ENSOLUM

February 21, 2024

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

Re: Closure Request
Mesa B 22-25 Tank Battery (Mesa B East)
Incident Number nAPP2209078912
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, delineation, excavation, and soil sampling activities performed at the Mesa B 22-25 Tank Battery (Mesa B East) (Site). The purpose of the Site activities was to assess the presence or absence of impacts to soil resulting from a historical release of crude oil at the Site. Based on field observations, field screening activities, and soil sample laboratory analytical results, BTA is submitting this *Closure Report*, describing Site assessment, delineation, and excavation activities that have occurred and requesting closure for Incident Number nAPP2209078912.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit A, Section 7, Township 26 South, Range 33 East, in Lea County, New Mexico (32.05980°, -103.60435°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On March 31, 2022, a transfer pump was left on at the tank battery causing fluid to be pushed to the flare and igniting. Approximately 330 barrels (bbls) of crude oil were released within the earthen berm and overflowed onto the surrounding well pad and pasture area. A vacuum truck was dispatched to the Site to recover free-standing fluids; approximately 130 bbls of crude oil were recovered. BTA reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on April 13, 2022. The release was assigned Incident Number nAPP2209078912.

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 between 51 feet to 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is New Mexico Office of the State Engineer (NMOSE) well C-4547 POD1 (MW-1), located approximately 0.38 miles south of the Site. The groundwater well has a reported depth to

groundwater of 89 feet bgs and a total depth of 112 feet bgs. 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 riverine, located approximately 702 feet east 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)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 10,000 mg/kg

SITE ASSESSMENT ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On August 25, 2023, Ensolum personnel visited the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. Fourteen assessment soil samples (SS01 through SS14) were collected within and around the release area, at a depth of approximately 0.5 feet bgs, to assess for the presence or absence of impacted soil resulting from the crude oil release. 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. The soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was completed during the Site visit and a photographic log is included as Appendix B.

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- GRO, TPH- DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method SM4500.

Laboratory analytical results for assessment soil sample SS07 through SS14, collected within the release area, indicated all COC concentrations were complaint with the most stringent Table I Closure Criteria. Laboratory analytical results for assessment soil samples SS01 through SS06, collected within the release area, indicated TPH concentrations exceeded the Closure Criteria at the ground surface. Vertical delineation activities and excavation activities appeared warranted to determine the depth of impacts and to address the elevated TPH concentrations.

DELINEATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On October 5, 2023, and November 13, 2023, Ensolum personnel returned to the Site to complete vertical delineation activities to determine the depth of impacts identified during the initial Site assessment. Boreholes were advanced via hand auger to further confirm the absence of impacted soil

in the soil sample locations of SS07 through SS10, SS15, and SS16, which were located within the presumed release extent. Delineation soil samples SS07A through SS10A, SS15A and SS16A were collected at a depth of 2 feet bgs. Additionally, soil samples SS17 through SS21 were collected within and around the release area, at a depth of approximately 0.5 feet bgs, to further assess for the presence or absence of impacted soil. Boreholes (BH01 through BH04) were advanced via hand auger within the inferred release extent to assess the vertical extent of the release. The boreholes were advanced to depths ranging from 1.5 feet to 3 feet bgs. The delineation soil samples were field screened for VOCs and chloride. Field screening results and observations were logged on lithologic/soil sampling logs, which are included in Appendix C. The delineation soil samples were collected, handled, and analyzed following the same procedures previously described. The delineation soil sample locations were mapped utilizing a handheld GPS unit and are depicted on Figure 2. Photographic documentation was completed during the Site visit and a photographic log is included in Appendix B.

Laboratory analytical results for delineation soil samples SS07A through SS10A, SS15A, and SS16A indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria. Laboratory analytical results for soil sample SS17 indicated TPH concentrations exceeded the Site Closure Criteria. Laboratory analytical results for soil samples SS18 through SS21 indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria. Laboratory analytical results for BH01, collected at depths ranging from 1-foot to 2-feet bgs, indicated TPH concentrations exceeded the Site Closure Criteria. Laboratory analytical results for boreholes BH02 and BH03, collected at depths ranging from 1-foot to 1.5 feet bgs, indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria. Laboratory analytical results for borehole BH04, collected at 1-foot bgs, indicated TPH concentrations exceeded the Site Closure Criteria but terminal BH04A, collected at 3 feet bgs, indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria. Based on laboratory analytical results, excavation activities were warranted.

EXCAVATION ACTIVITES AND LABORATORY ANALYTICAL RESULTS

Between December 13, 2023, and February 9, 2024, Ensolum personnel were at the Site to oversee excavation activities based on laboratory analytical results for assessment and delineation activities. Excavation activities were performed utilizing a hydrovac and back-hoe. To direct excavation activities, soil was screened for VOCs and chloride. The excavation was completed to depths ranging from 1-foot to 3 feet bgs. Photographic documentation of the excavation activities is included in Appendix B.

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. Confirmation soil samples FS01 through FS20 were collected from the floor of the excavation at depths ranging from 1-foot to 3 feet bgs. Confirmation soil samples SW01 through SW10 were collected from the sidewalls of the excavation at depths ranging from the ground surface to 3 feet bgs. The excavation soil samples were collected, handled, and analyzed following the same procedures as described above.

Laboratory analytical results for the excavation soil samples FS01 through FS20, SW01, SW02, and SW04 through SW10 indicated all COC concentrations were compliant with the Site Closure Criteria. Laboratory analytical results for sidewall soil sample SW03 indicated TPH concentrations exceeded the Site Closure Criteria. Additional soil was removed in the vicinity and subsequent soil sample SW11 was collected from the sidewall of the excavation at depths ranging from the ground surface to 3 feet bgs. Laboratory analytical results for SW11 indicated all COC concentrations were compliant with the Site 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 3,813 square feet. A total of approximately 423 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, delineation, and excavation activities were conducted at the Site to assess for the presence or absence of impacted soil resulting from the March 2022, release of crude oil. Laboratory analytical results for the delineation soil samples indicated elevated TPH concentrations were present within the top 3 feet bgs of the release and the release was laterally and vertically delineated to the most stringent Table I Closure Criteria. All excavation soil samples collected from the final excavation extent indicated all COC concentrations were compliant with the Site Closure Criteria. Based on the soil sample analytical results, no further remediation was required.

Excavation of impacted soil has mitigated impacts at this Site. BTA believes the remedial actions completed are protective of human health, the environment, and groundwater. As such, BTA respectfully requests closure for Incident Number nAPP2209078912. 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

Meredith Roberts
Field Geologist

Daniel R. Moir, PG
Senior Managing Geologist

cc: Kelton Beaird, 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	Photographic Log
Appendix C	Lithologic/Soil Sampling Logs
Appendix D	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix E	NMOCD Notifications
Appendix F	Final C-141

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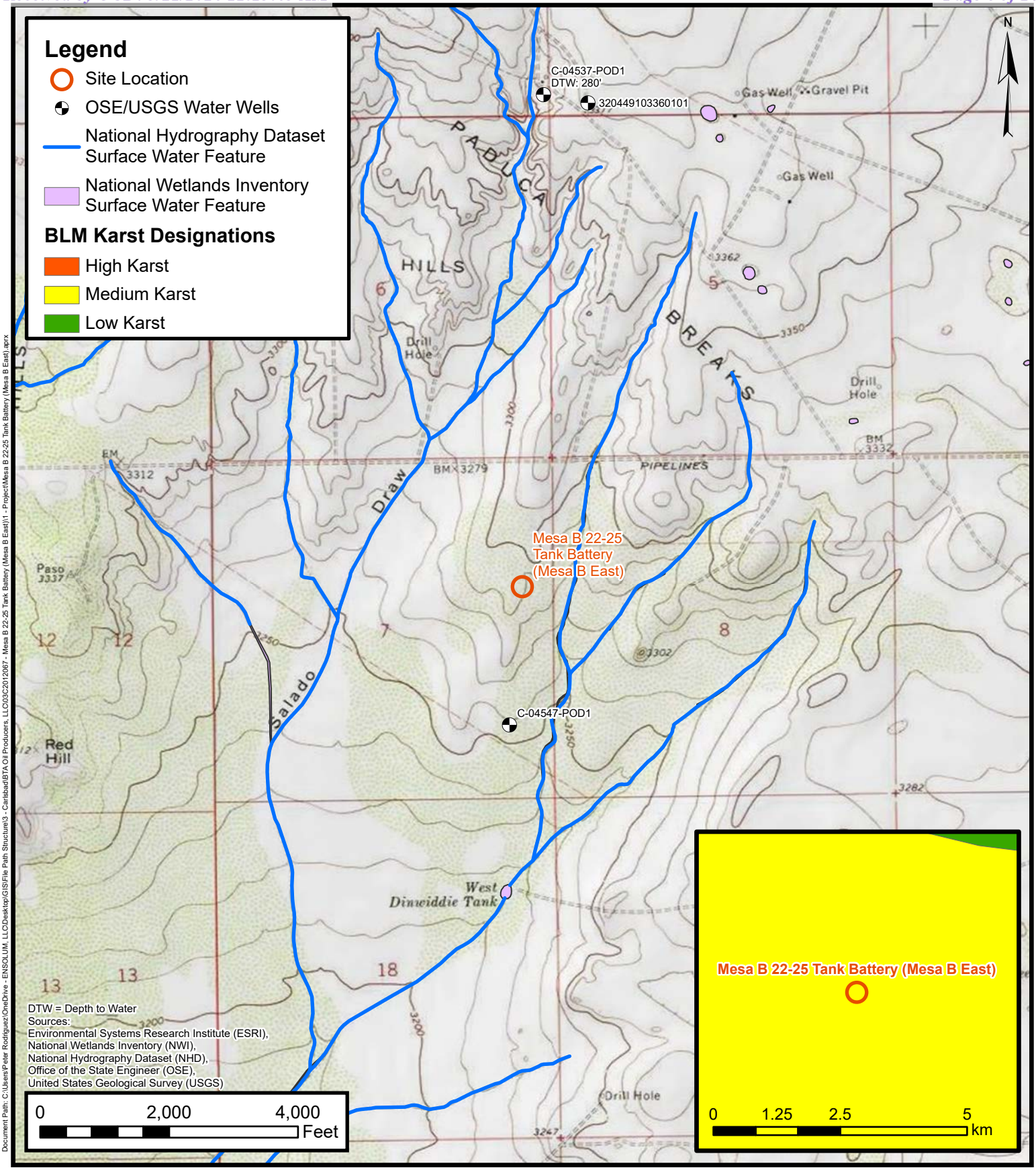
FIGURES



Document Path: C:\Users\Peter Rodriguez\OneDrive - ENSOLUM, LLC\Desktop\GIS\File Path Structure\3 - Carlsbad\BTA Oil Producers, LLC\03C2012067 - Mesa B 22-25 Tank Battery (Mesa B East)\1 - Project\Mesa B 22-25 Tank Battery (Mesa B East).aprx

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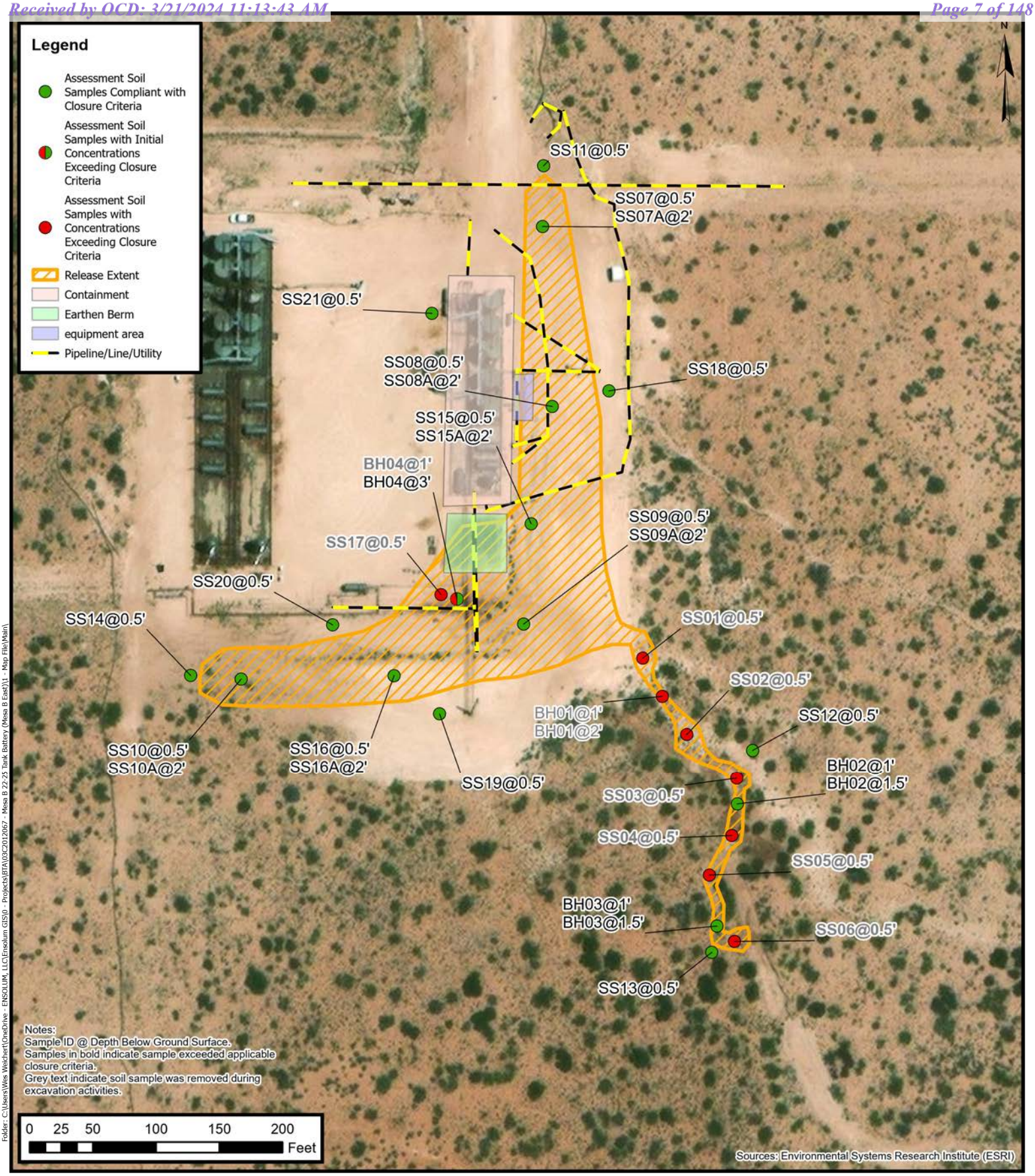
Site Receptor Map

BTA Oil Producers, LLC
Mesa B 22-25 Tank Battery (Mesa B East)
Incident Number: nAPP2209078912
Unit A, Section 7, T26S, Range 33E
Lea County,New Mexico

FIGURE
1



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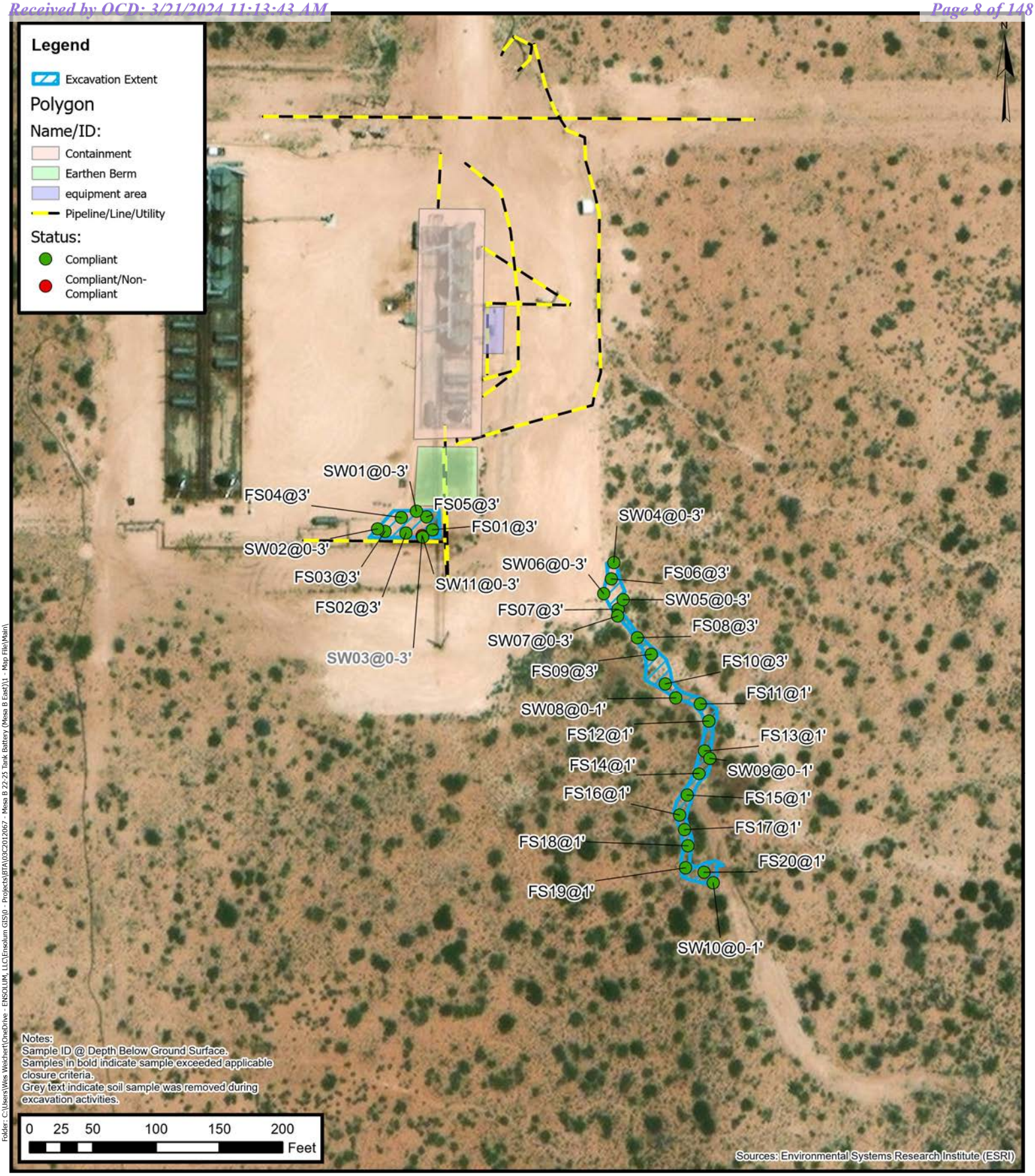
Assessment Soil Sample Locations

BTA Oil Producers, LLC
Mesa B 22-25 Tank Battery (Mesa B East)
Incident Number: nAPP2209078912
Unit A, Section 7, T26S, R33E
Eddy Co, New Mexico, United States

FIGURE 2



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Excavation Soil Sample Locations

BTA Oil Producers, LLC
Mesa B 22-25 Tank Battery (Mesa B East)
Incident Number: nAPP2209078912
Unit A, Section 7, T26S, R33E
Eddy Co, New Mexico, United States

FIGURE 3

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Mesa B 22-25 Tank Battery (Mesa B East)
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	10,000
Assessment Soil Samples										
SS01*	08/25/2023	0.5	<0.050	1.66	83.9	9,830	1,230	**9,914**	**11,144**	192
SS02*	08/25/2023	0.5	<0.050	0.899	61.0	6,430	878	**6,491**	**7,369**	64.0
SS03*	08/25/2023	0.5	<0.050	2.70	166	10,300	1,110	**10,466**	**11,576**	80.0
SS04*	08/25/2023	0.5	<0.100	<0.600	<100	11,100	2,560	**11,100**	**13,660**	16.0
SS05*	08/25/2023	0.5	<0.100	<0.600	<100	10,800	2,430	**10,800**	**13,230**	32.0
SS06*	08/25/2023	0.5	<0.050	1.07	108	9,660	1,030	**9,768**	**10,798**	32.0
SS07	08/25/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS07A	11/13/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SS08	08/25/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS08A	11/13/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144
SS09	08/25/2023	0.5	<0.050	<0.300	<10.0	31.9	<10.0	31.9	31.9	179
SS09A	11/13/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SS10	08/25/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS10A	11/13/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS11	08/25/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS12*	08/25/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SS13*	08/25/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SS14*	08/25/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SS15	10/05/2023	0.5	<0.050	<0.300	<10.0	27.2	<10.0	27.2	27.2	48.0
SS15A	11/13/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS16*	10/05/2023	0.5	<0.050	<0.300	<10.0	13.9	<10	13.9	13.9	48.0
SS16A*	11/13/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SS17	10/05/2023	0.5	<0.050	0.311	314	27,600	4,500	**27,914**	**32,414**	48.0
SS18	11/13/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SS19	11/13/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SS20	11/13/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SS21	11/13/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0

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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	10,000
Delineation Soil Samples										
BH01	10/05/2023	1	<0.050	<0.300	30.0	4,030	747	**4,060**	**4,807**	16.0
BH01A	10/05/2023	2	<0.050	<0.300	<10.0	871	217	**871**	**1,088**	64.0
BH02	10/05/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
BH02A	10/05/2023	1.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
BH03	10/05/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
BH03A	10/05/2023	1.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
BH04	11/13/2023	1	<0.050	<0.300	146	2,560	345	**2,905**	**3,051**	<16.0
BH04A	11/13/2023	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
Excavation Floor Soil Samples										
FS01	12/28/2023	3	<0.050	<0.300	<10.0	392	103	392	495	<16.0
FS02	12/28/2023	3	<0.050	<0.300	<10.0	397	81.7	397	479	<16.0
FS03	12/28/2023	3	<0.050	<0.300	<10.0	521	117	521	638	<16.0
FS04	12/28/2023	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
FS05	12/28/2023	3	<0.050	<0.300	<10.0	45.6	<10.0	45.6	45.6	32.0
FS06	01/16/2024	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
FS07	01/16/2024	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	128
FS08	01/16/2024	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	128
FS09	01/16/2024	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144
FS10	01/16/2024	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	128
FS11	01/16/2024	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112
FS12	01/16/2024	1	<0.050	<0.300	13.0	<10.0	<10.0	13.0	13.0	112
FS13	01/16/2024	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	128
FS14	01/16/2024	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112
FS15	01/16/2024	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
FS16	01/16/2024	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS17	01/16/2024	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
FS18	01/16/2024	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS19	01/16/2024	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS20	01/16/2024	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0

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TABLE 1
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Mesa B 22-25 Tank Battery (Mesa B East)
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**	**10,000**
Excavation Sidewall Soil Samples										
SW01	12/28/2023	0 - 3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SW02	12/28/2023	0 - 3	<0.050	<0.300	<10.0	55.2	<10.0	55.2	55.2	<16.0
SW03	12/28/2023	0 - 3	<0.050	<0.300	28.3	1,880	487	**1,908**	**2,395**	<16.0
SW04	01/16/2024	0 - 3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	128
SW05	01/16/2024	0 - 3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	160
SW06	01/16/2024	0 - 3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	128
SW07	01/16/2024	0 - 3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW08	01/16/2024	0 - 1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW09	01/16/2024	0 - 1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SW10	01/16/2024	0 - 1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW11	02/09/2024	0 - 3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0

Notes:

bgs: below ground surface
mg/kg: milligrams per kilogram
NMOCD: New Mexico Oil Conservation Division
NE: Not Established
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation standard where applicable.

GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
TPH: Total Petroleum Hydrocarbon
Grey texts indicates sample that has been excavated.

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APPENDIX A

Referenced Well Records

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

OSE DIT AUG 2 2021 PM4:44

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
POD1 (MW-1)	n/a	C-4547

WELL OWNER NAME(S)	PHONE (OPTIONAL)
BTA Oil Producers	

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
104 S. Pecos St.	Midland	TX	79701

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32	3	14.34	N
	LONGITUDE	103	36	16.96	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

NE SE SE Sec. 07 T26S R33E

2. DRILLING & CASING INFORMATION

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
1249	Jackie D. Atkins	Atkins Engineering Associates, Inc.

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
07/15/2021	07/15/2021	temporary well material	112	unknown

COMPLETED WELL IS: ☐ ARTESIAN ☐ DRY HOLE ☑ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): 89.5

DRILLING FLUID: ☑ AIR ☐ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ☐ ROTARY ☐ HAMMER ☐ CABLE TOOL ☑ OTHER – SPECIFY: Hollow Stem Auger

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	21	±8.5	Boring- HSA	--	--	--	--
21	112	±3.5	Boring- Air Rotary	--	--	--	--

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/30/17)

FILE NO. C-4547	POD NO. 1	TRN NO. 698291	
LOCATION 26S-33E-07 4-4-2		WELL TAG ID NO. NA	PAGE 1 OF 2

OSE DIT AUG 2 2021 PM4:44

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	4	4	Caliche, Consolidated , White	Y ✓N	
4	44	40	Sand, Fine-grained, poorly graded, with caliche gravel, Redish Brown	Y ✓N	
44	51	7	Clay, Stiff, Dark Brown,	Y ✓N	
51	103	52	Sandstone, Fine-grained, poorly graded, Tan Brown	✓Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☐ PUMP ☐ AIR LIFT ☐ BAILER ☐ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

5. TEST; RIG SUPERVISION

WELL TEST: TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION: Temporary well materials removed and the soil boring plugged using tremie pipe to total depth and landed cement slurry of <6.0 gallons of water per 94 lbs sack of Portland TYPE I/II Neat Cement. See attached Plugging Record

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

Shane Eldridge, Cameron Pruitt, Carmelo Trevino

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:

Jack Atkins — Jackie D. Atkins — 07/29/2021

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/30/2017)

FILE NO. C-4547	POD NO. 1	TRN NO.	
LOCATION 26S-33E-07 4.4.2		WELL TAG ID NO. NA	PAGE 2 OF 2

2021-07-28_C-4547_POD1_OSE_Well Record and Log_mesa1-for sign

Final Audit Report 2021-07-29

Created:	2021-07-29
By:	Lucas Middleton (lucas@atkinseng.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAA3aQOFUKeCXoHbozKpK1XeoMdI53IwcIm

OSE DIT AUG 2 2021 PM4:44

"2021-07-28_C-4547_POD1_OSE_Well Record and Log_mesa1-for sign" History

Document created by Lucas Middleton (lucas@atkinseng.com)
2021-07-29 - 8:40:54 PM GMT- IP address: 69.21.248.123

Document emailed to Jack Atkins (jack@atkinseng.com) for signature
2021-07-29 - 8:41:43 PM GMT

Email viewed by Jack Atkins (jack@atkinseng.com)
2021-07-29 - 8:43:29 PM GMT- IP address: 64.90.153.232

Document e-signed by Jack Atkins (jack@atkinseng.com)
Signature Date: 2021-07-29 - 8:44:00 PM GMT - Time Source: server- IP address: 64.90.153.232

Agreement completed.
2021-07-29 - 8:44:00 PM GMT

Adobe Sign

USGS 320245103335901 26S.33E.10.334343

Lea County, New Mexico
Latitude 32°02'45", Longitude 103°33'59" NAD27
Land-surface elevation 3,291 feet above NAVD88
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

- Table of data
- Tab-separated data
- Graph of data
- Reselect period

Date	Time	Water-level date-time accuracy	Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	Status	Method of measurement	Measuring agency	Source of measurement	Water-level approval status
2001											
2001-02-27		D	62610		3164.98	NGVD29	1	S			A
2001-02-27		D	62611		3166.56	NAVD88	1	S			A
2001-02-27		D	72019	124.44			1	S			A

ENSOLUM

APPENDIX B

Photographic Log

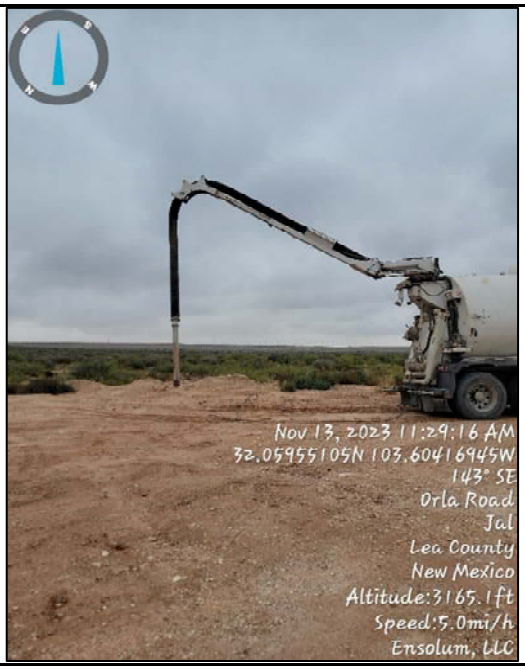
ENSOLUM

Photographic Log
BTA Oil Producers, LLC
Mesa B 22-25 Tank Battery (Mesa B East)
Incident Number nAPP2209078912

Photograph: 1 Date: 8/25/2023
Description: Initial assessment activities
View: West

Photograph: 2 Date: 8/25/2023
Description: Initial assessment activities
View: Northwest

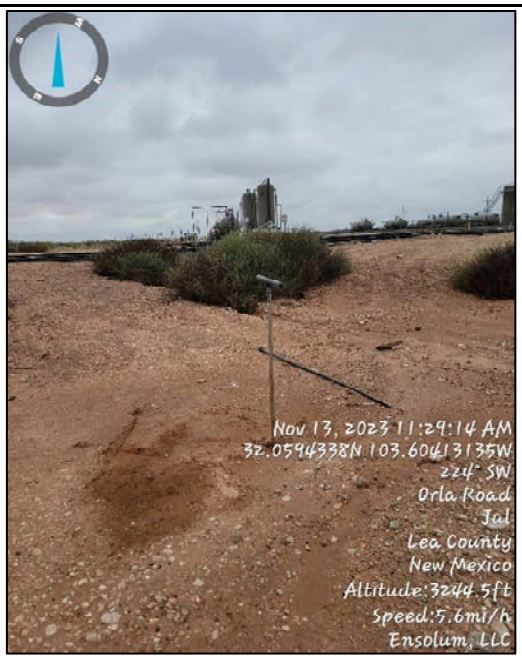
Photograph: 3 Date: 10/5/2023
Description: Delineation activities
View: Northwest



Photograph: 4 Date: 11/13/2023
Description: Delineation activities
View: Southeast

ENSOLUM

Photographic Log
BTA Oil Producers, LLC
Mesa B 22-25 Tank Battery (Mesa B East)
Incident Number nAPP2209078912



Photograph: 5 Date: 11/13/2023
Description: Delineation activities
View: Southwest

Photograph: 6 Date: 12/28/2023
Description: Excavation activities
View: Southwest

Photograph: 7 Date: 1/16/2024
Description: Excavation activities
View: Northwest

Photograph: 8 Date: 1/16/2024
Description: Excavation activities
View: Southwest

ENSOLUM

APPENDIX C

Lithologic Soil Sampling Logs

ENSOLUM

	Sample Name: SS07	Date: 11/13/2023
	Site Name: Mesa B 22-25 Tank Battery	
	Incident Number: nAPP2209078912	
	Job Number: 03C2012067	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: J.Falcomata	Method: Hand auger
Coordinates: (32.060344, -103.604179)	Hole Diameter: 4"	Total Depth: 2'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Dry	<168	0.0	N	-	-	1	SW-SM	SAND (1'): fine to medium grained, trace amounts small gravel, medium brown, non plastic, non cohesive, no odor
Dry	<168	0.0	N	SS07A	2	2	SW-SM	SAND (2'): SAA

TD @ 2' bgs

ENSOLUM	Sample Name: SS08	Date: 11/13/2023
	Site Name: Mesa B 22-25 Tank Battery	
	Incident Number: nAPP2209078912	
	Job Number: 03C2012067	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: J.Falcomata	Method: Hand auger
Coordinates: (32.059953, -103.604160)	Hole Diameter: 4"	Total Depth: 2'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Dry	515	0.2	N	-	-	1	SW-SM	SAND (1'): fine to medium grained, trace amounts small gravel, medium brown, non plastic, non cohesive, no odor
Dry	280	0.1	N	SS08A	2	2	SW-SM	SAND (2'): SAA w/ moderate amounts small gravel

TD @ 2' bgs

ENSOLUM

	Sample Name: SS09	Date: 11/13/2023
	Site Name: Mesa B 22-25 Tank Battery	
	Incident Number: nAPP2209078912	
	Job Number: 03C2012067	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: J.Falcomata	Method: Hand auger
Coordinates: (32.059481, -103.604240)	Hole Diameter: 4"	Total Depth: 2'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Dry	<168	0.0	N	-	-	1	SW-SM	SAND (1'): fine to medium grained, medium brown, non plastic, non cohesive, no odor
Dry	168	0.0	N	SS09A	2	2	SW-SM	SAND (2'): SAA

TD @ 2' bgs

ENSOLUM

	Sample Name: SS10	Date: 11/13/2023
	Site Name: Mesa B 22-25 Tank Battery	
	Incident Number: nAPP2209078912	
	Job Number: 03C2012067	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: J.Falcomata	Method: Hand auger
Coordinates: (32.059370, -103.604963)	Hole Diameter: 4"	Total Depth: 2'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Dry	<168	0.0	N	-	-	1	SW-SM	SAND (1'): fine to medium grained, trace amounts small gravel, medium brown to dark brown, non plastic, non cohesive, no odor
Dry	<168	0.0	N	SS10A	2	2	SW-SM	SAND (2'): SAA

TD @ 2' bgs

ENSOLUM

	Sample Name: SS15	Date: 11/13/2023
	Site Name: Mesa B 22-25 Tank Battery	
	Incident Number: nAPP2209078912	
	Job Number: 03C2012067	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: J.Falcomata	Method: Hand auger
Coordinates: (32.059699, -103.604218)	Hole Diameter: 4"	Total Depth: 2'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Dry	<168	0.0	N	-	-	1	CCHE	CALICHE (1'): medium to fine grained, moderate amounts of gravel, tan, non plastic, non cohesive, no odor.
Dry	<168	0.0	N	SS15A	2	2	SW-SM	SAND (2'): fine to medium grained, trace amounts gravel, tan to light brown, non plastic, non cohesive, no odor.

TD @ 2' bgs

ENSOLUM

	Sample Name: SS16	Date: 11/13/2023
	Site Name: Mesa B 22-25 Tank Battery	
	Incident Number: nAPP2209078912	
	Job Number: 03C2012067	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: J.Falcomata	Method: Hand auger
Coordinates: (32.059373, -103.604573)	Hole Diameter: 4"	Total Depth: 2'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Dry	<168	0.0	N	-	-	1	CCHE	CALICHE (1'): medium to fine grained, moderate amounts of gravel, tan, non plastic, non cohesive, no odor.
Dry	<168	0.0	N	SS16A	2	2	SW-SM	SAND (2'): fine to medium grained, trace amounts gravel, tan to light brown, non plastic, non cohesive, no odor.

TD @ 2' bgs

ENSOLUM

	Sample Name: BH01	Date: 10/5/2023
	Site Name: Mesa B 22-25 Tank Battery (Mesa B East)	
	Incident Number: nAPP2209078912	
	Job Number: 03C2012067	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Peter Van Patten	Method: Hand Auger
Coordinates: 32.059336, -103.603980	Hole Diameter: 4"	Total Depth: 2"

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included. ND - Non Detect

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Wet	ND	22.5	N	BH01	1	1	SP-SM	Sand: brown, medium to fine grain, poorly graded with silt, hydrocarbon odor
Damp	ND	3.7	N	BH01A	2	2	SP-SM	SAA (same as above) some caliche gravel
								TD (refusal, caliche bed) at 2 feet bgs.

ENSOLUM

	Sample Name: BH02	Date: 10/5/2023
	Site Name: Mesa B 22-25 Tank Battery (Mesa B East)	
	Incident Number: nAPP2209078912	
	Job Number: 03C2012067	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Peter Van Patten	Method: Hand Auger
Coordinates: 32.058966, -103.603958	Hole Diameter: 4"	Total Depth: 1.5"

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included. ND - Non Detect

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Dry	ND	0.1	N	BH02	1	1	SP-SM	Sand: brown, medium to fine grain, poorly graded with silt
Dry	ND	0.0	N	BH02A	1.5	1.5	SP-SM	SAA (same as above) some caliche gravel
								TD (refusal, caliche bed) at 1.5 feet bgs.

ENSOLUM

	Sample Name: BH03	Date: 10/5/2023
	Site Name: Mesa B 22-25 Tank Battery (Mesa B East)	
	Incident Number: nAPP2209078912	
	Job Number: 03C2012067	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Peter Van Patten	Method: Hand Auger
Coordinates: 32.058677, -103.603733	Hole Diameter: 4"	Total Depth: 1.5"

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included. ND - Non Detect

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Damp	ND	0.0	N	BH03	1	1	SP-SM	Sand: brown, medium to fine grain, poorly graded with silt
Damp	ND	0.0	N	BH03A	1.5	1.5	SP-SM	SAA (same as above) some caliche gravel
								TD (refusal, caliche bed) at 1.5 feet bgs.

ENSOLUM

	Sample Name: BH04	Date: 11/13/2023
	Site Name: Mesa B 22-25 Tank Battery	
	Incident Number: nAPP2209078912	
	Job Number: 03C2012067	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: J.Falcomata	Method: Hand auger
Coordinates: (32.059538, -103.604410)	Hole Diameter: 4"	Total Depth: 2'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Dry	<168	58.7	N	BH04	1	1	SW-SM	SAND (1'): fine to medium grained, trace amounts gravel, medium brown, non plastic, non cohesive, strong hydrocarbon odor.
Dry	<168	21.7	N	-	-	2	SW-SM	SAND (2'): SAA
Dry	<168	2.4	N	BH04A	3	3	SW-SM	SAND (3'): fine, trace amounts gravel, medium brown, non plastic, non cohesive, no odor.

TD @ 3' bgs

ENSOLUM

APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

CARDINAL Laboratories

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

September 01, 2023

HADLIE GREEN

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MESA B 22-25 TANK BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 08/29/23 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	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:	08/29/2023	Sampling Date:	08/25/2023
Reported:	09/01/2023	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.0597,-103.60435		

Sample ID: SS01 0.5' (H234682-01)

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	08/31/2023	ND	1.84	92.0	2.00	0.469	
Toluene*	**0.062**	0.050	08/31/2023	ND	2.15	108	2.00	0.139	GC-NC1
Ethylbenzene*	**0.177**	0.050	08/31/2023	ND	2.23	112	2.00	0.589	GC-NC1
Total Xylenes*	**1.43**	0.150	08/31/2023	ND	6.73	112	6.00	0.707	GC-NC1
Total BTEX	**1.66**	0.300	08/31/2023	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID *223 %* *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	**192**	16.0	08/30/2023	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**83.9**	10.0	08/30/2023	ND	195	97.4	200	3.38	
DRO >C10-C28*	**9830**	10.0	08/30/2023	ND	197	98.4	200	7.63	
EXT DRO >C28-C36	**1230**	10.0	08/30/2023	ND					

Surrogate: 1-Chlorooctane *117 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *226 %* *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:	08/29/2023	Sampling Date:	08/25/2023
Reported:	09/01/2023	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.0597,-103.60435		

Sample ID: SS02 0.5' (H234682-02)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/30/2023	ND	1.83	91.3	2.00	1.62	
Toluene*	<0.050	0.050	08/30/2023	ND	1.85	92.4	2.00	2.01	
Ethylbenzene*	**0.062**	0.050	08/30/2023	ND	1.87	93.7	2.00	1.40	GC-NC1
Total Xylenes*	**0.827**	0.150	08/30/2023	ND	5.68	94.7	6.00	1.13	GC-NC1
Total BTEX	**0.889**	0.300	08/30/2023	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID *131 %* *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	08/30/2023	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**61.0**	10.0	08/30/2023	ND	195	97.4	200	3.38	
DRO >C10-C28*	**6430**	10.0	08/30/2023	ND	197	98.4	200	7.63	
EXT DRO >C28-C36	**878**	10.0	08/30/2023	ND					

Surrogate: 1-Chlorooctane *111 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *172 %* *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:	08/29/2023	Sampling Date:	08/25/2023
Reported:	09/01/2023	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.0597,-103.60435		

Sample ID: SS03 0.5' (H234682-03)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/30/2023	ND	1.83	91.3	2.00	1.62	
Toluene*	<0.050	0.050	08/30/2023	ND	1.85	92.4	2.00	2.01	
Ethylbenzene*	**0.163**	0.050	08/30/2023	ND	1.87	93.7	2.00	1.40	GC-NC1
Total Xylenes*	**2.53**	0.150	08/30/2023	ND	5.68	94.7	6.00	1.13	GC-NC1
Total BTEX	**2.70**	0.300	08/30/2023	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID *181 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	08/30/2023	ND	416	104	400	0.00	

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*	**166**	100	08/30/2023	ND	195	97.4	200	3.38	
DRO >C10-C28*	**10300**	100	08/30/2023	ND	197	98.4	200	7.63	
EXT DRO >C28-C36	**1110**	100	08/30/2023	ND					

Surrogate: 1-Chlorooctane *120 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *217 %* *49.1-148*

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Analytical Results For:

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

Received:	08/29/2023	Sampling Date:	08/25/2023
Reported:	09/01/2023	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.0597,-103.60435		

Sample ID: SS04 0.5' (H234682-04)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/31/2023	ND	1.83	91.3	2.00	1.62	
Toluene*	<0.100	0.100	08/31/2023	ND	1.85	92.4	2.00	2.01	
Ethylbenzene*	<0.100	0.100	08/31/2023	ND	1.87	93.7	2.00	1.40	
Total Xylenes*	<0.300	0.300	08/31/2023	ND	5.68	94.7	6.00	1.13	
Total BTEX	<0.600	0.600	08/31/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *118 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	08/30/2023	ND	416	104	400	0.00	

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	08/30/2023	ND	195	97.4	200	3.38	
DRO >C10-C28*	**11100**	100	08/30/2023	ND	197	98.4	200	7.63	
EXT DRO >C28-C36	**2560**	100	08/30/2023	ND					

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

Surrogate: 1-Chlorooctadecane *246 %* *49.1-148*

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Analytical Results For:

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

Received:	08/29/2023	Sampling Date:	08/25/2023
Reported:	09/01/2023	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.0597,-103.60435		

Sample ID: SS05 0.5' (H234682-05)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/31/2023	ND	1.83	91.3	2.00	1.62	
Toluene*	<0.100	0.100	08/31/2023	ND	1.85	92.4	2.00	2.01	
Ethylbenzene*	**0.143**	0.100	08/31/2023	ND	1.87	93.7	2.00	1.40	GC-NC1
Total Xylenes*	<0.300	0.300	08/31/2023	ND	5.68	94.7	6.00	1.13	
Total BTEX	<0.600	0.600	08/31/2023	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	08/30/2023	ND	416	104	400	0.00	

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	08/30/2023	ND	195	97.4	200	3.38	
DRO >C10-C28*	**10800**	100	08/30/2023	ND	197	98.4	200	7.63	
EXT DRO >C28-C36	**2430**	100	08/30/2023	ND					

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

Surrogate: 1-Chlorooctadecane *268 %* *49.1-148*

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Analytical Results For:

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

Received:	08/29/2023	Sampling Date:	08/25/2023
Reported:	09/01/2023	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.0597,-103.60435		

Sample ID: SS06 0.5' (H234682-06)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/30/2023	ND	1.83	91.3	2.00	1.62	
Toluene*	<0.050	0.050	08/30/2023	ND	1.85	92.4	2.00	2.01	
Ethylbenzene*	**0.057**	0.050	08/30/2023	ND	1.87	93.7	2.00	1.40	GC-NC1
Total Xylenes*	**1.01**	0.150	08/30/2023	ND	5.68	94.7	6.00	1.13	GC-NC1
Total BTEX	**1.07**	0.300	08/30/2023	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID *152 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	08/30/2023	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**108**	10.0	08/30/2023	ND	195	97.4	200	3.38	
DRO >C10-C28*	**9660**	10.0	08/30/2023	ND	197	98.4	200	7.63	
EXT DRO >C28-C36	**1030**	10.0	08/30/2023	ND					

Surrogate: 1-Chlorooctane *157 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *206 %* *49.1-148*

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Analytical Results For:

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

Received:	08/29/2023	Sampling Date:	08/25/2023
Reported:	09/01/2023	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.0597,-103.60435		

Sample ID: SS07 0.5' (H234682-07)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/30/2023	ND	1.83	91.3	2.00	1.62	
Toluene*	<0.050	0.050	08/30/2023	ND	1.85	92.4	2.00	2.01	
Ethylbenzene*	<0.050	0.050	08/30/2023	ND	1.87	93.7	2.00	1.40	
Total Xylenes*	<0.150	0.150	08/30/2023	ND	5.68	94.7	6.00	1.13	
Total BTEX	<0.300	0.300	08/30/2023	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	**32.0**	16.0	08/30/2023	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/29/2023	ND	223	112	200	2.90	
DRO >C10-C28*	<10.0	10.0	08/29/2023	ND	222	111	200	0.250	
EXT DRO >C28-C36	<10.0	10.0	08/29/2023	ND					

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

Surrogate: 1-Chlorooctadecane *134 %* *49.1-148*

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Analytical Results For:

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

Received:	08/29/2023	Sampling Date:	08/25/2023
Reported:	09/01/2023	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.0597,-103.60435		

Sample ID: SS08 0.5' (H234682-08)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/31/2023	ND	1.83	91.3	2.00	1.62	
Toluene*	<0.050	0.050	08/31/2023	ND	1.85	92.4	2.00	2.01	
Ethylbenzene*	<0.050	0.050	08/31/2023	ND	1.87	93.7	2.00	1.40	
Total Xylenes*	<0.150	0.150	08/31/2023	ND	5.68	94.7	6.00	1.13	
Total BTEX	<0.300	0.300	08/31/2023	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	08/30/2023	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/29/2023	ND	223	112	200	2.90	
DRO >C10-C28*	<10.0	10.0	08/29/2023	ND	222	111	200	0.250	
EXT DRO >C28-C36	<10.0	10.0	08/29/2023	ND					

Surrogate: 1-Chlorooctane *114 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *136 %* *49.1-148*

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Analytical Results For:

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

Received:	08/29/2023	Sampling Date:	08/25/2023
Reported:	09/01/2023	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.0597,-103.60435		

Sample ID: SS09 0.5' (H234682-09)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/31/2023	ND	1.83	91.3	2.00	1.62	
Toluene*	<0.050	0.050	08/31/2023	ND	1.85	92.4	2.00	2.01	
Ethylbenzene*	<0.050	0.050	08/31/2023	ND	1.87	93.7	2.00	1.40	
Total Xylenes*	<0.150	0.150	08/31/2023	ND	5.68	94.7	6.00	1.13	
Total BTEX	<0.300	0.300	08/31/2023	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	**176**	16.0	08/30/2023	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/29/2023	ND	223	112	200	2.90	
DRO >C10-C28*	**31.9**	10.0	08/29/2023	ND	222	111	200	0.250	
EXT DRO >C28-C36	<10.0	10.0	08/29/2023	ND					

Surrogate: 1-Chlorooctane *118 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *142 %* *49.1-148*

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Analytical Results For:

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

Received:	08/29/2023	Sampling Date:	08/25/2023
Reported:	09/01/2023	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.0597,-103.60435		

Sample ID: SS10 0.5' (H234682-10)

BTEX 8021B mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/31/2023	ND	1.83	91.3	2.00	1.62	
Toluene*	<0.050	0.050	08/31/2023	ND	1.85	92.4	2.00	2.01	
Ethylbenzene*	<0.050	0.050	08/31/2023	ND	1.87	93.7	2.00	1.40	
Total Xylenes*	<0.150	0.150	08/31/2023	ND	5.68	94.7	6.00	1.13	
Total BTEX	<0.300	0.300	08/31/2023	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	08/30/2023	ND	416	104	400	0.00	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/29/2023	ND	223	112	200	2.90	
DRO >C10-C28*	<10.0	10.0	08/29/2023	ND	222	111	200	0.250	
EXT DRO >C28-C36	<10.0	10.0	08/29/2023	ND					

Surrogate: 1-Chlorooctane *116 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *137 %* *49.1-148*

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Analytical Results For:

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

Received:	08/29/2023	Sampling Date:	08/25/2023
Reported:	09/01/2023	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.0597,-103.60435		

Sample ID: SS11 0.5' (H234682-11)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/31/2023	ND	1.83	91.3	2.00	1.62	
Toluene*	<0.050	0.050	08/31/2023	ND	1.85	92.4	2.00	2.01	
Ethylbenzene*	<0.050	0.050	08/31/2023	ND	1.87	93.7	2.00	1.40	
Total Xylenes*	<0.150	0.150	08/31/2023	ND	5.68	94.7	6.00	1.13	
Total BTEX	<0.300	0.300	08/31/2023	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	**32.0**	16.0	08/30/2023	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/29/2023	ND	223	112	200	2.90	
DRO >C10-C28*	<10.0	10.0	08/29/2023	ND	222	111	200	0.250	
EXT DRO >C28-C36	<10.0	10.0	08/29/2023	ND					

Surrogate: 1-Chlorooctane *96.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *117 %* *49.1-148*

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Analytical Results For:

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

Received:	08/29/2023	Sampling Date:	08/25/2023
Reported:	09/01/2023	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.0597,-103.60435		

Sample ID: SS12 0.5' (H234682-12)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/31/2023	ND	1.83	91.3	2.00	1.62	
Toluene*	<0.050	0.050	08/31/2023	ND	1.85	92.4	2.00	2.01	
Ethylbenzene*	<0.050	0.050	08/31/2023	ND	1.87	93.7	2.00	1.40	
Total Xylenes*	<0.150	0.150	08/31/2023	ND	5.68	94.7	6.00	1.13	
Total BTEX	<0.300	0.300	08/31/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *100 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/30/2023	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/29/2023	ND	223	112	200	2.90	
DRO >C10-C28*	<10.0	10.0	08/29/2023	ND	222	111	200	0.250	
EXT DRO >C28-C36	<10.0	10.0	08/29/2023	ND					

Surrogate: 1-Chlorooctane *98.0 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *117 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

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

Received:	08/29/2023	Sampling Date:	08/25/2023
Reported:	09/01/2023	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.0597,-103.60435		

Sample ID: SS13 0.5' (H234682-13)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/31/2023	ND	1.83	91.3	2.00	1.62	
Toluene*	<0.050	0.050	08/31/2023	ND	1.85	92.4	2.00	2.01	
Ethylbenzene*	<0.050	0.050	08/31/2023	ND	1.87	93.7	2.00	1.40	
Total Xylenes*	<0.150	0.150	08/31/2023	ND	5.68	94.7	6.00	1.13	
Total BTEX	<0.300	0.300	08/31/2023	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	08/30/2023	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/30/2023	ND	223	112	200	2.90	
DRO >C10-C28*	<10.0	10.0	08/30/2023	ND	222	111	200	0.250	
EXT DRO >C28-C36	<10.0	10.0	08/30/2023	ND					

Surrogate: 1-Chlorooctane *100 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *118 %* *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:	08/29/2023	Sampling Date:	08/25/2023
Reported:	09/01/2023	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.0597,-103.60435		

Sample ID: SS14 0.5' (H234682-14)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/31/2023	ND	1.83	91.3	2.00	1.62	
Toluene*	<0.050	0.050	08/31/2023	ND	1.85	92.4	2.00	2.01	
Ethylbenzene*	<0.050	0.050	08/31/2023	ND	1.87	93.7	2.00	1.40	
Total Xylenes*	<0.150	0.150	08/31/2023	ND	5.68	94.7	6.00	1.13	
Total BTEX	<0.300	0.300	08/31/2023	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	08/30/2023	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/30/2023	ND	223	112	200	2.90	
DRO >C10-C28*	<10.0	10.0	08/30/2023	ND	222	111	200	0.250	
EXT DRO >C28-C36	<10.0	10.0	08/30/2023	ND					

Surrogate: 1-Chlorooctane *99.4 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *117 %* *49.1-148*

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Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
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.
GC-NC1	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are biased high with interfering compounds.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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

Pg 1 of 2

Company Name: Ensolum, LLC	**BILL TO**
Project Manager: Hadlie Green	P.O. #:
Address: 3122 Nat'l Parks Hwy	Company: BTA Oil
City: Carlsbad State: NM Zip: 88220	Attn: Kelton Beaird
Phone #: 432-557-8895 Fax #:	Address: 104 S Pecos St
Project #: 03C2012067 Project Owner:	City: Midland
Project Name: Mesa B 22-25 Tank Battery	State: TX Zip: 79701
Project Location: 32.0598, -103.60435	Phone #: 432-312-2203
Sampler Name: Meredith Roberts	Fax #:

FOR LAB USE ONLY					MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST		
Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	BTEX	Chlorides	TPH
H234482																		
1	SS01	0.5'	G	1			X					X		8/25/23	1000	X	X	X
2	SS02														1005			
3	SS03														1010			
4	SS04														1015			
5	SS05														1020			
6	SS06														1025			
7	SS07														1030			
8	SS08														1035			
9	SS09														1040			
10	SS10														1045			

Relinquished By:	Date: 8/9/23	Received By:	Verbal Result: ☐ Yes ☑ No Add'l Phone #:
	Time: 1300		All Results are emailed. Please provide Email address: hgreen@ensolum.com mroberts@ensolum.com
Relinquished By:	Date:	Received By:	REMARKS: Incident #: NAPP2209078912
	Time:		

Delivered By: (Circle One)	Observed Temp. °C 0.3	Sample Condition	CHECKED BY:	Turnaround Time: ☑ Standard ☐ Rush
Sampler - UPS - Bus - Other:	Corrected Temp. °C	Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No	(Initials)	Thermometer ID #113 Correction Factor -0.5°C #140

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

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Pg 2 of 2

Company Name: Ensolum, LLC	**BILL TO**
Project Manager: Hadlie Green	P.O. #:
Address: See Pg 1	Company: BTA Oil
City: State: Zip:	Attn: Kelton Beaird
Phone #: Fax #:	Address: See Pg 1
Project #: 03C2012067 Project Owner:	City:
Project Name: Mesa B 22-25 Tank Battery	State: Zip:
Project Location: 32.0598, -103.60435	Phone #:
Sampler Name: Meredith Roberts	Fax #:

FOR LAB USE ONLY					MATRIX							PRESERV.			SAMPLING		ANALYSIS REQUEST												
Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	BTEX	Chlorides	TPH											
H234682																													
11	SS11	0.5'	G	1			X					X		8/25/23	1050	X	X	X											
12	SS12														1055														
13	SS13														1100														
14	SS14														1105														

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: MEARS	Date: 8-29-23	Received By: S Rodriguez	Verbal Result: ☐ Yes ☑ No Add'l Phone #:
	Time: 1300		All Results are emailed. Please provide Email address: hgreen@ensolum.com mroberts@ensolum.com
Relinquished By:	Date:	Received By:	REMARKS: Incident #: NAPP2209078912
	Time:		

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 0.3	Sample Condition Cool ☑ Yes ☐ No Intact ☐ Yes ☐ No	CHECKED BY: (Initials)	Turnaround Time: Standard ☑ Rush ☐	Bacteria (only) Sample Condition Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No
	Corrected Temp. °C			Thermometer ID #113 Correction Factor -0.5°C #140	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

October 17, 2023

HADLIE GREEN

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MESA B 22-25 TANK BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 10/05/23 13:30.

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

Cardinal Laboratories is 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: MESA B 22-25 TANK BATTERY Project Number: 03C2012067 Project Manager: HADLIE GREEN Fax To:	Reported: 17-Oct-23 09:03

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH 01 1	H235432-01	Soil	05-Oct-23 09:15	05-Oct-23 13:30
BH 01A 2	H235432-02	Soil	05-Oct-23 09:20	05-Oct-23 13:30
BH 02 1	H235432-03	Soil	05-Oct-23 09:50	05-Oct-23 13:30
BH 02 A 1.5	H235432-04	Soil	05-Oct-23 09:55	05-Oct-23 13:30
BH 03 1	H235432-05	Soil	05-Oct-23 10:20	05-Oct-23 13:30
BH 03 A 1.5	H235432-06	Soil	05-Oct-23 10:25	05-Oct-23 13:30
SS 15 0.5	H235432-07	Soil	05-Oct-23 10:35	05-Oct-23 13:30
SS 16 0.5	H235432-08	Soil	05-Oct-23 10:45	05-Oct-23 13:30
SS 17 0.5	H235432-09	Soil	05-Oct-23 10:55	05-Oct-23 13:30

10/17/23 - Client changed the sample IDs for -07, -08 and -09 (see COC). This is the revised report and will replace the one sent on 10/11/23.

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: MESA B 22-25 TANK BATTERY Project Number: 03C2012067 Project Manager: HADLIE GREEN Fax To:	Reported: 17-Oct-23 09:03

BH 01 1

H235432-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**16.0**		16.0	mg/kg	4	3100635	AC	06-Oct-23	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										**S-04**
Benzene*	<0.050		0.050	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3100606	JH	08-Oct-23	8021B	GC-NC
Total Xylenes*	<0.150		0.150	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*139 %*	*71.5-134*		*3100606*	JH	*08-Oct-23*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	**30.0**		10.0	mg/kg	1	3100537	MS	06-Oct-23	8015B	
DRO >C10-C28*	**4030**		10.0	mg/kg	1	3100537	MS	06-Oct-23	8015B	
EXT DRO >C28-C36	**747**		10.0	mg/kg	1	3100537	MS	06-Oct-23	8015B	
Surrogate: 1-Chlorooctane			*131 %*	*48.2-134*		*3100537*	MS	*06-Oct-23*	*8015B*	
Surrogate: 1-Chlorooctadecane			*140 %*	*49.1-148*		*3100537*	MS	*06-Oct-23*	*8015B*	

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Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: MESA B 22-25 TANK BATTERY Project Number: 03C2012067 Project Manager: HADLIE GREEN Fax To:	Reported: 17-Oct-23 09:03

BH 01A 2

H235432-02 (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	3100635	AC	06-Oct-23	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*117 %*	*71.5-134*		*3100606*	JH	*08-Oct-23*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	3100537	MS	06-Oct-23	8015B	
DRO >C10-C28*	**871**		10.0	mg/kg	1	3100537	MS	06-Oct-23	8015B	
EXT DRO >C28-C36	**217**		10.0	mg/kg	1	3100537	MS	06-Oct-23	8015B	
Surrogate: 1-Chlorooctane			*118 %*	*48.2-134*		*3100537*	MS	*06-Oct-23*	*8015B*	
Surrogate: 1-Chlorooctadecane			*119 %*	*49.1-148*		*3100537*	MS	*06-Oct-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: MESA B 22-25 TANK BATTERY Project Number: 03C2012067 Project Manager: HADLIE GREEN Fax To:	Reported: 17-Oct-23 09:03

BH 02 1

H235432-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**16.0**		16.0	mg/kg	4	3100635	AC	06-Oct-23	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*101 %*	*71.5-134*		*3100606*	JH	*08-Oct-23*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	3100537	MS	06-Oct-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3100537	MS	06-Oct-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3100537	MS	06-Oct-23	8015B	
Surrogate: 1-Chlorooctane			*81.8 %*	*48.2-134*		*3100537*	MS	*06-Oct-23*	*8015B*	
Surrogate: 1-Chlorooctadecane			*102 %*	*49.1-148*		*3100537*	MS	*06-Oct-23*	*8015B*	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: MESA B 22-25 TANK BATTERY Project Number: 03C2012067 Project Manager: HADLIE GREEN Fax To:	Reported: 17-Oct-23 09:03

BH 02 A 1.5

H235432-04 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	<16.0		16.0	mg/kg	4	3100642	AC	06-Oct-23	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*103 %*	*71.5-134*		*3100606*	JH	*08-Oct-23*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	3100603	MS	06-Oct-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3100603	MS	06-Oct-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3100603	MS	06-Oct-23	8015B	
Surrogate: 1-Chlorooctane			*80.6 %*	*48.2-134*		*3100603*	MS	*06-Oct-23*	*8015B*	
Surrogate: 1-Chlorooctadecane			*90.8 %*	*49.1-148*		*3100603*	MS	*06-Oct-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: MESA B 22-25 TANK BATTERY Project Number: 03C2012067 Project Manager: HADLIE GREEN Fax To:	Reported: 17-Oct-23 09:03

BH 03 1

H235432-05 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	<16.0		16.0	mg/kg	4	3100642	AC	06-Oct-23	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*100 %*	*71.5-134*		*3100606*	JH	*08-Oct-23*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	3100603	MS	06-Oct-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3100603	MS	06-Oct-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3100603	MS	06-Oct-23	8015B	
Surrogate: 1-Chlorooctane			*93.7 %*	*48.2-134*		*3100603*	MS	*06-Oct-23*	*8015B*	
Surrogate: 1-Chlorooctadecane			*108 %*	*49.1-148*		*3100603*	MS	*06-Oct-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: MESA B 22-25 TANK BATTERY Project Number: 03C2012067 Project Manager: HADLIE GREEN Fax To:	Reported: 17-Oct-23 09:03

BH 03 A 1.5

H235432-06 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	<16.0		16.0	mg/kg	4	3100642	AC	06-Oct-23	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*99.3 %*	*71.5-134*		*3100606*	JH	*08-Oct-23*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	3100603	MS	06-Oct-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3100603	MS	06-Oct-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3100603	MS	06-Oct-23	8015B	
Surrogate: 1-Chlorooctane			*97.6 %*	*48.2-134*		*3100603*	MS	*06-Oct-23*	*8015B*	
Surrogate: 1-Chlorooctadecane			*114 %*	*49.1-148*		*3100603*	MS	*06-Oct-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: MESA B 22-25 TANK BATTERY Project Number: 03C2012067 Project Manager: HADLIE GREEN Fax To:	Reported: 17-Oct-23 09:03

SS 15 0.5

H235432-07 (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	3100642	AC	06-Oct-23	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*100 %*	*71.5-134*		*3100606*	JH	*08-Oct-23*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	3100603	MS	06-Oct-23	8015B	
DRO >C10-C28*	**27.2**		10.0	mg/kg	1	3100603	MS	06-Oct-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3100603	MS	06-Oct-23	8015B	
Surrogate: 1-Chlorooctane			*92.4 %*	*48.2-134*		*3100603*	MS	*06-Oct-23*	*8015B*	
Surrogate: 1-Chlorooctadecane			*109 %*	*49.1-148*		*3100603*	MS	*06-Oct-23*	*8015B*	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: MESA B 22-25 TANK BATTERY Project Number: 03C2012067 Project Manager: HADLIE GREEN Fax To:	Reported: 17-Oct-23 09:03

SS 16 0.5

H235432-08 (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	3100642	AC	06-Oct-23	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*101 %*	*71.5-134*		*3100606*	JH	*08-Oct-23*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	3100603	MS	06-Oct-23	8015B	
DRO >C10-C28*	**13.9**		10.0	mg/kg	1	3100603	MS	06-Oct-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3100603	MS	06-Oct-23	8015B	
Surrogate: 1-Chlorooctane			*96.6 %*	*48.2-134*		*3100603*	MS	*06-Oct-23*	*8015B*	
Surrogate: 1-Chlorooctadecane			*115 %*	*49.1-148*		*3100603*	MS	*06-Oct-23*	*8015B*	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: MESA B 22-25 TANK BATTERY Project Number: 03C2012067 Project Manager: HADLIE GREEN Fax To:	Reported: 17-Oct-23 09:03

SS 17 0.5

H235432-09 (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	3100642	AC	06-Oct-23	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										**S-04**
Benzene*	<0.050		0.050	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3100606	JH	08-Oct-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3100606	JH	08-Oct-23	8021B	GC-NC
Total Xylenes*	**0.311**		0.150	mg/kg	50	3100606	JH	08-Oct-23	8021B	GC-NC1
Total BTEX	**0.311**		0.300	mg/kg	50	3100606	JH	08-Oct-23	8021B	GC-NC1
Surrogate: 4-Bromofluorobenzene (PID)			*189 %*	*71.5-134*		*3100606*	JH	*08-Oct-23*	*8021B*	
Petroleum Hydrocarbons by GC FID										**S-06**
GRO C6-C10*	**314**		100	mg/kg	10	3100603	MS	09-Oct-23	8015B	
DRO >C10-C28*	**27600**		100	mg/kg	10	3100603	MS	09-Oct-23	8015B	
EXT DRO >C28-C36	**4500**		100	mg/kg	10	3100603	MS	09-Oct-23	8015B	
Surrogate: 1-Chlorooctane			*226 %*	*48.2-134*		*3100603*	MS	*09-Oct-23*	*8015B*	
Surrogate: 1-Chlorooctadecane			*514 %*	*49.1-148*		*3100603*	MS	*09-Oct-23*	*8015B*	

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CARDINAL Laboratories

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Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: MESA B 22-25 TANK BATTERY Project Number: 03C2012067 Project Manager: HADLIE GREEN Fax To:	Reported: 17-Oct-23 09:03

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3100635 - 1:4 DI Water										
Blank (3100635-BLK1)				Prepared & Analyzed: 06-Oct-23						
Chloride	ND	16.0	mg/kg							
LCS (3100635-BS1)				Prepared & Analyzed: 06-Oct-23						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (3100635-BSD1)				Prepared & Analyzed: 06-Oct-23						
Chloride	432	16.0	mg/kg	400		108	80-120	3.77	20	
Batch 3100642 - 1:4 DI Water										
Blank (3100642-BLK1)				Prepared & Analyzed: 06-Oct-23						
Chloride	ND	16.0	mg/kg							
LCS (3100642-BS1)				Prepared & Analyzed: 06-Oct-23						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (3100642-BSD1)				Prepared & Analyzed: 06-Oct-23						
Chloride	448	16.0	mg/kg	400		112	80-120	7.41	20	

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CARDINAL Laboratories

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Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: MESA B 22-25 TANK BATTERY Project Number: 03C2012067 Project Manager: HADLIE GREEN Fax To:	Reported: 17-Oct-23 09:03

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 3100606 - Volatiles										
Blank (3100606-BLK1)				Prepared: 06-Oct-23 Analyzed: 07-Oct-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)	*0.0505*		mg/kg	*0.0500*		*101*	*71.5-134*			
LCS (3100606-BS1)				Prepared: 06-Oct-23 Analyzed: 07-Oct-23						
Benzene	2.01	0.050	mg/kg	2.00		101	82.8-130			
Toluene	2.04	0.050	mg/kg	2.00		102	86-128			
Ethylbenzene	2.13	0.050	mg/kg	2.00		107	85.9-128			
m,p-Xylene	4.31	0.100	mg/kg	4.00		108	89-129			
o-Xylene	2.17	0.050	mg/kg	2.00		108	86.1-125			
Total Xylenes	6.47	0.150	mg/kg	6.00		108	88.2-128			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0534*		mg/kg	*0.0500*		*107*	*71.5-134*			
LCS Dup (3100606-BSD1)				Prepared: 06-Oct-23 Analyzed: 07-Oct-23						
Benzene	2.05	0.050	mg/kg	2.00		102	82.8-130	1.83	15.8	
Toluene	1.93	0.050	mg/kg	2.00		96.7	86-128	5.17	15.9	
Ethylbenzene	2.01	0.050	mg/kg	2.00		100	85.9-128	6.07	16	
m,p-Xylene	4.03	0.100	mg/kg	4.00		101	89-129	6.71	16.2	
o-Xylene	2.03	0.050	mg/kg	2.00		102	86.1-125	6.27	16.7	
Total Xylenes	6.06	0.150	mg/kg	6.00		101	88.2-128	6.56	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0512*		mg/kg	*0.0500*		*102*	*71.5-134*			

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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 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: MESA B 22-25 TANK BATTERY Project Number: 03C2012067 Project Manager: HADLIE GREEN Fax To:	Reported: 17-Oct-23 09:03

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 3100537 - General Prep - Organics										
Blank (3100537-BLK1)				Prepared: 05-Oct-23 Analyzed: 06-Oct-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	*52.0*		mg/kg	*50.0*		*104*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*64.0*		mg/kg	*50.0*		*128*	*49.1-148*			
LCS (3100537-BS1)				Prepared: 05-Oct-23 Analyzed: 06-Oct-23						
GRO C6-C10	213	10.0	mg/kg	200		106	66.4-123			
DRO >C10-C28	246	10.0	mg/kg	200		123	66.5-118			BS-3
Total TPH C6-C28	459	10.0	mg/kg	400		115	77.6-123			
Surrogate: 1-Chlorooctane	*55.5*		mg/kg	*50.0*		*111*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*63.4*		mg/kg	*50.0*		*127*	*49.1-148*			
LCS Dup (3100537-BSD1)				Prepared: 05-Oct-23 Analyzed: 06-Oct-23						
GRO C6-C10	216	10.0	mg/kg	200		108	66.4-123	1.73	17.7	
DRO >C10-C28	251	10.0	mg/kg	200		126	66.5-118	2.02	21	BS-3
Total TPH C6-C28	468	10.0	mg/kg	400		117	77.6-123	1.89	18.5	
Surrogate: 1-Chlorooctane	*56.6*		mg/kg	*50.0*		*113*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*64.7*		mg/kg	*50.0*		*129*	*49.1-148*			
Batch 3100603 - General Prep - Organics										
Blank (3100603-BLK1)				Prepared & Analyzed: 06-Oct-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	*45.5*		mg/kg	*50.0*		*91.0*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*53.4*		mg/kg	*50.0*		*107*	*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 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: MESA B 22-25 TANK BATTERY Project Number: 03C2012067 Project Manager: HADLIE GREEN Fax To:	Reported: 17-Oct-23 09:03

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 3100603 - General Prep - Organics										
LCS (3100603-BS1)				Prepared & Analyzed: 06-Oct-23						
GRO C6-C10	201	10.0	mg/kg	200		100	66.4-123			
DRO >C10-C28	220	10.0	mg/kg	200		110	66.5-118			
Total TPH C6-C28	420	10.0	mg/kg	400		105	77.6-123			
Surrogate: 1-Chlorooctane	*50.2*		mg/kg	*50.0*		*100*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*55.4*		mg/kg	*50.0*		*111*	*49.1-148*			
LCS Dup (3100603-BSD1)				Prepared & Analyzed: 06-Oct-23						
GRO C6-C10	203	10.0	mg/kg	200		102	66.4-123	1.38	17.7	
DRO >C10-C28	221	10.0	mg/kg	200		110	66.5-118	0.397	21	
Total TPH C6-C28	424	10.0	mg/kg	400		106	77.6-123	0.867	18.5	
Surrogate: 1-Chlorooctane	*50.6*		mg/kg	*50.0*		*101*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*55.9*		mg/kg	*50.0*		*112*	*49.1-148*			

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Celey D. Keene, Lab Director/Quality Manager

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Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
GC-NC1	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are biased high with interfering compounds.
GC-NC	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are reported as ND.
BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

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
Project Manager:	Hadlie Green
Address:	3122 National Parks Hwy
City:	Carlsbad
State:	NM
Zip:	88220
Phone #:	432-557-8895
Fax #:	
Project #:	03C2012067
Project Owner:	
Project Name:	Mesa B 22-25 Tank Battery (Mesa B East)
Project Location:	32.05980, -103.60435
Sampler Name:	Peter Van Patten

BILL TO

P.O. #:	
Company:	BTA Oil
Attn:	Kelton Beaird
Address:	104 S. Pecos St
City:	Midland
State:	TX
Zip:	79701
Phone #:	432-312-2203
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY

Lab I.D.	Sample I.D.	Depth	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	TPH	BTEX	Chlorides
H235432																		
1	BH01	1	C				✓					✓		10.5.23	915	X	X	X
2	BH01A	2	C				✓					✓			920	X	X	X
3	BH02	1	C				✓					✓			950	X	X	X
4	BH02A	1.5	C				✓					✓			955	X	X	X
5	BH03	1	C				✓					✓			1020	X	X	X
6	BH03A	1.5	C				✓					✓			1025	X	X	X
7	SS15	0.5	C				✓					✓			1035	X	X	X
* 8	SS16	0.5	C				✓					✓			1045	X	X	X
9	SS17	0.5	C				✓					✓		↓	1055	X	X	X

Relinquished By:	Peter Van Patten	Date:	10.5.23
		Time:	1330
Received By:			
Relinquished By:		Date:	
		Time:	
Received By:			

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

All Results are emailed. Please provide Email address:

hgreen@ensolum.com

REMARKS: Cooler Temp Blank 0.7°C

* Customer requested Id changes.

Turnaround Time: Standard ☑ Rush ☐

Thermometer ID #140
Correction Factor 0°C

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

Observed Temp. °C 13.7
Corrected Temp. °C

Sample Condition: Cool ☐ Yes ☑ No; Intact ☑ Yes ☐ No

CHECKED BY: (Initials) TO

Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No; Intact ☐ Yes ☐ No

Observed Temp. °C

Corrected Temp. °C

10/11/23

FORM-006 R 3.4 07/11/23

† 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

November 17, 2023

HADLIE GREEN

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MESA B 22-25 TANK BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 11/14/23 11:40.

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:	11/14/2023	Sampling Date:	11/13/2023
Reported:	11/17/2023	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067	Sample Received By:	Tamara Oldaker
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: SS 07 A @ 2' (H236219-01)

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	11/15/2023	ND	1.81	90.3	2.00	0.0557	
Toluene*	<0.050	0.050	11/15/2023	ND	1.94	96.8	2.00	0.265	
Ethylbenzene*	<0.050	0.050	11/15/2023	ND	1.95	97.6	2.00	0.694	
Total Xylenes*	<0.150	0.150	11/15/2023	ND	5.91	98.4	6.00	0.565	
Total BTEX	<0.300	0.300	11/15/2023	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/15/2023	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	11/15/2023	ND	200	99.8	200	3.63	
DRO >C10-C28*	<10.0	10.0	11/15/2023	ND	203	101	200	2.06	
EXT DRO >C28-C36	<10.0	10.0	11/15/2023	ND					

Surrogate: 1-Chlorooctane *88.6 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *87.1 %* *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:	11/14/2023	Sampling Date:	11/13/2023
Reported:	11/17/2023	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067	Sample Received By:	Tamara Oldaker
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: SS 08 A @ 2' (H236219-02)

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	11/15/2023	ND	1.81	90.3	2.00	0.0557	
Toluene*	<0.050	0.050	11/15/2023	ND	1.94	96.8	2.00	0.265	
Ethylbenzene*	<0.050	0.050	11/15/2023	ND	1.95	97.6	2.00	0.694	
Total Xylenes*	<0.150	0.150	11/15/2023	ND	5.91	98.4	6.00	0.565	
Total BTEX	<0.300	0.300	11/15/2023	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**144**	16.0	11/15/2023	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	11/15/2023	ND	198	98.8	200	0.820	
DRO >C10-C28*	<10.0	10.0	11/15/2023	ND	200	100	200	2.72	
EXT DRO >C28-C36	<10.0	10.0	11/15/2023	ND					

Surrogate: 1-Chlorooctane *88.5 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *97.6 %* *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:	11/14/2023	Sampling Date:	11/13/2023
Reported:	11/17/2023	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067	Sample Received By:	Tamara Oldaker
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: SS 09 A @ 2' (H236219-03)

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	11/15/2023	ND	1.81	90.3	2.00	0.0557	
Toluene*	<0.050	0.050	11/15/2023	ND	1.94	96.8	2.00	0.265	
Ethylbenzene*	<0.050	0.050	11/15/2023	ND	1.95	97.6	2.00	0.694	
Total Xylenes*	<0.150	0.150	11/15/2023	ND	5.91	98.4	6.00	0.565	
Total BTEX	<0.300	0.300	11/15/2023	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	11/15/2023	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	11/15/2023	ND	198	98.8	200	0.820	
DRO >C10-C28*	<10.0	10.0	11/15/2023	ND	200	100	200	2.72	
EXT DRO >C28-C36	<10.0	10.0	11/15/2023	ND					

Surrogate: 1-Chlorooctane *82.5 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *90.3 %* *49.1-148*

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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:	11/14/2023	Sampling Date:	11/13/2023
Reported:	11/17/2023	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067	Sample Received By:	Tamara Oldaker
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: SS 10 A @ 2' (H236219-04)

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	11/15/2023	ND	1.81	90.3	2.00	0.0557	
Toluene*	<0.050	0.050	11/15/2023	ND	1.94	96.8	2.00	0.265	
Ethylbenzene*	<0.050	0.050	11/15/2023	ND	1.95	97.6	2.00	0.694	
Total Xylenes*	<0.150	0.150	11/15/2023	ND	5.91	98.4	6.00	0.565	
Total BTEX	<0.300	0.300	11/15/2023	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	11/15/2023	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	11/15/2023	ND	198	98.8	200	0.820	
DRO >C10-C28*	<10.0	10.0	11/15/2023	ND	200	100	200	2.72	
EXT DRO >C28-C36	<10.0	10.0	11/15/2023	ND					

Surrogate: 1-Chlorooctane *86.3 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *96.4 %* *49.1-148*

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CARDINAL Laboratories

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Analytical Results For:

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

Received:	11/14/2023	Sampling Date:	11/13/2023
Reported:	11/17/2023	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067	Sample Received By:	Tamara Oldaker
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: SS 15 A @ 2' (H236219-05)

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	11/15/2023	ND	1.81	90.3	2.00	0.0557	
Toluene*	<0.050	0.050	11/15/2023	ND	1.94	96.8	2.00	0.265	
Ethylbenzene*	<0.050	0.050	11/15/2023	ND	1.95	97.6	2.00	0.694	
Total Xylenes*	<0.150	0.150	11/15/2023	ND	5.91	98.4	6.00	0.565	
Total BTEX	<0.300	0.300	11/15/2023	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	11/15/2023	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	11/15/2023	ND	198	98.8	200	0.820	
DRO >C10-C28*	<10.0	10.0	11/15/2023	ND	200	100	200	2.72	
EXT DRO >C28-C36	<10.0	10.0	11/15/2023	ND					

Surrogate: 1-Chlorooctane *84.3 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *94.0 %* *49.1-148*

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Analytical Results For:

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

Received:	11/14/2023	Sampling Date:	11/13/2023
Reported:	11/17/2023	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067	Sample Received By:	Tamara Oldaker
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: SS 16 A @ 2' (H236219-06)

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	11/15/2023	ND	1.81	90.3	2.00	0.0557	
Toluene*	<0.050	0.050	11/15/2023	ND	1.94	96.8	2.00	0.265	
Ethylbenzene*	<0.050	0.050	11/15/2023	ND	1.95	97.6	2.00	0.694	
Total Xylenes*	<0.150	0.150	11/15/2023	ND	5.91	98.4	6.00	0.565	
Total BTEX	<0.300	0.300	11/15/2023	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	11/15/2023	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	11/15/2023	ND	198	98.8	200	0.820	
DRO >C10-C28*	<10.0	10.0	11/15/2023	ND	200	100	200	2.72	
EXT DRO >C28-C36	<10.0	10.0	11/15/2023	ND					

Surrogate: 1-Chlorooctane *84.6 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *93.4 %* *49.1-148*

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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:	11/14/2023	Sampling Date:	11/13/2023
Reported:	11/17/2023	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067	Sample Received By:	Tamara Oldaker
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: BH 04 @ 1' (H236219-07)

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	11/15/2023	ND	1.81	90.3	2.00	0.0557	
Toluene*	<0.050	0.050	11/15/2023	ND	1.94	96.8	2.00	0.265	
Ethylbenzene*	<0.050	0.050	11/15/2023	ND	1.95	97.6	2.00	0.694	
Total Xylenes*	**0.263**	0.150	11/15/2023	ND	5.91	98.4	6.00	0.565	GC-NC1
Total BTEX	<0.300	0.300	11/15/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *125 %* *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	11/15/2023	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*	**146**	10.0	11/15/2023	ND	198	98.8	200	0.820	
DRO >C10-C28*	**2560**	10.0	11/15/2023	ND	200	100	200	2.72	
EXT DRO >C28-C36	**345**	10.0	11/15/2023	ND					

Surrogate: 1-Chlorooctane *111 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *77.8 %* *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:	11/14/2023	Sampling Date:	11/13/2023
Reported:	11/17/2023	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067	Sample Received By:	Tamara Oldaker
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: BH 04 A @ 3' (H236219-08)

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	11/15/2023	ND	1.81	90.3	2.00	0.0557	
Toluene*	<0.050	0.050	11/15/2023	ND	1.94	96.8	2.00	0.265	
Ethylbenzene*	<0.050	0.050	11/15/2023	ND	1.95	97.6	2.00	0.694	
Total Xylenes*	<0.150	0.150	11/15/2023	ND	5.91	98.4	6.00	0.565	
Total BTEX	<0.300	0.300	11/15/2023	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/15/2023	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	11/15/2023	ND	198	98.8	200	0.820	
DRO >C10-C28*	<10.0	10.0	11/15/2023	ND	200	100	200	2.72	
EXT DRO >C28-C36	<10.0	10.0	11/15/2023	ND					

Surrogate: 1-Chlorooctane *89.1 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *98.9 %* *49.1-148*

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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:	11/14/2023	Sampling Date:	11/13/2023
Reported:	11/17/2023	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067	Sample Received By:	Tamara Oldaker
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: SS 18 @ .5' (H236219-09)

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	11/15/2023	ND	1.81	90.3	2.00	0.0557	
Toluene*	<0.050	0.050	11/15/2023	ND	1.94	96.8	2.00	0.265	
Ethylbenzene*	<0.050	0.050	11/15/2023	ND	1.95	97.6	2.00	0.694	
Total Xylenes*	<0.150	0.150	11/15/2023	ND	5.91	98.4	6.00	0.565	
Total BTEX	<0.300	0.300	11/15/2023	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	11/15/2023	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	11/15/2023	ND	198	98.8	200	0.820	
DRO >C10-C28*	<10.0	10.0	11/15/2023	ND	200	100	200	2.72	
EXT DRO >C28-C36	<10.0	10.0	11/15/2023	ND					

Surrogate: 1-Chlorooctane *117 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *129 %* *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:	11/14/2023	Sampling Date:	11/13/2023
Reported:	11/17/2023	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067	Sample Received By:	Tamara Oldaker
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: SS 19 @ .5' (H236219-10)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/15/2023	ND	1.81	90.3	2.00	0.0557	
Toluene*	<0.050	0.050	11/15/2023	ND	1.94	96.8	2.00	0.265	
Ethylbenzene*	<0.050	0.050	11/15/2023	ND	1.95	97.6	2.00	0.694	
Total Xylenes*	<0.150	0.150	11/15/2023	ND	5.91	98.4	6.00	0.565	
Total BTEX	<0.300	0.300	11/15/2023	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	11/15/2023	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	11/15/2023	ND	198	98.8	200	0.820	
DRO >C10-C28*	<10.0	10.0	11/15/2023	ND	200	100	200	2.72	
EXT DRO >C28-C36	<10.0	10.0	11/15/2023	ND					

Surrogate: 1-Chlorooctane *85.3 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *94.9 %* *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:	11/14/2023	Sampling Date:	11/13/2023
Reported:	11/17/2023	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067	Sample Received By:	Tamara Oldaker
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: SS 20 @ .5' (H236219-11)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/15/2023	ND	1.81	90.3	2.00	0.0557	
Toluene*	<0.050	0.050	11/15/2023	ND	1.94	96.8	2.00	0.265	
Ethylbenzene*	<0.050	0.050	11/15/2023	ND	1.95	97.6	2.00	0.694	
Total Xylenes*	<0.150	0.150	11/15/2023	ND	5.91	98.4	6.00	0.565	
Total BTEX	<0.300	0.300	11/15/2023	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	11/15/2023	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	11/15/2023	ND	198	98.8	200	0.820	
DRO >C10-C28*	<10.0	10.0	11/15/2023	ND	200	100	200	2.72	
EXT DRO >C28-C36	<10.0	10.0	11/15/2023	ND					

Surrogate: 1-Chlorooctane *83.6 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *93.5 %* *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:	11/14/2023	Sampling Date:	11/13/2023
Reported:	11/17/2023	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067	Sample Received By:	Tamara Oldaker
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: SS 21 @ .5' (H236219-12)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/15/2023	ND	1.81	90.3	2.00	0.0557	
Toluene*	<0.050	0.050	11/15/2023	ND	1.94	96.8	2.00	0.265	
Ethylbenzene*	<0.050	0.050	11/15/2023	ND	1.95	97.6	2.00	0.694	
Total Xylenes*	<0.150	0.150	11/15/2023	ND	5.91	98.4	6.00	0.565	
Total BTEX	<0.300	0.300	11/15/2023	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/15/2023	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	11/15/2023	ND	198	98.8	200	0.820	
DRO >C10-C28*	<10.0	10.0	11/15/2023	ND	200	100	200	2.72	
EXT DRO >C28-C36	<10.0	10.0	11/15/2023	ND					

Surrogate: 1-Chlorooctane *86.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *95.3 %* *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

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.
GC-NC1	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are biased high with interfering compounds.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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** P.O. #:	
Project Manager:	Hadlie Green	Company:	BTA OIL
Address:	3122 Nat'l Parks Hwy	Attn:	Kelton Beaird
City:	Carlsbad State: NM Zip: 88220	Address:	104 S Pecos St
Phone #:	432-557-8895 Fax #: -	City:	Midland
Project #:	03C2012067 Project Owner: BTA	State: TX Zip:	79701
Project Name:	Mesa B 22-25 Tank Battery	Phone #:	
Project Location:	32.05180, -103.60935	Fax #:	
Sampler Name:	Julianna Falcomata		

ANALYSIS REQUEST: BTEX, TPH, Chlorides

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	BTEX	TPH	Chlorides
H236219																	
1	SS01A @ 2'	C	1			X					X		11/13/23	1105	X	X	X
2	SS02A @ 2'													1115			
3	SS03A @ 2'													1125			
4	SS04A @ 2'													1135			
5	SS05A @ 2'													1325			
6	SS06A @ 2'													1335			
7	BH01 @ 1'													1210			
8	BH01A @ 3'													1220			
9	SS18 @ .5'													1400			
10	SS19 @ .5'													1405			

Relinquished By: Julianna Falcomata	Date: 11-14-23 Time: 7140	Received By: Tamara Oldaker	Verbal Result: ☐ Yes ☑ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	All Results are emailed. Please provide Email address: hgreen@ensolum.com
			REMARKS: nAPP2209078912
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 1.3 Corrected Temp. °C	Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials) TO
Turnaround Time: Standard ☒ Rush ☐	Thermometer ID #140 Correction Factor 0°C	Bacteria (only) Sample Condition Cool: ☐ Yes ☐ No Intact: ☐ Yes ☐ No	Observed Temp. °C Corrected Temp. °C

FORM-006 R 3.4 07/11/23

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

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	Ensolum, LLC
Project Manager:	Hadlie Green
Address:	3122 Nat'l Parks Hwy
City:	Carlsbad State: NM Zip: 88220
Phone #:	432-557-8805 Fax #:
Project #:	23C2012467 Project Owner: BTA
Project Name:	Mesa B 22-25 Tank Battery
Project Location:	(32.059480, -103.607435)
Sampler Name:	Juliana Falcomato

BILL TO

P.O. #:	
Company:	BTA OIL
Attn:	Melton Braird
Address:	104 S Pecos St
City:	Midland
State:	TX Zip: 79701
Phone #:	
Fax #:	

ANALYSIS REQUEST

BTEX, TPH, Chlorides

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME
H236219-11	SS20 @ 0.5'	C	1			X					X		11/13/23	1410
12	SS21 @ 0.5'	C	1			X					X		11/13/23	1415

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 consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	Date: 11-14-23 Time: 1140	Received By:	
Relinquished By:	Date: Time:	Received By:	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 1.3 Corrected Temp. °C	Sample Condition Cool: Yes / No Intact: Yes / No	CHECKED BY: (Initials)

Verbal Result: ☐ Yes ☐ No Add'l Phone #:
All Results are emailed. Please provide Email address:
hgreen@ensolum.com
REMARKS:
nAPP2209078gr

Turnaround Time: Standard ☒ Rush ☐
Thermometer ID #140
Correction Factor 0°C

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

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

FORM-006 R 3.4 07/11/23

CARDINAL Laboratories

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

January 02, 2024

HADLIE GREEN

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MESA B 22-25 TANK BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 12/29/23 8:59.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/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:	12/29/2023	Sampling Date:	12/28/2023
Reported:	01/02/2024	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067	Sample Received By:	Dionica Hinojos
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: FS01 3 (H236862-01)

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	12/29/2023	ND	2.26	113	2.00	0.401	
Toluene*	<0.050	0.050	12/29/2023	ND	2.21	110	2.00	0.707	
Ethylbenzene*	<0.050	0.050	12/29/2023	ND	2.22	111	2.00	0.486	
Total Xylenes*	<0.150	0.150	12/29/2023	ND	6.49	108	6.00	0.496	
Total BTEX	<0.300	0.300	12/29/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.9 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	12/29/2023	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	12/29/2023	ND	229	114	200	2.58	
DRO >C10-C28*	**392**	10.0	12/29/2023	ND	206	103	200	7.37	
EXT DRO >C28-C36	**103**	10.0	12/29/2023	ND					

Surrogate: 1-Chlorooctane *99.6 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *134 %* *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:	12/29/2023	Sampling Date:	12/28/2023
Reported:	01/02/2024	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067	Sample Received By:	Dionica Hinojos
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: FS02 3 (H236862-02)

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	12/29/2023	ND	2.26	113	2.00	0.401	
Toluene*	<0.050	0.050	12/29/2023	ND	2.21	110	2.00	0.707	
Ethylbenzene*	<0.050	0.050	12/29/2023	ND	2.22	111	2.00	0.486	
Total Xylenes*	<0.150	0.150	12/29/2023	ND	6.49	108	6.00	0.496	
Total BTEX	<0.300	0.300	12/29/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.8 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	12/29/2023	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	12/29/2023	ND	229	114	200	2.58	
DRO >C10-C28*	**397**	10.0	12/29/2023	ND	206	103	200	7.37	
EXT DRO >C28-C36	**81.7**	10.0	12/29/2023	ND					

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

Surrogate: 1-Chlorooctadecane *112 %* *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:	12/29/2023	Sampling Date:	12/28/2023
Reported:	01/02/2024	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067	Sample Received By:	Dionica Hinojos
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: FS03 3 (H236862-03)

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	12/29/2023	ND	2.26	113	2.00	0.401	
Toluene*	<0.050	0.050	12/29/2023	ND	2.21	110	2.00	0.707	
Ethylbenzene*	<0.050	0.050	12/29/2023	ND	2.22	111	2.00	0.486	
Total Xylenes*	<0.150	0.150	12/29/2023	ND	6.49	108	6.00	0.496	
Total BTEX	<0.300	0.300	12/29/2023	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	12/29/2023	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	12/29/2023	ND	229	114	200	2.58	
DRO >C10-C28*	**521**	10.0	12/29/2023	ND	206	103	200	7.37	
EXT DRO >C28-C36	**117**	10.0	12/29/2023	ND					

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

Surrogate: 1-Chlorooctadecane *139 %* *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:	12/29/2023	Sampling Date:	12/28/2023
Reported:	01/02/2024	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067	Sample Received By:	Dionica Hinojos
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: FS04 3 (H236862-04)

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	12/29/2023	ND	2.26	113	2.00	0.401	
Toluene*	<0.050	0.050	12/29/2023	ND	2.21	110	2.00	0.707	
Ethylbenzene*	<0.050	0.050	12/29/2023	ND	2.22	111	2.00	0.486	
Total Xylenes*	<0.150	0.150	12/29/2023	ND	6.49	108	6.00	0.496	
Total BTEX	<0.300	0.300	12/29/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.0 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	12/29/2023	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	12/29/2023	ND	229	114	200	2.58	
DRO >C10-C28*	<10.0	10.0	12/29/2023	ND	206	103	200	7.37	
EXT DRO >C28-C36	<10.0	10.0	12/29/2023	ND					

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

Surrogate: 1-Chlorooctadecane *123 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

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:	12/29/2023	Sampling Date:	12/28/2023
Reported:	01/02/2024	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067	Sample Received By:	Dionica Hinojos
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: FS05 3 (H236862-05)

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	12/29/2023	ND	2.26	113	2.00	0.401	
Toluene*	<0.050	0.050	12/29/2023	ND	2.21	110	2.00	0.707	
Ethylbenzene*	<0.050	0.050	12/29/2023	ND	2.22	111	2.00	0.486	
Total Xylenes*	<0.150	0.150	12/29/2023	ND	6.49	108	6.00	0.496	
Total BTEX	<0.300	0.300	12/29/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.3 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	12/29/2023	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	12/29/2023	ND	229	114	200	2.58	
DRO >C10-C28*	**45.6**	10.0	12/29/2023	ND	206	103	200	7.37	
EXT DRO >C28-C36	<10.0	10.0	12/29/2023	ND					

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

Surrogate: 1-Chlorooctadecane *117 %* *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:	12/29/2023	Sampling Date:	12/28/2023
Reported:	01/02/2024	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067	Sample Received By:	Dionica Hinojos
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: SW01 0-3 (H236862-06)

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	12/29/2023	ND	2.25	113	2.00	1.15	
Toluene*	<0.050	0.050	12/29/2023	ND	2.20	110	2.00	0.857	
Ethylbenzene*	<0.050	0.050	12/29/2023	ND	2.19	109	2.00	1.44	
Total Xylenes*	<0.150	0.150	12/29/2023	ND	6.37	106	6.00	1.51	
Total BTEX	<0.300	0.300	12/29/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.4 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	12/29/2023	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	12/29/2023	ND	220	110	200	2.33	
DRO >C10-C28*	<10.0	10.0	12/29/2023	ND	196	98.2	200	2.21	
EXT DRO >C28-C36	<10.0	10.0	12/29/2023	ND					

Surrogate: 1-Chlorooctane *99.4 %* *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:	12/29/2023	Sampling Date:	12/28/2023
Reported:	01/02/2024	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067	Sample Received By:	Dionica Hinojos
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: SW02 0-3 (H236862-07)

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	12/29/2023	ND	2.25	113	2.00	1.15	
Toluene*	<0.050	0.050	12/29/2023	ND	2.20	110	2.00	0.857	
Ethylbenzene*	<0.050	0.050	12/29/2023	ND	2.19	109	2.00	1.44	
Total Xylenes*	<0.150	0.150	12/29/2023	ND	6.37	106	6.00	1.51	
Total BTEX	<0.300	0.300	12/29/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.3 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	12/29/2023	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	12/29/2023	ND	220	110	200	2.33	
DRO >C10-C28*	**55.2**	10.0	12/29/2023	ND	196	98.2	200	2.21	
EXT DRO >C28-C36	<10.0	10.0	12/29/2023	ND					

Surrogate: 1-Chlorooctane *105 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *125 %* *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:	12/29/2023	Sampling Date:	12/28/2023
Reported:	01/02/2024	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067	Sample Received By:	Dionica Hinojos
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: SW03 0-3 (H236862-08)

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	12/29/2023	ND	2.25	113	2.00	1.15	
Toluene*	<0.050	0.050	12/29/2023	ND	2.20	110	2.00	0.857	
Ethylbenzene*	<0.050	0.050	12/29/2023	ND	2.19	109	2.00	1.44	GC-NC
Total Xylenes*	<0.150	0.150	12/29/2023	ND	6.37	106	6.00	1.51	GC-NC
Total BTEX	<0.300	0.300	12/29/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *132 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	12/29/2023	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*	**28.3**	10.0	12/29/2023	ND	220	110	200	2.33	
DRO >C10-C28*	**1880**	10.0	12/29/2023	ND	196	98.2	200	2.21	
EXT DRO >C28-C36	**487**	10.0	12/29/2023	ND					

Surrogate: 1-Chlorooctane *99.3 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *98.5 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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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.
GC-NC	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are reported as ND.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

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: ~~TX~~ NM Zip: 88220	Attn: Kelton Beaird
Phone #: 432-557-8895 Fax #:	Address: 104 S Pecos St
Project #: 03C2012067 Project Owner:	City: Midland
Project Name: Mesa B 22-25 Tank Battery	State: TX Zip: 79701
Project Location: 32.05480, -103.60435	Phone #:
Sampler Name: Sarah Wehling	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	Cl-	BTEX	TPH
H231862 1	FS01	3	C	1			X					X		12/28/23	11:00	X	X	X
2	FS02	3													11:05			
3	FS03	3													11:10			
4	FS04	3													11:20			
5	FS05	3													11:25			
6	SW01	0-3													11:40			
7	SW02	0-3													11:45			
8	SW03	0-3													11:50			

ANALYSIS REQUEST

Relinquished By:	Date: 12-29-23	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 6:59		All Results are emailed. Please provide Email address: Hadlie hgreen@ensolum.com TMorrissey@ensolum.com SWehling@ensolum.com
Relinquished By:	Date:	Received By:	REMARKS: Ice. Client #=nAPP2209078912 temp blank 0.1°c
	Time:		
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 3.9°c Corrected Temp. °C	Sample Condition Cool ☑ Yes Intact ☑ Yes ☐ No ☐ No	CHECKED BY: (Initials)
			Turnaround Time: Standard ☒ Rush ☐ Thermometer ID #113 Correction Factor -0.5°C
			Bacteria (only) Sample Condition Cool ☐ Yes Intact ☐ Yes ☐ No ☐ 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

January 30, 2024

HADLIE GREEN

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MESA B 22-25 TANK BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 01/26/24 14:02.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/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:	01/26/2024	Sampling Date:	01/16/2024
Reported:	01/30/2024	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067 (MESA B EAST)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: FS 06 3' (H240369-01)

BTEX 8021B mg/kg Analyzed By: JH HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/29/2024	ND	2.06	103	2.00	5.88	
Toluene*	<0.050	0.050	01/29/2024	ND	2.05	103	2.00	5.68	
Ethylbenzene*	<0.050	0.050	01/29/2024	ND	2.05	102	2.00	5.68	
Total Xylenes*	<0.150	0.150	01/29/2024	ND	5.99	99.9	6.00	5.60	
Total BTEX	<0.300	0.300	01/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.8 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	01/29/2024	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/29/2024	ND	226	113	200	3.90	
DRO >C10-C28*	<10.0	10.0	01/29/2024	ND	220	110	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	01/29/2024	ND					

Surrogate: 1-Chlorooctane *83.9 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *95.0 %* *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:	01/26/2024	Sampling Date:	01/16/2024
Reported:	01/30/2024	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067 (MESA B EAST)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: FS 07 3' (H240369-02)

BTEX 8021B mg/kg Analyzed By: JH HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/29/2024	ND	2.06	103	2.00	5.88	
Toluene*	<0.050	0.050	01/29/2024	ND	2.05	103	2.00	5.68	
Ethylbenzene*	<0.050	0.050	01/29/2024	ND	2.05	102	2.00	5.68	
Total Xylenes*	<0.150	0.150	01/29/2024	ND	5.99	99.9	6.00	5.60	
Total BTEX	<0.300	0.300	01/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.3 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**128**	16.0	01/29/2024	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/29/2024	ND	226	113	200	3.90	
DRO >C10-C28*	<10.0	10.0	01/29/2024	ND	220	110	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	01/29/2024	ND					

Surrogate: 1-Chlorooctane *107 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *119 %* *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:	01/26/2024	Sampling Date:	01/16/2024
Reported:	01/30/2024	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067 (MESA B EAST)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: FS 08 3' (H240369-03)

BTEX 8021B mg/kg Analyzed By: JH HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/29/2024	ND	2.06	103	2.00	5.88	
Toluene*	<0.050	0.050	01/29/2024	ND	2.05	103	2.00	5.68	
Ethylbenzene*	<0.050	0.050	01/29/2024	ND	2.05	102	2.00	5.68	
Total Xylenes*	<0.150	0.150	01/29/2024	ND	5.99	99.9	6.00	5.60	
Total BTEX	<0.300	0.300	01/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.7 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**128**	16.0	01/29/2024	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/29/2024	ND	226	113	200	3.90	
DRO >C10-C28*	<10.0	10.0	01/29/2024	ND	220	110	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	01/29/2024	ND					

Surrogate: 1-Chlorooctane *102 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *114 %* *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:	01/26/2024	Sampling Date:	01/16/2024
Reported:	01/30/2024	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067 (MESA B EAST)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: FS 09 3' (H240369-04)

BTEX 8021B mg/kg Analyzed By: JH HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/29/2024	ND	2.06	103	2.00	5.88	
Toluene*	<0.050	0.050	01/29/2024	ND	2.05	103	2.00	5.68	
Ethylbenzene*	<0.050	0.050	01/29/2024	ND	2.05	102	2.00	5.68	
Total Xylenes*	<0.150	0.150	01/29/2024	ND	5.99	99.9	6.00	5.60	
Total BTEX	<0.300	0.300	01/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.2 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**144**	16.0	01/29/2024	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/29/2024	ND	226	113	200	3.90	
DRO >C10-C28*	<10.0	10.0	01/29/2024	ND	220	110	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	01/29/2024	ND					

Surrogate: 1-Chlorooctane *102 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *114 %* *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:	01/26/2024	Sampling Date:	01/16/2024
Reported:	01/30/2024	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067 (MESA B EAST)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: FS 10 3' (H240369-05)

BTEX 8021B mg/kg Analyzed By: JH HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/29/2024	ND	2.06	103	2.00	5.88	
Toluene*	<0.050	0.050	01/29/2024	ND	2.05	103	2.00	5.68	
Ethylbenzene*	<0.050	0.050	01/29/2024	ND	2.05	102	2.00	5.68	
Total Xylenes*	<0.150	0.150	01/29/2024	ND	5.99	99.9	6.00	5.60	
Total BTEX	<0.300	0.300	01/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.9 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**128**	16.0	01/29/2024	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/29/2024	ND	226	113	200	3.90	
DRO >C10-C28*	<10.0	10.0	01/29/2024	ND	220	110	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	01/29/2024	ND					

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

Surrogate: 1-Chlorooctadecane *116 %* *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:	01/26/2024	Sampling Date:	01/16/2024
Reported:	01/30/2024	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067 (MESA B EAST)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: FS 11 1' (H240369-06)

BTEX 8021B mg/kg Analyzed By: JH HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/29/2024	ND	2.06	103	2.00	5.88	
Toluene*	<0.050	0.050	01/29/2024	ND	2.05	103	2.00	5.68	
Ethylbenzene*	<0.050	0.050	01/29/2024	ND	2.05	102	2.00	5.68	
Total Xylenes*	<0.150	0.150	01/29/2024	ND	5.99	99.9	6.00	5.60	
Total BTEX	<0.300	0.300	01/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.5 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	01/29/2024	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/29/2024	ND	226	113	200	3.90	
DRO >C10-C28*	<10.0	10.0	01/29/2024	ND	220	110	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	01/29/2024	ND					

Surrogate: 1-Chlorooctane *101 %* *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:	01/26/2024	Sampling Date:	01/16/2024
Reported:	01/30/2024	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067 (MESA B EAST)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: FS 12 1' (H240369-07)

BTEX 8021B mg/kg Analyzed By: JH HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/29/2024	ND	2.06	103	2.00	5.88	
Toluene*	<0.050	0.050	01/29/2024	ND	2.05	103	2.00	5.68	
Ethylbenzene*	<0.050	0.050	01/29/2024	ND	2.05	102	2.00	5.68	
Total Xylenes*	<0.150	0.150	01/29/2024	ND	5.99	99.9	6.00	5.60	
Total BTEX	<0.300	0.300	01/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.9 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	01/29/2024	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**13.0**	10.0	01/29/2024	ND	226	113	200	3.90	
DRO >C10-C28*	<10.0	10.0	01/29/2024	ND	220	110	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	01/29/2024	ND					

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

Surrogate: 1-Chlorooctadecane *116 %* *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:	01/26/2024	Sampling Date:	01/16/2024
Reported:	01/30/2024	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067 (MESA B EAST)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: FS 13 1' (H240369-08)

BTEX 8021B mg/kg Analyzed By: JH HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/29/2024	ND	2.06	103	2.00	5.88	
Toluene*	<0.050	0.050	01/29/2024	ND	2.05	103	2.00	5.68	
Ethylbenzene*	<0.050	0.050	01/29/2024	ND	2.05	102	2.00	5.68	
Total Xylenes*	<0.150	0.150	01/29/2024	ND	5.99	99.9	6.00	5.60	
Total BTEX	<0.300	0.300	01/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.2 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**128**	16.0	01/29/2024	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/29/2024	ND	226	113	200	3.90	
DRO >C10-C28*	<10.0	10.0	01/29/2024	ND	220	110	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	01/29/2024	ND					

Surrogate: 1-Chlorooctane *79.9 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *89.6 %* *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:	01/26/2024	Sampling Date:	01/16/2024
Reported:	01/30/2024	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067 (MESA B EAST)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: FS 14 1' (H240369-09)

BTEX 8021B mg/kg Analyzed By: JH HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/29/2024	ND	2.06	103	2.00	5.88	
Toluene*	<0.050	0.050	01/29/2024	ND	2.05	103	2.00	5.68	
Ethylbenzene*	<0.050	0.050	01/29/2024	ND	2.05	102	2.00	5.68	
Total Xylenes*	<0.150	0.150	01/29/2024	ND	5.99	99.9	6.00	5.60	
Total BTEX	<0.300	0.300	01/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.7 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	01/29/2024	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/29/2024	ND	226	113	200	3.90	
DRO >C10-C28*	<10.0	10.0	01/29/2024	ND	220	110	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	01/29/2024	ND					

Surrogate: 1-Chlorooctane *80.8 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *89.5 %* *49.1-148*

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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:	01/26/2024	Sampling Date:	01/16/2024
Reported:	01/30/2024	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067 (MESA B EAST)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: FS 15 1' (H240369-10)

BTEX 8021B mg/kg Analyzed By: JH HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/29/2024	ND	2.06	103	2.00	5.88	
Toluene*	<0.050	0.050	01/29/2024	ND	2.05	103	2.00	5.68	
Ethylbenzene*	<0.050	0.050	01/29/2024	ND	2.05	102	2.00	5.68	
Total Xylenes*	<0.150	0.150	01/29/2024	ND	5.99	99.9	6.00	5.60	
Total BTEX	<0.300	0.300	01/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.7 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	01/29/2024	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/29/2024	ND	226	113	200	3.90	
DRO >C10-C28*	<10.0	10.0	01/29/2024	ND	220	110	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	01/29/2024	ND					

Surrogate: 1-Chlorooctane *82.0 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *91.7 %* *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:	01/26/2024	Sampling Date:	01/16/2024
Reported:	01/30/2024	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067 (MESA B EAST)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: FS 16 1' (H240369-11)

BTEX 8021B mg/kg Analyzed By: JH HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/29/2024	ND	2.06	103	2.00	5.88	
Toluene*	<0.050	0.050	01/29/2024	ND	2.05	103	2.00	5.68	
Ethylbenzene*	<0.050	0.050	01/29/2024	ND	2.05	102	2.00	5.68	
Total Xylenes*	<0.150	0.150	01/29/2024	ND	5.99	99.9	6.00	5.60	
Total BTEX	<0.300	0.300	01/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.5 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	01/29/2024	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/29/2024	ND	226	113	200	3.90	
DRO >C10-C28*	<10.0	10.0	01/29/2024	ND	220	110	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	01/29/2024	ND					

Surrogate: 1-Chlorooctane *72.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *82.9 %* *49.1-148*

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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:	01/26/2024	Sampling Date:	01/16/2024
Reported:	01/30/2024	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067 (MESA B EAST)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: FS 17 1' (H240369-12)

BTEX 8021B mg/kg Analyzed By: JH HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/29/2024	ND	2.06	103	2.00	5.88	
Toluene*	<0.050	0.050	01/29/2024	ND	2.05	103	2.00	5.68	
Ethylbenzene*	<0.050	0.050	01/29/2024	ND	2.05	102	2.00	5.68	
Total Xylenes*	<0.150	0.150	01/29/2024	ND	5.99	99.9	6.00	5.60	
Total BTEX	<0.300	0.300	01/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.7 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	01/29/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/29/2024	ND	226	113	200	3.90	
DRO >C10-C28*	<10.0	10.0	01/29/2024	ND	220	110	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	01/29/2024	ND					

Surrogate: 1-Chlorooctane *87.4 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *97.4 %* *49.1-148*

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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:	01/26/2024	Sampling Date:	01/16/2024
Reported:	01/30/2024	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067 (MESA B EAST)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: FS 18 1' (H240369-13)

BTEX 8021B mg/kg Analyzed By: JH HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/29/2024	ND	2.06	103	2.00	5.88	
Toluene*	<0.050	0.050	01/29/2024	ND	2.05	103	2.00	5.68	
Ethylbenzene*	<0.050	0.050	01/29/2024	ND	2.05	102	2.00	5.68	
Total Xylenes*	<0.150	0.150	01/29/2024	ND	5.99	99.9	6.00	5.60	
Total BTEX	<0.300	0.300	01/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.9 %* *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	01/29/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/29/2024	ND	226	113	200	3.90	
DRO >C10-C28*	<10.0	10.0	01/29/2024	ND	220	110	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	01/29/2024	ND					

Surrogate: 1-Chlorooctane *89.3 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *98.3 %* *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:	01/26/2024	Sampling Date:	01/16/2024
Reported:	01/30/2024	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067 (MESA B EAST)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: FS 19 1' (H240369-14)

BTEX 8021B mg/kg Analyzed By: JH HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/29/2024	ND	2.06	103	2.00	5.88	
Toluene*	<0.050	0.050	01/29/2024	ND	2.05	103	2.00	5.68	
Ethylbenzene*	<0.050	0.050	01/29/2024	ND	2.05	102	2.00	5.68	
Total Xylenes*	<0.150	0.150	01/29/2024	ND	5.99	99.9	6.00	5.60	
Total BTEX	<0.300	0.300	01/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.1 %* *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	01/29/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/29/2024	ND	226	113	200	3.90	
DRO >C10-C28*	<10.0	10.0	01/29/2024	ND	220	110	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	01/29/2024	ND					

Surrogate: 1-Chlorooctane *89.5 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *99.0 %* *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:	01/26/2024	Sampling Date:	01/16/2024
Reported:	01/30/2024	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067 (MESA B EAST)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: FS 20 1' (H240369-15)

BTEX 8021B mg/kg Analyzed By: JH HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/29/2024	ND	2.06	103	2.00	5.88	
Toluene*	<0.050	0.050	01/29/2024	ND	2.05	103	2.00	5.68	
Ethylbenzene*	<0.050	0.050	01/29/2024	ND	2.05	102	2.00	5.68	
Total Xylenes*	<0.150	0.150	01/29/2024	ND	5.99	99.9	6.00	5.60	
Total BTEX	<0.300	0.300	01/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.3 %* *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	01/29/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/29/2024	ND	226	113	200	3.90	
DRO >C10-C28*	<10.0	10.0	01/29/2024	ND	220	110	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	01/29/2024	ND					

Surrogate: 1-Chlorooctane *82.8 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *96.0 %* *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:	01/26/2024	Sampling Date:	01/16/2024
Reported:	01/30/2024	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067 (MESA B EAST)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: SW 04 0-3' (H240369-16)

BTEX 8021B mg/kg Analyzed By: JH HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/29/2024	ND	2.06	103	2.00	5.88	
Toluene*	<0.050	0.050	01/29/2024	ND	2.05	103	2.00	5.68	
Ethylbenzene*	<0.050	0.050	01/29/2024	ND	2.05	102	2.00	5.68	
Total Xylenes*	<0.150	0.150	01/29/2024	ND	5.99	99.9	6.00	5.60	
Total BTEX	<0.300	0.300	01/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.5 %* *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	**128**	16.0	01/29/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/29/2024	ND	226	113	200	3.90	
DRO >C10-C28*	<10.0	10.0	01/29/2024	ND	220	110	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	01/29/2024	ND					

Surrogate: 1-Chlorooctane *94.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *104 %* *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:	01/26/2024	Sampling Date:	01/16/2024
Reported:	01/30/2024	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067 (MESA B EAST)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: SW 05 0-3' (H240369-17)

BTEX 8021B mg/kg Analyzed By: JH HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/29/2024	ND	2.06	103	2.00	5.88	
Toluene*	<0.050	0.050	01/29/2024	ND	2.05	103	2.00	5.68	
Ethylbenzene*	<0.050	0.050	01/29/2024	ND	2.05	102	2.00	5.68	
Total Xylenes*	<0.150	0.150	01/29/2024	ND	5.99	99.9	6.00	5.60	
Total BTEX	<0.300	0.300	01/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.6 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**160**	16.0	01/29/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/29/2024	ND	226	113	200	3.90	
DRO >C10-C28*	<10.0	10.0	01/29/2024	ND	220	110	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	01/29/2024	ND					

Surrogate: 1-Chlorooctane *93.1 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *104 %* *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:	01/26/2024	Sampling Date:	01/16/2024
Reported:	01/30/2024	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067 (MESA B EAST)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: SW 06 0-3' (H240369-18)

BTEX 8021B mg/kg Analyzed By: JH HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/29/2024	ND	2.06	103	2.00	5.88	
Toluene*	<0.050	0.050	01/29/2024	ND	2.05	103	2.00	5.68	
Ethylbenzene*	<0.050	0.050	01/29/2024	ND	2.05	102	2.00	5.68	
Total Xylenes*	<0.150	0.150	01/29/2024	ND	5.99	99.9	6.00	5.60	
Total BTEX	<0.300	0.300	01/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.6 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**128**	16.0	01/29/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/29/2024	ND	226	113	200	3.90	
DRO >C10-C28*	<10.0	10.0	01/29/2024	ND	220	110	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	01/29/2024	ND					

Surrogate: 1-Chlorooctane *95.9 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *106 %* *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:	01/26/2024	Sampling Date:	01/16/2024
Reported:	01/30/2024	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067 (MESA B EAST)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: SW 07 0-3' (H240369-19)

BTEX 8021B mg/kg Analyzed By: JH HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/29/2024	ND	2.06	103	2.00	5.88	
Toluene*	<0.050	0.050	01/29/2024	ND	2.05	103	2.00	5.68	
Ethylbenzene*	<0.050	0.050	01/29/2024	ND	2.05	102	2.00	5.68	
Total Xylenes*	<0.150	0.150	01/29/2024	ND	5.99	99.9	6.00	5.60	
Total BTEX	<0.300	0.300	01/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.3 %* *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	01/29/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/29/2024	ND	226	113	200	3.90	
DRO >C10-C28*	<10.0	10.0	01/29/2024	ND	220	110	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	01/29/2024	ND					

Surrogate: 1-Chlorooctane *85.6 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *95.8 %* *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:	01/26/2024	Sampling Date:	01/16/2024
Reported:	01/30/2024	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067 (MESA B EAST)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: SW 08 0-1' (H240369-20)

BTEX 8021B mg/kg Analyzed By: JH HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/29/2024	ND	2.06	103	2.00	5.88	
Toluene*	<0.050	0.050	01/29/2024	ND	2.05	103	2.00	5.68	
Ethylbenzene*	<0.050	0.050	01/29/2024	ND	2.05	102	2.00	5.68	
Total Xylenes*	<0.150	0.150	01/29/2024	ND	5.99	99.9	6.00	5.60	
Total BTEX	<0.300	0.300	01/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.7 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	01/29/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/29/2024	ND	226	113	200	3.90	
DRO >C10-C28*	<10.0	10.0	01/29/2024	ND	220	110	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	01/29/2024	ND					

Surrogate: 1-Chlorooctane *89.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *102 %* *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:	01/26/2024	Sampling Date:	01/16/2024
Reported:	01/30/2024	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067 (MESA B EAST)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: SW 09 0-1' (H240369-21)

BTEX 8021B mg/kg Analyzed By: JH HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/29/2024	ND	1.96	97.8	2.00	5.71	
Toluene*	<0.050	0.050	01/29/2024	ND	1.97	98.4	2.00	5.02	
Ethylbenzene*	<0.050	0.050	01/29/2024	ND	1.97	98.5	2.00	5.39	
Total Xylenes*	<0.150	0.150	01/29/2024	ND	5.83	97.2	6.00	5.47	
Total BTEX	<0.300	0.300	01/29/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	01/29/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/29/2024	ND	201	100	200	3.21	
DRO >C10-C28*	<10.0	10.0	01/29/2024	ND	187	93.3	200	4.27	
EXT DRO >C28-C36	<10.0	10.0	01/29/2024	ND					

Surrogate: 1-Chlorooctane *87.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *94.0 %* *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:	01/26/2024	Sampling Date:	01/16/2024
Reported:	01/30/2024	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067 (MESA B EAST)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: SW 10 0-1' (H240369-22)

BTEX 8021B mg/kg Analyzed By: JH HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/29/2024	ND	1.96	97.8	2.00	5.71	
Toluene*	<0.050	0.050	01/29/2024	ND	1.97	98.4	2.00	5.02	
Ethylbenzene*	<0.050	0.050	01/29/2024	ND	1.97	98.5	2.00	5.39	
Total Xylenes*	<0.150	0.150	01/29/2024	ND	5.83	97.2	6.00	5.47	
Total BTEX	<0.300	0.300	01/29/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	01/29/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS HDSP-1

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/29/2024	ND	201	100	200	3.21	
DRO >C10-C28*	<10.0	10.0	01/29/2024	ND	187	93.3	200	4.27	
EXT DRO >C28-C36	<10.0	10.0	01/29/2024	ND					

Surrogate: 1-Chlorooctane *99.5 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *108 %* *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

Notes and Definitions

HDSP-1	Sample container had headspace. Results may be biased low.
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

1/3

Company Name:	Ensolum, LLC
Project Manager:	Hadlie Green
Address:	3122 National Parks Hwy
City:	Carlsbad
State:	NM
Zip:	88220
Phone #:	432 557-8895
Fax #:	
Project #:	03C2012067
Project Owner:	BTA
Project Name:	Mesa B 22-25 Tank Battery (Mesa B East)
Project Location:	
Sampler Name:	Connor Whitman

BILL TO

P.O. #:	
Company:	BTA Oil
Attn:	Kelton Beaird
Address:	104 S Pecos St
City:	Midland
State:	TX
Zip:	79701
Phone #:	
Fax #:	

ANALYSIS REQUEST

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	BTEX	TPH	Chloride
H240369																		
1	FS06	3	C	1			X					X		1/16/24	945	X	X	X
2	FS07	3													950			
3	FS08	3													955			
4	FS09	3													1000			
5	FS10	3													1005			
6	FS11	1													1010			
7	FS12	1													1015			
8	FS13	1													1030			
9	FS14	1													1040			
10	FS15	1													1100			

Relinquished By:	Date: 01/26/24	Received By:	
	Time: 0730		
Relinquished By:	Date: 1.26.24	Received By:	SRodriguez
	Time: 1402		

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

Observed Temp. °C: 3.4
Corrected Temp. °C:

Sample Condition: Cool: Yes / No; Intact: Yes / No

CHECKED BY: (Initials): SR

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

All Results are emailed. Please provide Email address:
HGreen@ensolum.com

REMARKS:
All samples have headspace. customer said run anyways. SRodriguez 1.26.24

Turnaround Time: Standard ☑ Rush ☐

Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No; Intact ☐ Yes ☐ No

Observed Temp. °C

Thermometer ID #140

Correction Factor -0.5°C

Corrected Temp. °C

Date: 1/26/24

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

FORM-006 R 3.2 10/07/21

2/3

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: Kelton Beaird
Phone #: 432 557-8895 Fax #:	Address: 104 S Pecos St
Project #: 03C2012067 Project Owner: BTA	City: Midland
Project Name: Mesa B 22-25 Tank Battery (Mesa B East)	State: TX Zip: 79701
Project Location:	Phone #:
Sampler Name: Connor Whitman	Fax #:

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	ANALYSIS REQUEST: TPH	BTEX	Chloride
H240369																		
11	FS16	1	C	1			X					X		1/16/24	1105	X	X	X
12	FS17	1													1110			
13	FS18	1													1115			
14	FS19	1													1120			
15	FS20	1													1125			
16	SW04	0-3													1145			
17	SW05	0-3													1150			
18	SW06	0-3													1155			
19	SW07	0-3													1200			
20	SW08	0-1													1205			

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Relinquished By:	Date: 01/26/24	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Time: 0730	Received By:	All Results are emailed. Please provide Email address: HGreen@ensolum.com
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Date: 1-26-24 Time: 1402	Observed Temp. °C 3.0 Corrected Temp. °C	REMARKS:
	Sample Condition Cool Intact ☐ Yes ☐ Yes ☐ No ☐ No	CHECKED BY: (Initials)	Turnaround Time: Standard ☑ Rush ☐ Bacteria (only) Sample Condition Cool Intact Observed Temp. °C ☐ Yes ☐ Yes ☐ No ☐ No Corrected Temp. °C
			Thermometer ID #113 Correction Factor -0.5°C #140

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

FORM-006 R 3.2 10/07/21

3/3

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
Project Manager:	Hadlie Green
Address:	3122 National Parks Hwy
City:	Carlsbad
State:	NM
Zip:	88220
Phone #:	432 557-8895
Fax #:	
Project #:	03C2012067
Project Owner:	BTA
Project Name:	Mesa B 22-25 Tank Battery (Mesa B East)
Project Location:	
Sampler Name:	Connor Whitman

BILL TO

P.O. #:	
Company:	BTA Oil
Attn:	Kelton Beaird
Address:	104 S Pecos St
City:	Midland
State:	TX
Zip:	79701
Phone #:	
Fax #:	

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	ANALYSIS REQUEST: BTEX	TPH	Chlorides
H240369																		
21	SW09	0-1	C	1			X					X		1/16/24	1210	1	1	1
22	SW10	0-1	C	1			X					X		1/16/24	1215	1	1	1

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:	Date: 1/26/24	Received By:	
Relinquished By:	Time: 0730 Date: 1-26-24	Received By:	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Time: 1402 Observed Temp. °C 3.6 Corrected Temp. °C	Sample Condition: Cool Yes / Intact Yes	CHECKED BY: (Initials)

Verbal Result: ☐ Yes ☐ No Add'l Phone #:
All Results are emailed. Please provide Email address:
HGreen@ensolum.com
REMARKS:

Turnaround Time: Standard ☑ Rush ☐ #140 2 Days
Thermometer ID #113 Correction Factor -0.5°C
Bacteria (only) Sample Condition: Cool ☐ Yes Intact ☐ Yes
Observed Temp. °C
Corrected Temp. °C

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

FORM-006 R 3.2 10/07/21

P.O. 1/26/24

CARDINAL Laboratories

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

February 14, 2024

HADLIE GREEN

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MESA B 22-25 TANK BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 02/09/24 14:39.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/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:	02/09/2024	Sampling Date:	02/09/2024
Reported:	02/14/2024	Sampling Type:	Soil
Project Name:	MESA B 22-25 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012067	Sample Received By:	Dionica Hinojos
Project Location:	BTA (32.05980,-103.60435)		

Sample ID: SW 11 0-3' (H240637-01)

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	02/10/2024	ND	2.21	111	2.00	13.2	
Toluene*	<0.050	0.050	02/10/2024	ND	2.21	110	2.00	13.3	
Ethylbenzene*	<0.050	0.050	02/10/2024	ND	2.19	109	2.00	13.3	
Total Xylenes*	<0.150	0.150	02/10/2024	ND	6.37	106	6.00	13.6	
Total BTEX	<0.300	0.300	02/10/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.6 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/12/2024	ND	384	96.0	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	02/09/2024	ND	218	109	200	1.23	
DRO >C10-C28*	<10.0	10.0	02/09/2024	ND	224	112	200	6.76	
EXT DRO >C28-C36	<10.0	10.0	02/09/2024	ND					

Surrogate: 1-Chlorooctane *85.1 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *77.3 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories *=Accredited Analyte

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
Project Manager:	Hadlie Green
Address:	601 N Marienfeld St # 400
City:	Midland State: TX Zip: 79701
Phone #:	432-557-8895 Fax #:
Project #:	03C2012067 Project Owner:
Project Name:	Mesa B 22-25 Tank Battery (Mesa B West)
Project Location:	32.05980, -103.60435
Sampler Name:	Mariana O'Dell

BILL TO

P.O. #:	
Company:	BTA Oil Producers, LLC
Attn:	Kelton Beaird
Address:	104 S. Pecos St
City:	Midland
State:	TX Zip: 79701
Phone #:	
Fax #:	

ANALYSIS REQUEST

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	Chlorides	TPH	BTEX										
H240637																												
1	SW11	0-3'	C	1			X					X		2/9/24	10:30	X	X	X										

MO

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:	Date: 2/9/2024 Time: 14:39	Received By:	
Relinquished By:	Date: Time:	Received By:	

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

All Results are emailed. Please provide Email address:

~~BJennings@ensolum.com~~ MO hgreene@ensolum.com

REMARKS: Incident ID : nAPP2209078912

Delivered By: (Circle One)	Observed Temp. °C 4.1	Sample Condition Cool Intact	CHECKED BY: (Initials)	Turnaround Time: Standard ☑ Rush ☐	Bacteria (only) Sample Condition Cool Intact Observed Temp. °C
Sampler - UPS - Bus - Other:	Corrected Temp. °C 4.0	☑ Yes ☐ Yes ☐ No ☐ No		Thermometer ID ~~#113~~ BH Correction Factor ~~-0.5°C~~ 2/9/24	☐ Yes ☐ Yes ☐ No ☐ No 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: Rodgers, Scott, EMNRD
To: Hadlie Green; Velez, Nelson, EMNRD; Bratcher, Michael, EMNRD
Cc: Kelton Beaird; Tacoma Morrissey
Subject: RE: [EXTERNAL] BTA - Sampling Notification - Week of 10/2/2023
Date: Thursday, September 28, 2023 2:11:18 PM
Attachments: image005.jpg
image006.png
image007.png
image008.png
image009.png

> You don't often get email from scott.rodgers@emnrd.nm.gov. Learn why this is important

[**EXTERNAL EMAIL**]

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

Scott Rodgers ● Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
8801 Horizon Blvd. NE, Suite 260 | Albuquerque, NM 87113
505.469.1830 | scott.rodgers@emnrd.nm.gov
http://www.emnrd.nm.gov/ocd

From: Hadlie Green <hgreen@ensolum.com>
Sent: Thursday, September 28, 2023 12:20 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Kelton Beaird <KBeaird@btaoil.com>; Tacoma Morrissey <tmorrissey@ensolum.com>
Subject: [EXTERNAL] BTA - Sampling Notification - Week of 10/2/2023

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 October 2, 2023.

- Chiso 14 State Jet Pump Excavation / nAPP2205837214
  - Sampling Date: 10/2-4/2023 @ 9:00 AM MST

- Mesa B 22-25 Tank Battery (Mesa B East) / nAPP2209078912
    - Sampling Date: 10/5/2023 @ 9:00 AM MST

Thank you,

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

From: Wells, Shelly, EMNRD
To: Hadlie Green
Cc: Kelton Beaird; Tacoma Morrissey; Aimee Cole; Velez, Nelson, EMNRD; Bratcher, Michael, EMNRD
Subject: RE: [EXTERNAL] BTA - Sampling Notification - Mesa B 22-25 Tank Battery (Incident Number nAPP2209078912)
Date: Monday, November 13, 2023 10:52:28 AM
Attachments: image001.png
image002.png
image003.png
image004.png

[**EXTERNAL EMAIL**]

Hi Hadlie,

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

Thank you,

Shelly

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

From: Hadlie Green <hgreen@ensolum.com>
Sent: Friday, November 10, 2023 12:05 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Kelton Beaird <KBeaird@btaoil.com>; Tacoma Morrissey <tmorrissey@ensolum.com>; Aimee Cole <acole@ensolum.com>
Subject: [EXTERNAL] BTA - Sampling Notification - Mesa B 22-25 Tank Battery (Incident Number nAPP2209078912)

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 location on Monday and Tuesday, November 13-14, 2023.

- Mesa B 22-25 Tank Battery / nAPP2209078912
  - Sampling Date: 11/13-14/2023 @ 9:00 AM MST
  - GPS: 32.05980, -103.60435

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	nAPP2209078912
District RP	
Facility ID	fAPP2130022003
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) nAPP2209078912
Contact mailing address: 104 S. Pecos St., Midland, TX 79701	

Location of Release Source

Latitude: 32.05980 Longitude: -103.60435
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Mesa B 22-25 Tank Battery (Mesa B East)	Site Type: Tank Battery
Date Release Discovered: 3/31/2022	API# *(if applicable)* Nearest well:

Unit Letter	Section	Township	Range	County
A	7	26S	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) 330 BBL	Volume Recovered (bbls) 130 BBL
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
Operator Error - Transfer Pump Left ON at Tank Battery.
A transfer pump was left on and pushed at least 155 BO to the flare. Some of the oil was burned at the flare, but the fire was doused by the continuous stream of oil which accumulated at the flare inside an earthen fire wall. The earthen containment filled with oil that overflowed off of the pad and onto surrounding pasture. Additionally, some oil was sprayed from the flare and onto vegetation immediately adjacent to the tank battery pad. An aerial photo was used for the attached spill volume calculation and an increase in the volume of the release is reported in this filing.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2209078912
District RP	
Facility ID	fAPP2130022003
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? Yes – Release greater than 25 BBL and there was fire due to oil burning at the flare stack.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

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

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

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

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

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

Printed Name: Bob Hall Title: Environmental Manager

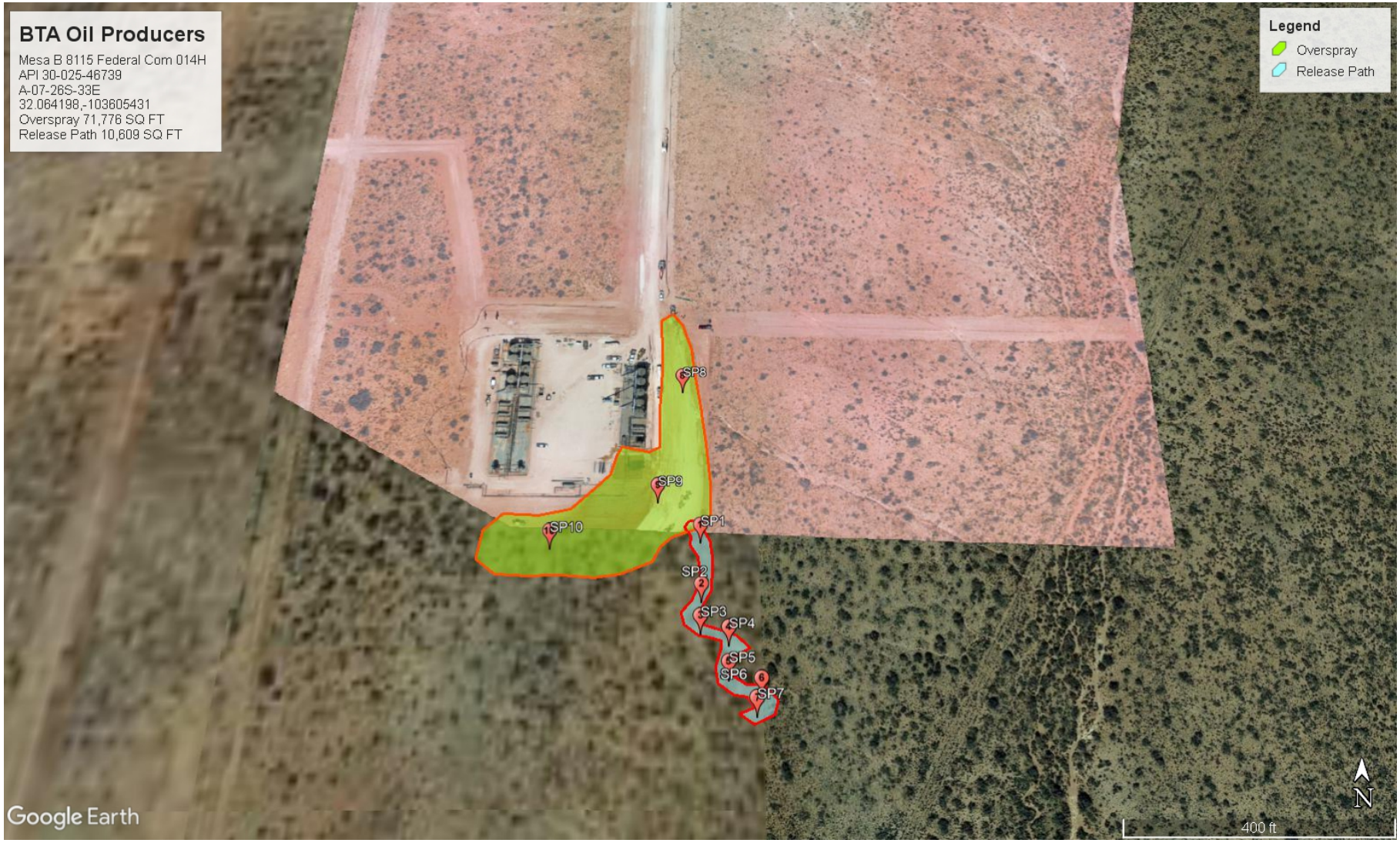
Signature: /s/ Bob Hall Date: 4/13/2022

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

OCD Only

Received by: Jocelyn Harimon Date: 04/13/2022

NAPP2209078912



Location Mesa B 22-25 / Mesa B East Oil Transfer Pump (Overspray Area)
API #
Spill Date 3/31/2022

Spill Dimensions

ENTER - Length of Spill	268	**feet**
ENTER - Width of Spill	268	**feet**
ENTER - Saturation Depth of Spill	0.05	**inches**
ENTER - Porosity Factor	0.2	**decimal**

Oil Cut - Well Test / Vessel Throughput or Contents

Oil	99.999
Water	0.001
Calculated Oil Cut	0.99999

Volume Recovered in Truck / Containment

ENTER - Recovered Oil	0	**BBL**
ENTER - Recovered Water	0	**BBL**

Calculated Values	*calculated*	
Release of Oil in Soil - Unrecovered	11	***BBL***
Release of Water in Soil - Unrecovered	0	***BBL***
Unrecovered Total Release	11	***BBL***

Calculated Values	*calculated*	
Total Release of Oil	11	***BBL***
Total Release of Water	0	***BBL***
Total Release	11	***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

$$\frac{\text{(Length X Width X Depth X 1 ft/12 in) X Porosity}}{5.615\ ft^3 / BBL} \times \text{Oil Cut (or Water Cut)}$$

Location Mesa B 22-25 / Mesa B East Oil Transfer Pump (Release Path)
API #
Spill Date 3/31/2022

Spill Dimensions

ENTER - Length of Spill	103	**feet**
ENTER - Width of Spill	103	**feet**
ENTER - Saturation Depth of Spill	6	**inches**
ENTER - Porosity Factor	0.2	**decimal**

Oil Cut - Well Test / Vessel Throughput or Contents

Oil	99.999
Water	0.001
Calculated Oil Cut	0.99999

Volume Recovered in Truck / Containment

ENTER - Recovered Oil	130	**BBL**
ENTER - Recovered Water	0	**BBL**

Calculated Values	*calculated*	
Release of Oil in Soil - Unrecovered	189	***BBL***
Release of Water in Soil - Unrecovered	0	***BBL***
Unrecovered Total Release	189	***BBL***

Calculated Values	*calculated*	
Total Release of Oil	319	***BBL***
Total Release of Water	0	***BBL***
Total Release	319	***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

$$\frac{\text{(Length X Width X Depth X 1 ft/12 in) X Porosity}}{5.615\ ft^3 / BBL} \times \text{Oil Cut (or Water Cut)}$$

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

Action 98343

CONDITIONS

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID: 260297
	Action Number: 98343
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	None	4/13/2022

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2209078912
District RP	
Facility ID	fAPP2130022003
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?	51-100 (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	nAPP2209078912
District RP	
Facility ID	fAPP2130022003
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: _____2/21/2024_____

email: __KBeaird@btaoil.com_____ Telephone: ___432-312-2203_____

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2209078912
District RP	
Facility ID	fAPP2130022003
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: _____2/21/2024_____

email: __KBeaird@btaoil.com_____ Telephone: ___432-312-2203_____

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

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

QUESTIONS

Action 325467

QUESTIONS

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID: 260297
	Action Number: 325467
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2209078912**
Incident Name	**NAPP2209078912 MESA B 22-25 TANK BATTERY @ 0**
Incident Type	**Oil Release**
Incident Status	**Remediation Closure Report Received**
Incident Facility	**[fAPP2130022003] Mesa B 22-25**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	MESA B 22-25 TANK BATTERY
Date Release Discovered	03/31/2022
Surface Owner	Private

Incident Details	
Please answer all the questions in this group.	
Incident Type	Oil Release
Did this release result in a fire or is the result of a fire	Yes
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Cause: Human Error | Pump | Crude Oil | Released: 155 BBL | Recovered: 130 BBL | Lost: 25 BBL.
Produced Water Released (bbls) Details	*Not answered.*
Is the concentration of chloride in the produced water >10,000 mg/l	*Not answered.*
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	A transfer pump was left on and pushed at least 155 BO to the flare. Some of the oil was burned at the flare, but the fire was doused by the continuous stream of oil which accumulated at the flare inside an earthen fire wall. The earthen containment filled with oil that overflowed off of the pad and onto surrounding pasture. Additionally, some oil was sprayed from the flare and onto vegetation immediately adjacent to the tank battery pad. Aerial photos have been taken and will be used to update the volume of the oil release.

District I
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Phone:(575) 393-6161 Fax:(575) 393-0720
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Phone:(575) 748-1283 Fax:(575) 748-9720
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1000 Rio Brazos Rd., Aztec, NM 87410
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Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS (continued)

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID: 260297
	Action Number: 325467
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**No, according to supplied volumes this does not appear to be a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	**Yes**
Reasons why this would be considered a submission for a notification of a major release	**From paragraph A. "Major release" determine using:** **(1) an unauthorized release of a volume, excluding gases, of 25 barrels or more;** **(2) an unauthorized release of a volume that:** **(a) results in a fire or is the result of a fire.**
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

Initial Response	
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.	
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	*Not answered.*
Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.	

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

I hereby agree and sign off to the above statement	Name: BTA ENSOLUM Title: Environmental Manager Email: kbeaird@btaoil.com Date: 03/21/2024

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QUESTIONS (continued)

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID: 260297
	Action Number: 325467
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 75 and 100 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 500 and 1000 (ft.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Greater than 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Greater than 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between ½ and 1 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Medium
A 100-year floodplain	Greater than 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	Yes

Remediation Plan	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	179
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	32414
GRO+DRO (EPA SW-846 Method 8015M)	27914
BTEX (EPA SW-846 Method 8021B or 8260B)	0
Benzene (EPA SW-846 Method 8021B or 8260B)	0
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
On what estimated date will the remediation commence	08/25/2023
On what date will (or did) the final sampling or liner inspection occur	02/09/2024
On what date will (or was) the remediation complete(d)	02/09/2024
What is the estimated surface area (in square feet) that will be reclaimed	3813
What is the estimated volume (in cubic yards) that will be reclaimed	423
What is the estimated surface area (in square feet) that will be remediated	3813
What is the estimated volume (in cubic yards) that will be remediated	423
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.	
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID: 260297
	Action Number: 325467
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Remediation Plan (continued)	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
(Select all answers below that apply.)	
(Ex Situ) Excavation and **off-site** disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for **off-site** disposal	OWL LANDFILL JAL [fJEG1635837366]
OR which OCD approved well (API) will be used for **off-site** disposal	*Not answered.*
OR is the **off-site** disposal site, to be used, out-of-state	*Not answered.*
OR is the **off-site** disposal site, to be used, an NMED facility	*Not answered.*
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	*Not answered.*
(In Situ) Soil Vapor Extraction	*Not answered.*
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	*Not answered.*
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	*Not answered.*
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	*Not answered.*
Ground Water Abatement pursuant to 19.15.30 NMAC	*Not answered.*
OTHER (Non-listed remedial process)	*Not answered.*
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: BTA ENSOLUM Title: Environmental Manager Email: kbeaird@btaoil.com Date: 03/21/2024
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID: 260297
	Action Number: 325467
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS (continued)

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID: 260297
	Action Number: 325467
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**312132**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**02/09/2024**
What was the (estimated) number of samples that were to be gathered	**1**
What was the sampling surface area in square feet	**15300**

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	**Yes**
Was this release entirely contained within a lined containment area	**No**
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	3813
What was the total volume (cubic yards) remediated	423
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	3813
What was the total volume (in cubic yards) reclaimed	423
Summarize any additional remediation activities not included by answers (above)	n/a

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

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

I hereby agree and sign off to the above statement	Name: BTA ENSOLUM Title: Environmental Manager Email: kbeaird@btaoil.com Date: 03/21/2024

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QUESTIONS (continued)

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID: 260297
	Action Number: 325467
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	No

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CONDITIONS

Action 325467

CONDITIONS

Operator:	OGRID:
BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	260297
	Action Number: 325467
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
scott.rodgers	This Remediation Closure Report is approved. A report for reclamation and revegetation will need to be submitted and approved prior to this incident receiving the final status of "Restoration Complete".	4/23/2024
scott.rodgers	• The reclamation report will need to include: Executive Summary of the reclamation activities; Scaled Site Map including sampling locations; Analytical results including, but not limited to, results showing that any remaining impacts meet the reclamation standards and results to prove the backfill is non-waste containing; At least one (1) representative 5-point composite sample will need to be collected from the backfill material that will be used for the reclamation of the top four feet of the excavation. OCD reserves the right to request additional sampling if needed; pictures of the backfilled areas showing that the area is back, as nearly as practical, to the original condition or the final land use and maintain those areas to control dust and minimize erosion to the extent practical; pictures of the top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater; and a revegetation plan.	4/23/2024