ENSOLUM

February 14, 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 8105-JV-P 004H
Incident Number nOY1831160155
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 delineation, excavation, and soil sampling activities performed at the Mesa 8105-JV-P 004H (Site), in accordance with an approved *Remediation Work Plan (Work Plan)* submitted June 9, 2023. The *Work Plan* proposed lateral and vertical delineation of the release. Based on the delineation activities completed and laboratory analytical results from the soil sampling events in accordance with the *Work Plan*, BTA is submitting this *Closure Request*, describing remediation that has occurred and requesting closure for Incident Number nOY1831160155.

Details regarding the release, Site characterization, and proposed remediation activities can be referenced in the original *Work Plan* submitted on June 9, 2023. The *Work Plan* is included as Appendix A. On August 18, 2023, the New Mexico Oil Conservation Division (NMOCD) approved the *Work Plan* with the following conditions:

> *Remediation Plan is conditionally approved. Horizontal delineation must meet the requirements of the reclamation standards 19.15.29.13 NMAC (600 mg/kg Cl, 100 mg/kg TPH, 50 mg/kg BTEX, 10 mg/kg benzene) or OCD approved "background" values for the upper 4 feet of the impacted area. Soil standards below 4 feet must be delineated/remediated to Table I Closure Criteria for the approved site-specific depth to groundwater. A surface visual footprint alone is not sufficient when assessing the horizontal extent of the release. Laboratory data must be provided as evidence of delineation efforts. Confirmation soil samples must consist of a five-point composite sample representing a surface area of no more than 200 ft2 unless otherwise approved.*

BACKGROUND

The Site is located in Unit C, Section 11, Township 26 South, Range 32 East, in Lea County, New Mexico (32.065054°, -103.64362°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On October 23, 2018, a water transfer line was cut in half during pipeline construction operations and resulted in the release of approximately 60 barrels (bbls) of produced water and 15 bbls of crude oil into the surrounding pasture area. A vacuum truck was dispatched to the Site to recover free-standing fluids; approximately 50 bbls of produced water and 8 bbls of crude oil were recovered. The release affected

an approximate 9,688 square foot area on the south side of the lease road. BTA reported the release immediately via email to the NMOCD and submitted a *Release Notification Form C-141* (Form C-141) on November 7, 2018. The release was assigned Incident Number nOY1831160155.

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). Based on the results of the Site Characterization reported in the June 2023 *Work Plan* (Appendix A), the following NMOCD Table I Closure Criteria (Closure Criteria) apply:

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

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

DELINEATION ACTIVITIES AND ANALYTICAL RESULTS

On September 12, 2023, Ensolum personnel were at the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. No visible indications of the historical release were observed during the Site visit. Four delineation soil samples (SS01 through SS04) were collected around the inferred release extent at a depth of 0.5 feet below ground surface (bgs) to assess the lateral extent of chemicals of concern (COCs) resulting from the produced water and crude oil release. Boreholes BH01 through BH08 were advanced via hand auger within the inferred release extent to assess the vertical extent of the release. The boreholes were advanced to a depth of 4 feet bgs. Discrete delineation soil samples were collected from the boreholes at depths ranging from 1-foot to 4 feet bgs. The delineation soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. Field screening results and observations were logged on lithologic/soil sampling logs, which are included in Appendix B. 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 C.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Cardinal Laboratories (Cardinal) in Hobbs, New Mexico, for analysis of the following 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 delineation soil samples SS01 through SS04, collected around the inferred release extent, indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria and confirmed the lateral extent of the release. Laboratory analytical results for delineation samples collected from boreholes BH01 through BH04, BH06, and BH08, collected within the inferred release extent, indicated all COC concentrations were compliant with the Closure Criteria. Laboratory analytical results for delineation samples collected from boreholes BH05 and BH07 indicated elevated TPH concentrations within the top 4 feet of the inferred release area and excavation activities

were warranted to address impacted and waste-containing soil. Laboratory analytical results are summarized in Table 1 and the complete analytical reports are included as Appendix D.

EXCAVATION ACTIVITIES AND ANALYTICAL RESULTS

Between January 3 and January 15, 2024, Ensolum personnel were at the Site to oversee excavation activities based on laboratory analytical results for boreholes BH05 and BH07. 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 a depth of 4 feet bgs. Photographic documentation of the excavation activities is included in Appendix C.

Following removal of impacted soil, 5-point composite soil samples were collected every 200 square feet from the floor and sidewall of the excavation extents. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Confirmation soil samples FS01 through FS09 were collected from the floor of the excavation at a depth of 4 feet bgs. Confirmation soil samples SW01 through SW06 were collected from the sidewalls of the excavation at depths ranging from the ground surface to 4 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 FS09 and SW01 through SW06 indicated all COC concentrations were compliant with the Site Closure Criteria and reclamation requirement. The excavation extent and excavation soil sample locations are presented on Figure 4. Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included as Appendix D.

The excavation area measured approximately 1,520 square feet. A total of approximately 225 cubic yards of impacted soil were removed during the excavation activities. The impacted soil was transported and properly disposed of at the Lea Land, LLC in Hobbs, New Mexico. The excavation will be backfilled with non-waste containing soil and reseeded with an approved BLM seed mixture.

CLOSURE REQUEST

Delineation and excavation activities were conducted at the Site to assess for the presence or absence of impacted soil resulting from the October 2018 release of produced water and crude oil. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated all COC concentrations were compliant with the Closure Criteria and reclamation requirement. Based on laboratory analytical results, impacted soil was excavated and no further remediation is required.

Initial response efforts and excavation of impacted soil have mitigated adverse effects at this Site. BTA believes these remedial actions are protective of human health, the environment, and groundwater. As such, BTA respectfully requests closure for Incident Number nOY1831160155. Notifications submitted to the NMOCD are included in Appendix E and the final Form C-141 is included as 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

Hadlie Green
Project Geologist

Daniel R. Moir, PG
Senior Managing Geologist

cc: Kelton Beaird, BTA
Bureau of Land Management

Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Figure 3	Excavation Soil Sample Location
Table 1	Soil Sample Analytical Results
Appendix A	June 9, 2023, *Remediation Work Plan*
Appendix B	Lithologic Soil Sampling Logs
Appendix C	Photographic Log
Appendix D	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix E	NMOCD Notifications
Appendix F	Final C-141

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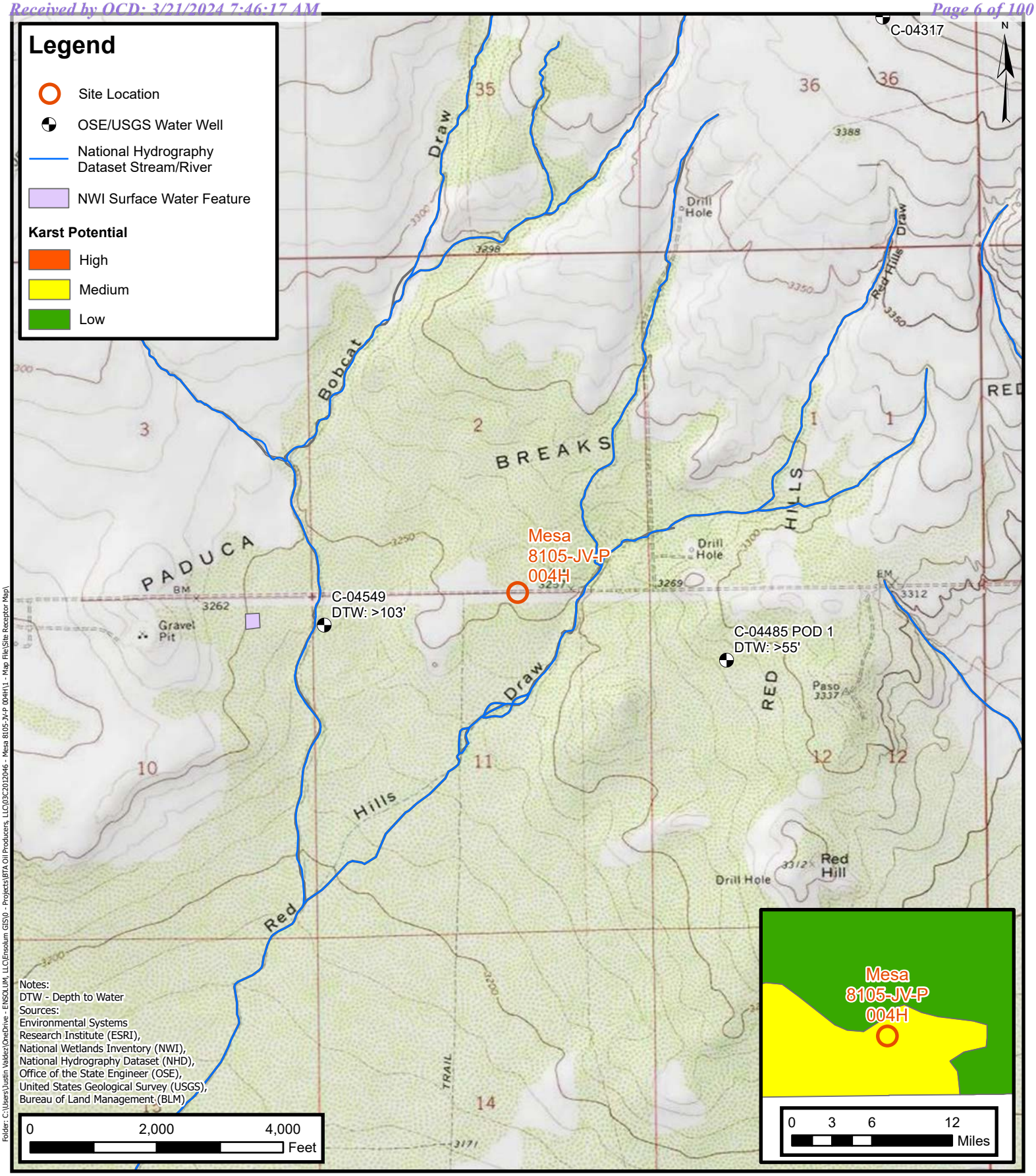
FIGURES



Folder: C:\Users\Justin Valdez\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\BTA Oil Producers, LLC\03C2012046 - Mesa 8105-JV-P 004H\1 - Map File\Site Receptor Map\

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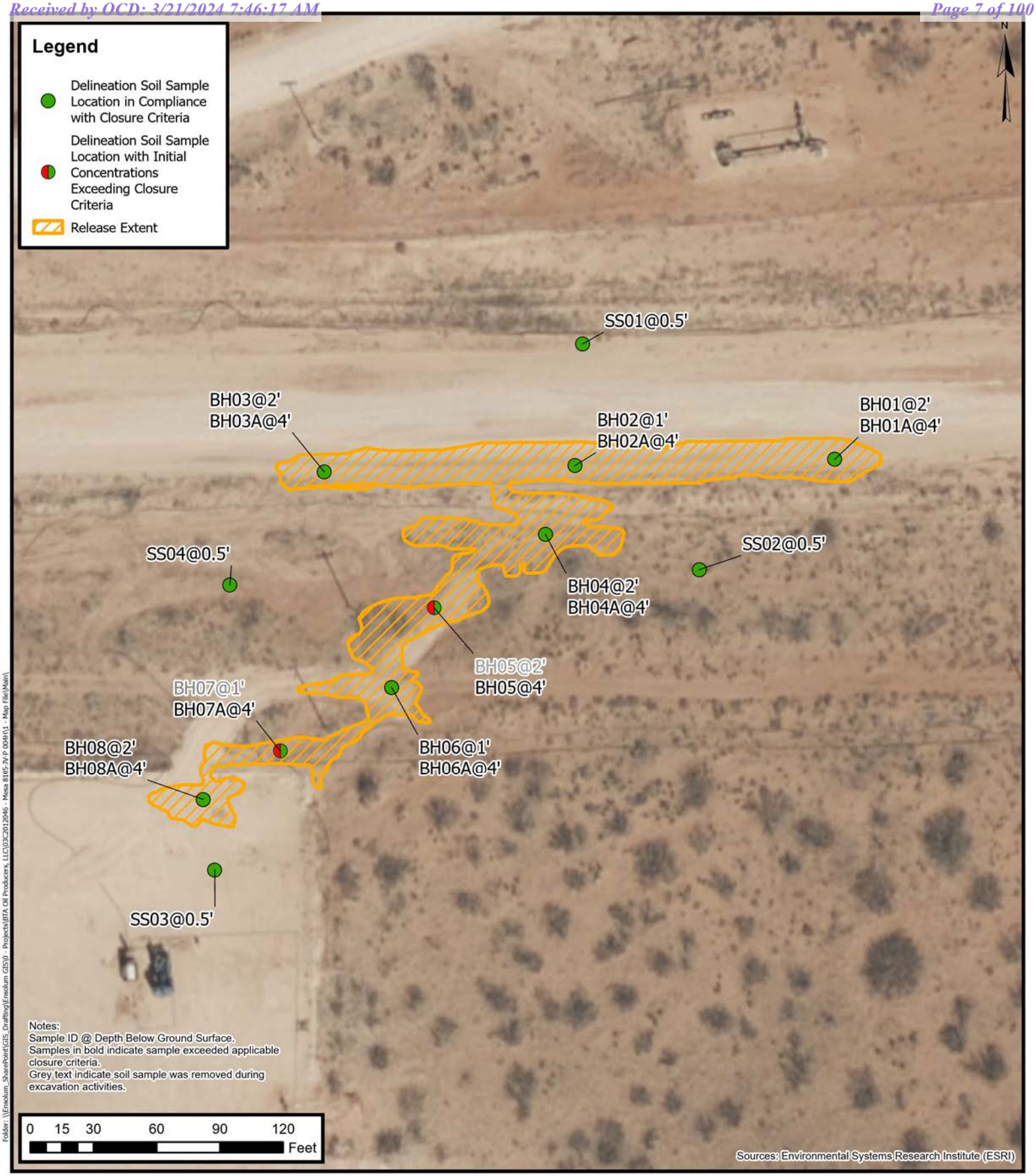
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

BTA Oil Producers, LLC
Mesa 8105-JV-P 004H
Incident Number: nOY1831160155
Unit C, Sec 11, T26S, R32E
Lea County, New Mexico

FIGURE 1



Folder: \\Ensolum SharePoint\GIS Drafting\Ensolum GIS\0 - Projects\BTA Oil Producers, LLC\03C2012046 - Mesa 8105-JV-P 004H\1 - Map Files\Main\

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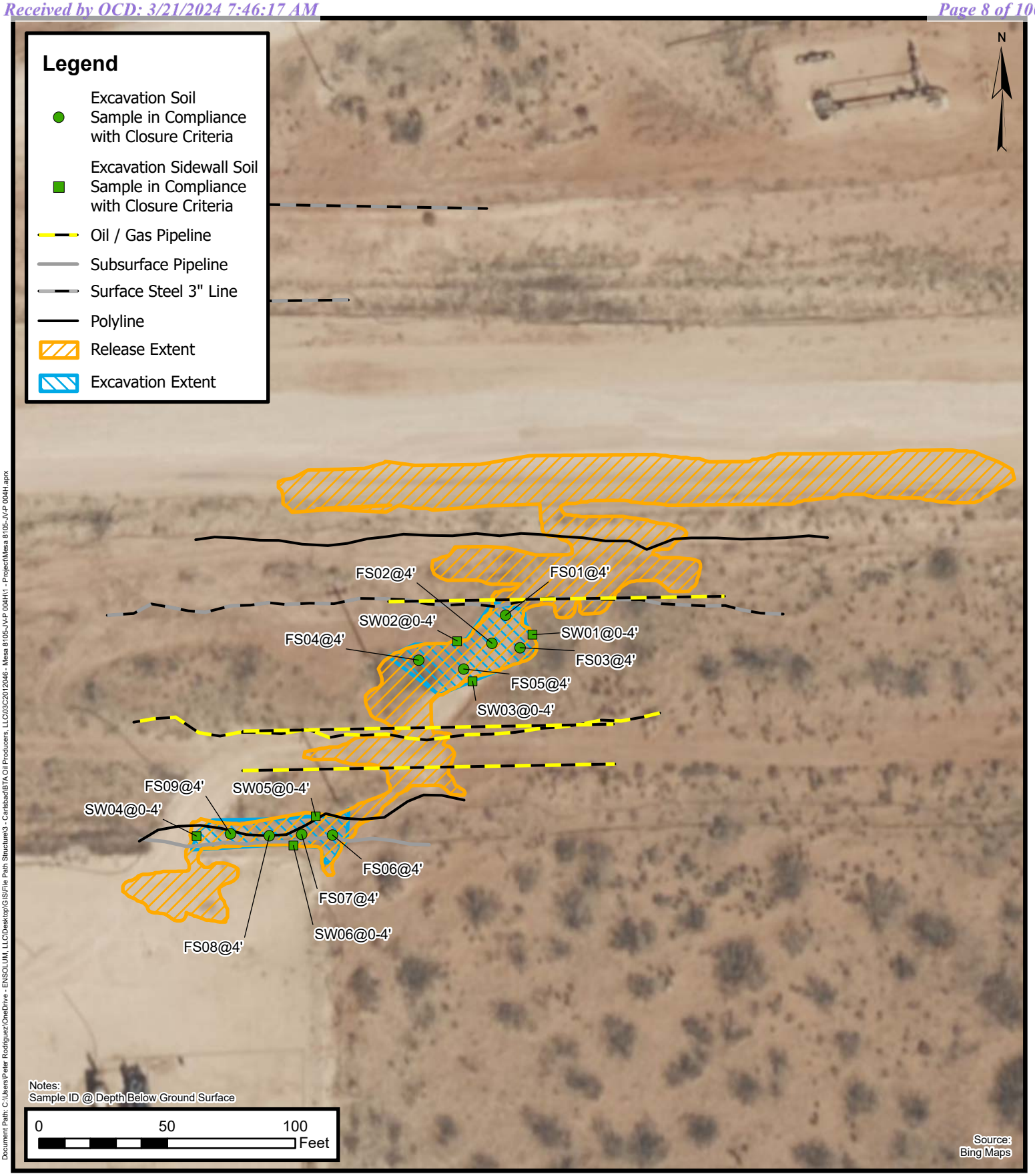
Delineation Soil Sample Locations

BTA Oil Producers, LLC
Mesa 8105-JV-P 004H
Incident Number: nOY1831160155
Unit C, Sec 11, T26S, R32E
Lea County, New Mexico

FIGURE 2



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Excavation Soil Sample Locations

BTA Oil Producers, LLC
Mesa 8105-JV-P 004H
Incident Number: nOY1831160155
Unit C, Sec 11, T26S, R32E
Lea County,New Mexico

FIGURE
3

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
MESA 8105-JV-P 004H
BTA Oil Producers, LLC
Lea County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Assessment Soil Samples										
BH01*	09/12/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
BH01A	09/12/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
BH02*	09/12/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
BH02A	0912/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
BH03*	09/12/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
BH03A	09/12/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
BH04*	09/12/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
BH04A	09/12/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
BH05*	09/12/2023	2	<0.050	<0.300	16.9	1,100	344	**1,117**	1,461	192
BH05A	09/12/2023	4	<0.050	<0.300	<10.0	491	178	491	669	224
BH06*	09/12/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
BH06A	09/12/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	176
BH07*	09/12/2023	1	<0.050	<0.300	23.0	2,410	829	**2,433**	**3,262**	32.0
BH07A	09/12/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
BH08	09/12/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
BH08A	09/12/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS01*	09/12/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SS02*	09/12/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS03	09/12/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SS04*	09/12/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
MESA 8105-JV-P 004H
BTA Oil Producers, LLC
Lea County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			**10**	**50**	**NE**	**NE**	**NE**	**1,000**	**2,500**	**20,000**
Excavation Floor Soil Samples										
FS01	01/05/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144
FS02	01/08/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192
FS03	01/08/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	208
FS04	01/08/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	224
FS05	01/08/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	240
FS06	01/08/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	208
FS07	01/15/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
FS08	01/15/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS09	01/15/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
Excavation Sidewall Soil Samples										
SW01*	01/08/2024	0 - 4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	224
SW02*	01/08/2024	0 - 4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	208
SW03*	01/08/2024	0 - 4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	208
SW04*	01/15/2024	0 - 4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SW05*	01/15/2024	0 - 4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW06*	01/15/2024	0 - 4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0

Notes:

bgs: below ground surface
mg/kg: milligrams per kilogram
NMOCD: New Mexico Oil Conservation Division
NMAC: New Mexico Administrative Code
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
TPH: Total Petroleum Hydrocarbon
* indicates sample was collected in area to be reclaimed after remediation is complete
Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation requirement standard where applicable.
Grey text represents samples that have been excavated.

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APPENDIX A

June 9, 2023, Remediation Work Plan

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June 8, 2023

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

Re: Remediation Work Plan
Mesa 8105-JV-P 004H
Incident Number nOY1831160155
Lea County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of BTA Oil Producers, LLC (BTA), has prepared the following *Remediation Work Plan* (*Work Plan*) for the October 23, 2018, crude oil and produced water release at the Mesa 8105-JV-P 004H (Site). The following *Work Plan* proposes to complete Site assessment and delineation activities to assess for the presence or absence of impacts to soil resulting from the historical release at the Site.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit C, Section 11, Township 26 South, Range 32 East, in Lea County, New Mexico (32.065054°, -103.64362°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On October 23, 2018, a water transfer line was cut in half during pipeline construction operations and resulted in the release of approximately 60 barrels (bbls) of produced water and 15 bbls of crude oil into the surrounding pasture area. A vacuum truck was dispatched to the Site to recover free-standing fluids; approximately 50 bbls of produced water and 8 bbls of crude oil were recovered. The release impacted an approximate 9,688 square foot area on the south side of the lease road. BTA reported the release immediately via email to the New Mexico Oil Conservation Division (NMOCD) and submitted a *Release Notification Form C-141* (Form C-141) on November 7, 2018. The release was assigned Incident Number nOY1831160155.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

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

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is New Mexico Office of the State Engineer (NMOSE) well C-04549, located

approximately 0.5 miles west of the Site. The soil boring was drilled during July 2021 to a total depth of 103 feet bgs, and no groundwater was encountered. All wells used for depth to groundwater determination are presented on Figure 1. The associated well records are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is a dry wash, located approximately 900 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: 20,000 mg/kg

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

PROPOSED REMEDIATION WORK PLAN

Based on the unrecovered volume of crude oil and produced water and the age of the release, BTA proposes to complete Site assessment and delineation activities within and around the documented release extent to assess for the presence or absence of impacted soil resulting from the historical release at the Site. The documented release extent from October 2018 is depicted on the attached Figure 2. BTA requests approval to complete the following remediation activities:

- Soil samples will be collected outside of the documented release extent from a depth of 0.5 feet bgs to confirm the lateral extent of the surface release.
- Boreholes will be advanced via hand auger within the documented release extent to assess the vertical extent of impacted soil or determine if remediation activities have been previously completed.
- The proposed borehole and soil sample locations are shown on the attached Figure 3. Borehole locations may need to be adjusted slightly during field activities based on the location of underground utilities.
- Soil from the boreholes will be field screened at 1-foot intervals for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. Field screening results and observations will be logged on lithologic/soil sampling logs. Two delineation samples from each borehole will be submitted for laboratory analysis; the sample with the highest field screening result and the sample from the final borehole depth.

  - Final depth of the boreholes will be determined by field screening results indicating compliance with the reclamation requirement in the top four feet or the Site Closure Criteria at depths greater than 4 feet. In the absence of elevated field screening results, the boreholes will be advanced to a depth of 4 feet bgs.

- The soil samples will be 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 will be transported under strict chain-of-custody procedures to Cardinal Laboratories (Cardinal) in Hobbs, New Mexico, for analysis of the following 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.
- Upon completion of the lateral and vertical delineation activities and review of the laboratory analytical results, BTA will prepare a follow-up *Remediation Work Plan* proposing additional remediation activities, if warranted, or a *Closure Request* if no impacted soil is identified.

BTA will complete the delineation activities within 90 days of the date of approval of this *Work Plan* by the NMOCD. BTA believes the scope of work described above meets requirements set forth in 19.15.29.13 NMAC and is protective of human health, the environment, and groundwater. As such, BTA respectfully requests approval of this *Work Plan* for Incident Number nOY1831160155.

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

Sincerely,
Ensolum, LLC

Hadlie Green
Project Geologist

Ashley Ager, M.S., PG
Principal

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

Appendices:

Figure 1	Site Receptor Map (2023)
Figure 2	Documented Release Extent (2018)
Figure 3	Proposed Delineation Soil Sample Locations (2023)
Appendix A	Referenced Well Records
Appendix B	Final C-141

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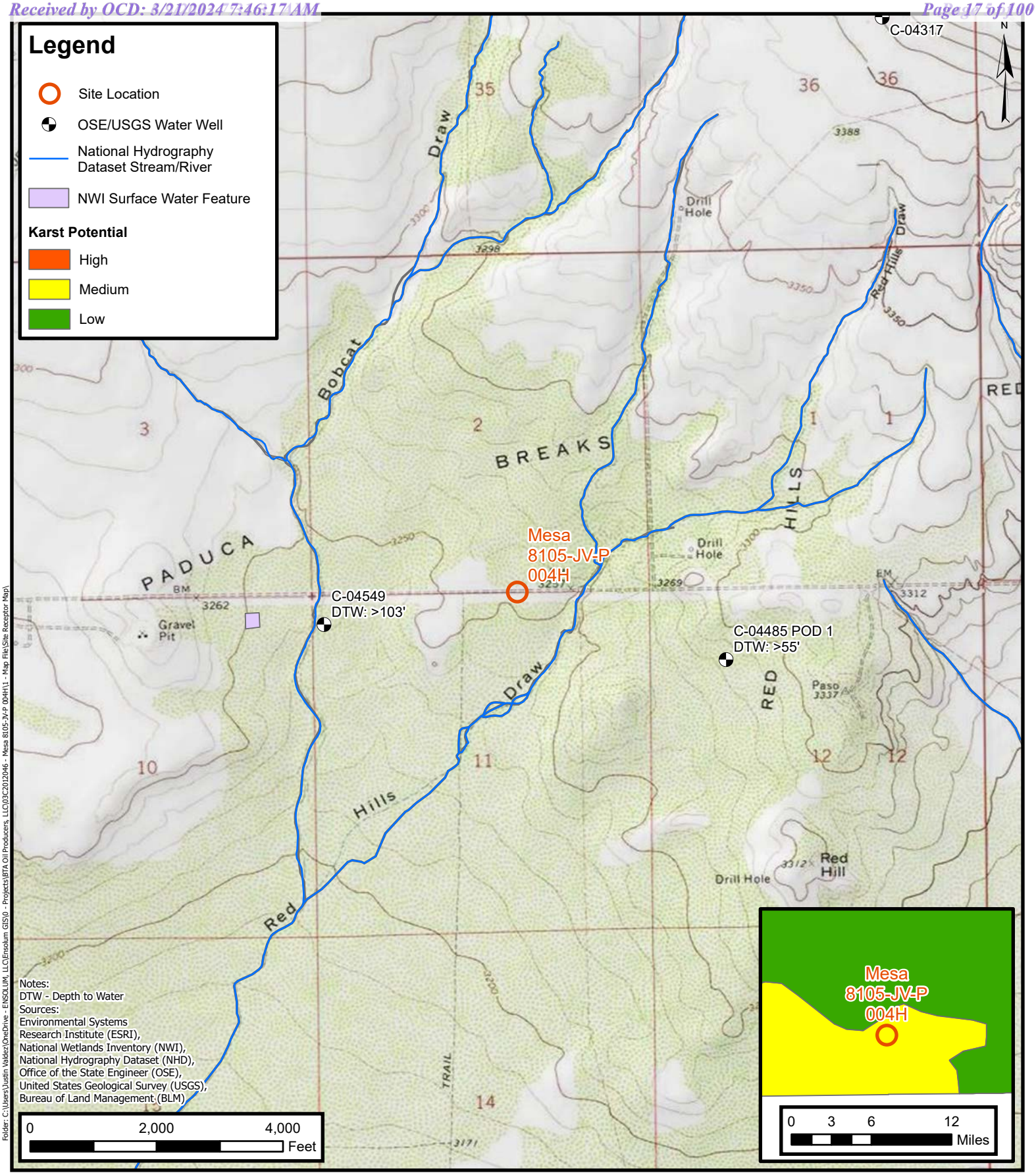
FIGURES



Folder: C:\Users\Justin Valdez\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\BTA Oil Producers, LLC\03C2012046 - Mesa 8105-JV-P 004H\1 - Map File\Site Receptor Map\

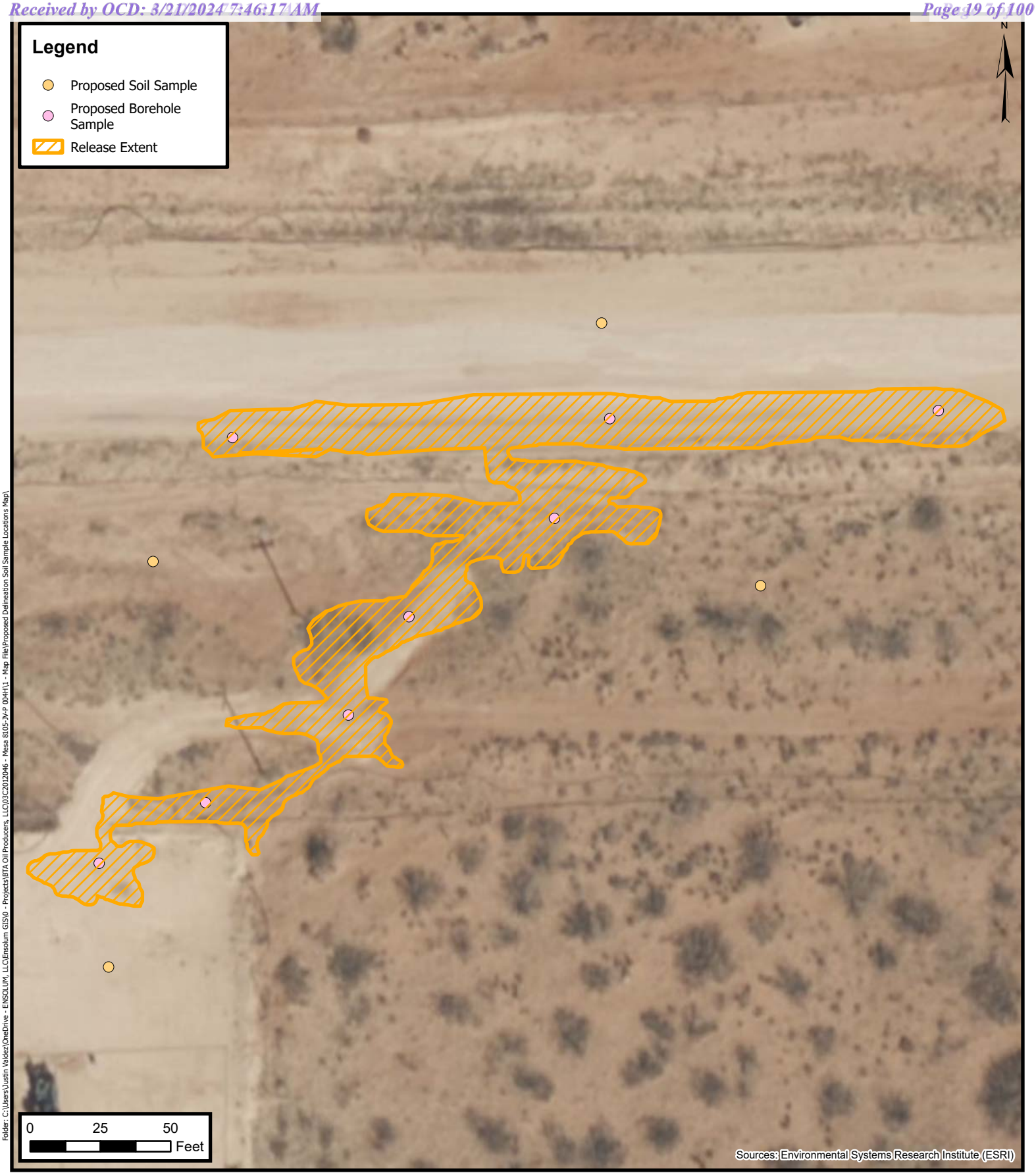
ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

BTA Oil Producers, LLC
Mesa 8105-JV-P 004H
Incident Number: nOY1831160155
Unit C, Sec 11, T26S, R32E
Lea County, New Mexico

FIGURE 1

Figure 2
Documented Release Extent (October 2018)



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Environmental, Engineering and Hydrogeologic Consultants

Proposed Delineation Soil Sample Locations

BTA Oil Producers, LLC
Mesa 8105-JV-P 004H
Incident Number: nOY1831160155
Unit C, Sec 11, T26S, R32E
Lea County, New Mexico

FIGURE 3

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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 PM4:45

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
POD1 (MW-1)	n/a	C-4549

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	4	40.92	N
	LONGITUDE	103	37	53.68	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

NW NW NW Sec. 11 T26S R32E

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)
07/14/2021	07/14/2021	temporary well material	103	n/a

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

STATIC WATER LEVEL IN COMPLETED WELL (FT): n/a

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	103	±8.5	Boring- HSA	–	–	–	–

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-4549	POD NO. 1	TRN NO. 698318	
LOCATION 26S-32E-11	1.1.1	WELL TAG ID NO. NA	PAGE 1 OF 2

OSE DIT AUG 2 2021 PM4:45

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	9	5	Caliche, Consolidated , with fine-grained, Tan	Y ✓ N	
9	14	5	Caliche, Consolidated , White	Y ✓ N	
14	19	5	Caliche, Consolidated , with fine-grained, Tan	Y ✓ N	
19	69	50	Sand, Fine-grained poorly graded, with caliche , Tanish Brown	Y ✓ N	
69	79	103	Clay, Stiff, High Plasticity, Dark 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	

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 backfilled using drill cuttings from total depth to ten feet below ground surface, then hydrated bentonite chips from ten feet below ground surface to surface.

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-4549	POD NO. 1	TRN NO. 698318	
LOCATION 26S-32E-11	1.1.1	WELL TAG ID NO. NA	PAGE 2 OF 2

U[illegible].21.32311

Lea County, New Mexico
Latitude 32°01'35.2", Longitude 103°41'01.8" NAD83
Land-surface elevation 3,130 feet above NAVD88
The depth of the well is 405 feet below land surface.
The depth of the hole is 405 feet below land surface.
This well is completed in the Pecos River Basin alluvial aquifer (N100PCSRVR) national aquifer.
This well is completed in the Dockum Group (231DCKM) 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
1993-06-16		D	62610		2723.41	NGVD29	1	L			A
1993-06-16		D	62611		2725.00	NAVD88	1	L			A
1993-06-16		D	72019	405.00			1	L			A
2013-01-16	19:10 UTC	m	62610		2906.47	NGVD29	P	S	USGS	S	A
2013-01-16	19:10 UTC	m	62611		2908.06	NAVD88	P	S	USGS	S	A
		m	72019	221.94			P	S	USGS	S	

ENSOLUM

APPENDIX B

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	pOY1831158528
District RP	1RP-5261
Facility ID	
Application ID	NOY1831160155

Release Notification

Responsible Party

Responsible Party BTA Oil Producers	OGRID NM1195/NMB000849 260297
Contact Name Ben Grimes	Contact Telephone 432-682-3753
Contact email bgrimes@btaoil.com	Incident # *(assigned by OCD)* NOY1831160155
Contact mailing address 104 South Pecos St. Midland, TX 79701	

Location of Release Source

Latitude 32.065054 Longitude 103.64362
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Mesa 8105-JV-P 004H (Closest well related)	Site Type flowline/transfer
Date Release Discovered Oct 23rd, 2018	API# *(if applicable)* 30-025-42842

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

Federal minerals

Medium cave karst

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	15 bbl. released	Volume Recovered 8 bbl.
☒ Produced Water	Volume Released- 60 bbl.	Volume Recovered 50 bbl
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No not known at this time
☐ Condensate	Volume Released (bbl.)	Volume Recovered (bbl.)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release; On October 23rd,2018 at approx. 10am the foreman found a spill on the south side of pipeline road. The water transfer line was cut in half which appeared to be from a piece of equipment most likely used during the pipeline construction currently on the same road. The line was isolated and repaired. A vacuum truck was called and recovered approx.. 8 bbl of oil and approx. 50 bbl. of water. The spill area is approx. 9688 square ft. and prob has migrated at least 1 ft, BGS due to rain and sandy soil in spill area. The spill area was calculated by google earths measuring system using GPS points of spill.
Environmental consultants will be retained to remediate spill and submit documentation.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? Spill falls under 19.15.29.7 (A) (1) an un authorized release of 25 bbl or more.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc.)? At 2:59 pm on October 23rd notice was sent in an email to Maxey G with the NMOCD	

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: Ben Grimes Title: Production Manager
Signature: Ben Grimes Date: 11/7/2018
email: Bgrimes@BTAOil.com Telephone: 432-682-3753

OCD Only

Received by: RECEIVED By Olivia Yu at 8:18 am, Nov 08, 2018 Date:

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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

Printed Name: Ben Grimes Title: Production Manager

Signature: Ben Grimes Date: 11/7/2018

email: BGrimes@BTAOil.com Telephone: 432-682-3753

OCD Only

Received by: _____ Date: _____

Incident ID	nOY1831160155
District RP	1RP-5261
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

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Page 4

State of New Mexico
Oil Conservation Division

Incident ID	nOY1831160155
District RP	1RP-5261
Facility ID	
Application ID	

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

Printed Name: Kelton Beaird Title: Environmental Manager

Signature: Date: 6/9/2023

email: KBeaird@btaoil.com Telephone: 432-312-2203

OCD Only

Received by: Jocelyn Harimon Date: 06/09/2023

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Page 5

State of New Mexico
Oil Conservation Division

Incident ID	nOY1831160155
District RP	1RP-5261
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

☒ Detailed description of proposed remediation technique
☒ Scaled sitemap with GPS coordinates showing delineation points
☒ Estimated volume of material to be remediated
☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
☒ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☐ Extents of contamination must be fully delineated.

☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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: 6/9/2023
email: KBeaird@btaoil.com
Telephone: 432-312-2203

OCD Only

Received by: Jocelyn Harimon
Date: 06/09/2023

☐ Approved ☒ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature:
Date: 8/18/2023

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

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

CONDITIONS

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID: 260297
	Action Number: 225739
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	Remediation Plan is conditionally approved. Horizontal delineation must meet the requirements of the reclamation standards 19.15.29.13 NMAC (600 mg/kg Cl, 100 mg/kg TPH, 50 mg/kg BTEX, 10 mg/kg benzene) or OCD approved “background” values for the upper 4 feet of the impacted area. Soil standards below 4 feet must be delineated/remediated to Table I Closure Criteria for the approved site-specific depth to groundwater. A surface visual footprint alone is not sufficient when assessing the horizontal extent of the release. Laboratory data must be provided as evidence of delineation efforts. Confirmation soil samples must consist of a five-point composite sample representing a surface area of no more than 200 ft2 unless otherwise approved.	8/18/2023

ENSOLUM

APPENDIX B

Lithologic Soil Sampling Logs

ENSOLUM

	Sample Name: BH01	Date: 09/12/2023
	Site Name: Mesa 8105 JVP #004H	
	Incident Number: n041831160155	
	Job Number: 03C2012046	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: MR/CH	Method: Hand Auger
Coordinates: 32.065049, -103.642784	Hole Diameter: 4"	Total Depth: 4'

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.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	SP	0-4' : Sand with trace caliche. Red/brown, poorly sorted, medium sub-rounded. No staining, no odor,dry.
D	<173.6	0.0	N			1		
D	<173.6	0.0	N	BH01	2	2		
D	<173.6	0.0	N			3		
D	<173.6	0.0	N	BH01A	4	4		
						TD		Total Depth at 4' bgs.

ENSOLUM

	Sample Name: BH02	Date: 09/12/2023
	Site Name: Mesa 8105 JVP #004H	
	Incident Number: n041831160155	
	Job Number: 03C2012046	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: MR/CH	Method: Hand Auger
Coordinates: 32.065049, -103.642784	Hole Diameter: 4"	Total Depth: 4'

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.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	SP/SM	0-1' : Sand with silt, dark brown/red. Poorly sorted, medium sub-rounded. No staining, no odor,moist.
M	<173.6	0.0	N	BH02	1	1		1-4': Sand with silt, red , poorly sorted, medium sub-rounded grains. No staining, no odor, moist.
M	<173.6	0.0	N			2		
M	<173.6	0.0	N			3		
M	<173.6	0.0	N	BH02A	4	4		
						TD		Total Depth at 4' bgs.

ENSOLUM

	Sample Name: BH03	Date: 09/12/2023
	Site Name: Mesa 8105 JVP #004H	
	Incident Number: n041831160155	
	Job Number: 03C2012046	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: MR/CH	Method: Hand Auger
Coordinates: 32.065049, -103.642784	Hole Diameter: 4"	Total Depth: 4'

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.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	SP	0-4' : Sand with trace caliche. Red/brown, poorly sorted, medium sub-rounded. No staining, no odor,dry.
D	<173.6	0.0	N			1		
D	<173.6	0.0	N	BH03	2	2		
D	<173.6	0.0	N			3		
D	<173.6	0.0	N	BH03A	4	4		
						TD		Total Depth at 4' bgs.

ENSOLUM

	Sample Name: BH04	Date: 09/12/2023
	Site Name: Mesa 8105 JVP #004H	
	Incident Number: n041831160155	
	Job Number: 03C2012046	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: MR/CH	Method: Hand Auger
Coordinates: 32.065049, -103.642784	Hole Diameter: 4"	Total Depth: 4'

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.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	SP/SM	0-4' : Sand with silt. Red, medium to fine grained, poorly sorted, sub-rounded. No staining, no odor,moist.
M	<173.6	0.0	N			1		
M	<173.6	0.0	N	BH04	2	2		
M	<173.6	0.0	N			3		
M	<173.6	0.0	N	BH04A	4	4		
						TD		Total Depth at 4' bgs.

ENSOLUM

Sample Name: BH05	Date: 09/12/2023
Site Name: Mesa 8105 JVP #004H	
Incident Number: n041831160155	
Job Number: 03C2012046	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: MR/CH / Method: Hand Auger
Coordinates: 32.065049, -103.642784	Hole Diameter: 4" / Total Depth: 4'

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.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	SP/SM	0-3' : Sand with silt. Dark brown, medium to fine grained, poorly sorted, sub-rounded. No staining, no odor,moist.
M	<173.6	44.7	N			1		
M	207.2	71.8	N	BH05	2	2		
M	173.6	69.4	N			3		3-4': Sand with silt. Red, medium grained, poorly sorted. No staining, slight odor, moist.
M	280	0.7	N	BH05A	4	4		
						TD		Total Depth at 4' bgs.

ENSOLUM

Sample Name: BH06	Date: 09/12/2023	
Site Name: Mesa 8105 JVP #004H		
Incident Number: n041831160155		
Job Number: 03C2012046		
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: MR/CH	Method: Hand Auger
Coordinates: 32.065049, -103.642784	Hole Diameter: 4"	Total Depth: 4'

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.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	SP/SM	0-1' : Sand with silt. Red/brown, medium to fine grained, poorly sorted,sub-rounded. No staining, slight odor, moist.
M	<173.6	0.7	N	BH06	1	1		1-4': Sand with silt. Red/brown, medium to fine grained, poorly sorted,sub-rounded. No staining, no odor, moist.
M	<173.6	0.0	N			2		
M	<173.6	0.0	N			3		
M	<173.6	0.0	N	BH06A	4	4		
						TD		Total Depth at 4' bgs.

ENSOLUM

	Sample Name: BH07	Date: 09/12/2023
	Site Name: Mesa 8105 JVP #004H	
	Incident Number: n041831160155	
	Job Number: 03C2012046	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: MR/CH	Method: Hand Auger
Coordinates: 32.065049, -103.642784	Hole Diameter: 4"	Total Depth: 4'

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.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	SP/SM	0-1' : Sand with silt. Medium red/brown, poorly sorted, sub-rounded, medium to fine grained. No staining, odorous, moist.
M	<173.6	57.7	N	BH07	1	1		1-4':Sand with silt. Medium red/brown, poorly sorted, sub-rounded , medium to fine grained. No staining, no odor, moist.
M	<173.6	0.7	N			2		
M	<173.6	0.3	N			3		
M	<173.6	0.1	N	BH07A	4	4		
						TD		Total Depth at 4' bgs.

ENSOLUM

Sample Name: BH08	Date: 09/12/2023
Site Name: Mesa 8105 JVP #004H	
Incident Number: n041831160155	
Job Number: 03C2012046	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: MR/CH / Method: Hand Auger
Coordinates: 32.065049, -103.642784	Hole Diameter: 4" / Total Depth: 4'

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.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	SP/SM	0-2' : Sand with silt. Dark red, medium to fine grained, poorly sorted, sub-rounded. No staining, no odor, moist.
D	<173.6	0.0	N			1		
D	<173.6	0.0	N	BH08	2	2		2-3': Sand with silt. Medium brown/red, medium grained,poorly sorted, sub-rounded. No staining, no odor,moist.
D	<173.6	0.0	N			3		3-4':Sand with silt. Medium/ light brown. Medium to fine grained,poorly sorted, sub-rounded. No staining, no odor,moist.
D	<173.6	0.0	N	BH08A	4	4		
						TD		Total Depth at 4' bgs.

ENSOLUM

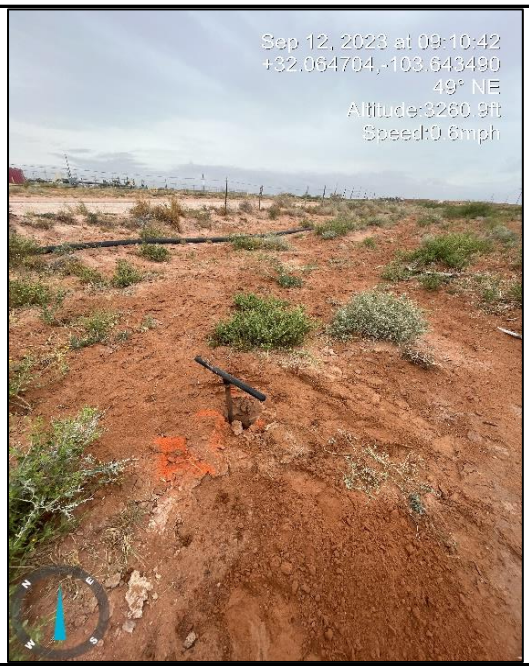
APPENDIX C

Photographic Log

ENSOLUM

Photographic Log
BTA Oil Producers, LLC
Mesa 8105-JV-P 004H
Incident Number nOY1831160155

Photograph:	1	Date:	9/12/2023
Description:	Delineation activities		
View:	East		



Photograph:	2	Date:	9/12/2023
Description:	Delineation activities		
View:	Northeast		

Photograph:	3	Date:	1/15/2024
Description:	Excavation activities		
View:	Southwest		

Photograph:	4	Date:	1/15/2024
Description:	Excavation activities		
View:	Northwest		

ENSOLUM

APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

CARDINAL Laboratories

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

September 18, 2023

HADLIE GREEN

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MESA 8105 JVP #004H

Enclosed are the results of analyses for samples received by the laboratory on 09/12/23 13:45.

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

Cardinal Laboratories is 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:	09/12/2023	Sampling Date:	09/12/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	MESA 8105 JVP #004H	Sampling Condition:	Cool & Intact
Project Number:	03C2012046	Sample Received By:	Dionica Hinojos
Project Location:	BTA (32.065054,-103.64362)		

Sample ID: BH 01 2' (H234927-01)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/15/2023	ND	2.04	102	2.00	3.62	
Toluene*	<0.050	0.050	09/15/2023	ND	2.08	104	2.00	3.37	
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	2.02	101	2.00	3.44	
Total Xylenes*	<0.150	0.150	09/15/2023	ND	6.04	101	6.00	2.66	
Total BTEX	<0.300	0.300	09/15/2023	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	09/14/2023	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2023	ND	191	95.3	200	1.24	
DRO >C10-C28*	<10.0	10.0	09/13/2023	ND	211	105	200	1.71	
EXT DRO >C28-C36	<10.0	10.0	09/13/2023	ND					

Surrogate: 1-Chlorooctane *94.6 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *105 %* *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:	09/12/2023	Sampling Date:	09/12/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	MESA 8105 JVP #004H	Sampling Condition:	Cool & Intact
Project Number:	03C2012046	Sample Received By:	Dionica Hinojos
Project Location:	BTA (32.065054,-103.64362)		

Sample ID: BH 01 A 4' (H234927-02)

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	09/14/2023	ND	1.92	95.9	2.00	2.05	
Toluene*	<0.050	0.050	09/14/2023	ND	1.98	98.8	2.00	1.15	
Ethylbenzene*	<0.050	0.050	09/14/2023	ND	2.02	101	2.00	0.924	
Total Xylenes*	<0.150	0.150	09/14/2023	ND	5.68	94.7	6.00	0.00354	
Total BTEX	<0.300	0.300	09/14/2023	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	09/14/2023	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2023	ND	191	95.3	200	1.24	
DRO >C10-C28*	<10.0	10.0	09/13/2023	ND	211	105	200	1.71	
EXT DRO >C28-C36	<10.0	10.0	09/13/2023	ND					

Surrogate: 1-Chlorooctane *95.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *105 %* *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:	09/12/2023	Sampling Date:	09/12/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	MESA 8105 JVP #004H	Sampling Condition:	Cool & Intact
Project Number:	03C2012046	Sample Received By:	Dionica Hinojos
Project Location:	BTA (32.065054,-103.64362)		

Sample ID: BH 02 1' (H234927-03)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/14/2023	ND	1.92	95.9	2.00	2.05	
Toluene*	<0.050	0.050	09/14/2023	ND	1.98	98.8	2.00	1.15	
Ethylbenzene*	<0.050	0.050	09/14/2023	ND	2.02	101	2.00	0.924	
Total Xylenes*	<0.150	0.150	09/14/2023	ND	5.68	94.7	6.00	0.00354	
Total BTEX	<0.300	0.300	09/14/2023	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	09/14/2023	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2023	ND	191	95.3	200	1.24	
DRO >C10-C28*	<10.0	10.0	09/13/2023	ND	211	105	200	1.71	
EXT DRO >C28-C36	<10.0	10.0	09/13/2023	ND					

Surrogate: 1-Chlorooctane *98.9 %* *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:	09/12/2023	Sampling Date:	09/12/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	MESA 8105 JVP #004H	Sampling Condition:	Cool & Intact
Project Number:	03C2012046	Sample Received By:	Dionica Hinojos
Project Location:	BTA (32.065054,-103.64362)		

Sample ID: BH 02 A 4' (H234927-04)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/14/2023	ND	1.92	95.9	2.00	2.05	
Toluene*	<0.050	0.050	09/14/2023	ND	1.98	98.8	2.00	1.15	
Ethylbenzene*	<0.050	0.050	09/14/2023	ND	2.02	101	2.00	0.924	
Total Xylenes*	<0.150	0.150	09/14/2023	ND	5.68	94.7	6.00	0.00354	
Total BTEX	<0.300	0.300	09/14/2023	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	09/14/2023	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2023	ND	191	95.3	200	1.24	
DRO >C10-C28*	<10.0	10.0	09/13/2023	ND	211	105	200	1.71	
EXT DRO >C28-C36	<10.0	10.0	09/13/2023	ND					

Surrogate: 1-Chlorooctane *91.4 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *103 %* *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:	09/12/2023	Sampling Date:	09/12/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	MESA 8105 JVP #004H	Sampling Condition:	Cool & Intact
Project Number:	03C2012046	Sample Received By:	Dionica Hinojos
Project Location:	BTA (32.065054,-103.64362)		

Sample ID: BH 03 2' (H234927-05)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/14/2023	ND	1.92	95.9	2.00	2.05	
Toluene*	<0.050	0.050	09/14/2023	ND	1.98	98.8	2.00	1.15	
Ethylbenzene*	<0.050	0.050	09/14/2023	ND	2.02	101	2.00	0.924	
Total Xylenes*	<0.150	0.150	09/14/2023	ND	5.68	94.7	6.00	0.00354	
Total BTEX	<0.300	0.300	09/14/2023	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	**48.0**	16.0	09/14/2023	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2023	ND	191	95.3	200	1.24	
DRO >C10-C28*	<10.0	10.0	09/13/2023	ND	211	105	200	1.71	
EXT DRO >C28-C36	<10.0	10.0	09/13/2023	ND					

Surrogate: 1-Chlorooctane *99.9 %* *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:	09/12/2023	Sampling Date:	09/12/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	MESA 8105 JVP #004H	Sampling Condition:	Cool & Intact
Project Number:	03C2012046	Sample Received By:	Dionica Hinojos
Project Location:	BTA (32.065054,-103.64362)		

Sample ID: BH 03 A 4' (H234927-06)

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	09/14/2023	ND	1.92	95.9	2.00	2.05	
Toluene*	<0.050	0.050	09/14/2023	ND	1.98	98.8	2.00	1.15	
Ethylbenzene*	<0.050	0.050	09/14/2023	ND	2.02	101	2.00	0.924	
Total Xylenes*	<0.150	0.150	09/14/2023	ND	5.68	94.7	6.00	0.00354	
Total BTEX	<0.300	0.300	09/14/2023	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	09/14/2023	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2023	ND	191	95.3	200	1.24	
DRO >C10-C28*	<10.0	10.0	09/13/2023	ND	211	105	200	1.71	
EXT DRO >C28-C36	<10.0	10.0	09/13/2023	ND					

Surrogate: 1-Chlorooctane *102 %* *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:	09/12/2023	Sampling Date:	09/12/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	MESA 8105 JVP #004H	Sampling Condition:	Cool & Intact
Project Number:	03C2012046	Sample Received By:	Dionica Hinojos
Project Location:	BTA (32.065054,-103.64362)		

Sample ID: BH 04 2' (H234927-07)

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	09/14/2023	ND	1.92	95.9	2.00	2.05	
Toluene*	<0.050	0.050	09/14/2023	ND	1.98	98.8	2.00	1.15	
Ethylbenzene*	<0.050	0.050	09/14/2023	ND	2.02	101	2.00	0.924	
Total Xylenes*	<0.150	0.150	09/14/2023	ND	5.68	94.7	6.00	0.00354	
Total BTEX	<0.300	0.300	09/14/2023	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	09/14/2023	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2023	ND	191	95.3	200	1.24	
DRO >C10-C28*	<10.0	10.0	09/13/2023	ND	211	105	200	1.71	
EXT DRO >C28-C36	<10.0	10.0	09/13/2023	ND					

Surrogate: 1-Chlorooctane *104 %* *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:	09/12/2023	Sampling Date:	09/12/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	MESA 8105 JVP #004H	Sampling Condition:	Cool & Intact
Project Number:	03C2012046	Sample Received By:	Dionica Hinojos
Project Location:	BTA (32.065054,-103.64362)		

Sample ID: BH 04 A 4' (H234927-08)

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	09/14/2023	ND	1.92	95.9	2.00	2.05	
Toluene*	<0.050	0.050	09/14/2023	ND	1.98	98.8	2.00	1.15	
Ethylbenzene*	<0.050	0.050	09/14/2023	ND	2.02	101	2.00	0.924	
Total Xylenes*	<0.150	0.150	09/14/2023	ND	5.68	94.7	6.00	0.00354	
Total BTEX	<0.300	0.300	09/14/2023	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	09/14/2023	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2023	ND	191	95.3	200	1.24	
DRO >C10-C28*	<10.0	10.0	09/13/2023	ND	211	105	200	1.71	
EXT DRO >C28-C36	<10.0	10.0	09/13/2023	ND					

Surrogate: 1-Chlorooctane *106 %* *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:	09/12/2023	Sampling Date:	09/12/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	MESA 8105 JVP #004H	Sampling Condition:	Cool & Intact
Project Number:	03C2012046	Sample Received By:	Dionica Hinojos
Project Location:	BTA (32.065054,-103.64362)		

Sample ID: BH 05 2' (H234927-09)

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	09/15/2023	ND	1.92	95.9	2.00	2.05	
Toluene*	<0.050	0.050	09/15/2023	ND	1.98	98.8	2.00	1.15	
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	2.02	101	2.00	0.924	GC-NC
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.68	94.7	6.00	0.00354	
Total BTEX	<0.300	0.300	09/15/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *144 %* *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	09/14/2023	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*	**16.9**	10.0	09/13/2023	ND	191	95.3	200	1.24	
DRO >C10-C28*	**1100**	10.0	09/13/2023	ND	211	105	200	1.71	
EXT DRO >C28-C36	**344**	10.0	09/13/2023	ND					

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

Surrogate: 1-Chlorooctadecane *101 %* *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:	09/12/2023	Sampling Date:	09/12/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	MESA 8105 JVP #004H	Sampling Condition:	Cool & Intact
Project Number:	03C2012046	Sample Received By:	Dionica Hinojos
Project Location:	BTA (32.065054,-103.64362)		

Sample ID: BH 05 A 4' (H234927-10)

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	09/15/2023	ND	1.92	95.9	2.00	2.05	
Toluene*	<0.050	0.050	09/15/2023	ND	1.98	98.8	2.00	1.15	
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	2.02	101	2.00	0.924	
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.68	94.7	6.00	0.00354	
Total BTEX	<0.300	0.300	09/15/2023	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	**224**	16.0	09/14/2023	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/14/2023	ND	191	95.3	200	1.24	
DRO >C10-C28*	**491**	10.0	09/14/2023	ND	211	105	200	1.71	
EXT DRO >C28-C36	**178**	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane *112 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *104 %* *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:	09/12/2023	Sampling Date:	09/12/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	MESA 8105 JVP #004H	Sampling Condition:	Cool & Intact
Project Number:	03C2012046	Sample Received By:	Dionica Hinojos
Project Location:	BTA (32.065054,-103.64362)		

Sample ID: BH 06 1' (H234927-11)

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	09/14/2023	ND	1.92	95.9	2.00	2.05	
Toluene*	<0.050	0.050	09/14/2023	ND	1.98	98.8	2.00	1.15	
Ethylbenzene*	<0.050	0.050	09/14/2023	ND	2.02	101	2.00	0.924	
Total Xylenes*	<0.150	0.150	09/14/2023	ND	5.68	94.7	6.00	0.00354	
Total BTEX	<0.300	0.300	09/14/2023	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	**64.0**	16.0	09/14/2023	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/14/2023	ND	191	95.3	200	1.24	
DRO >C10-C28*	<10.0	10.0	09/14/2023	ND	211	105	200	1.71	
EXT DRO >C28-C36	<10.0	10.0	09/14/2023	ND					

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

Surrogate: 1-Chlorooctadecane *121 %* *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:	09/12/2023	Sampling Date:	09/12/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	MESA 8105 JVP #004H	Sampling Condition:	Cool & Intact
Project Number:	03C2012046	Sample Received By:	Dionica Hinojos
Project Location:	BTA (32.065054,-103.64362)		

Sample ID: BH 06 A 4' (H234927-12)

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	09/14/2023	ND	1.92	95.9	2.00	2.05	
Toluene*	<0.050	0.050	09/14/2023	ND	1.98	98.8	2.00	1.15	
Ethylbenzene*	<0.050	0.050	09/14/2023	ND	2.02	101	2.00	0.924	
Total Xylenes*	<0.150	0.150	09/14/2023	ND	5.68	94.7	6.00	0.00354	
Total BTEX	<0.300	0.300	09/14/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *111 %* *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	09/14/2023	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/14/2023	ND	191	95.3	200	1.24	
DRO >C10-C28*	<10.0	10.0	09/14/2023	ND	211	105	200	1.71	
EXT DRO >C28-C36	<10.0	10.0	09/14/2023	ND					

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

Surrogate: 1-Chlorooctadecane *113 %* *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:	09/12/2023	Sampling Date:	09/12/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	MESA 8105 JVP #004H	Sampling Condition:	Cool & Intact
Project Number:	03C2012046	Sample Received By:	Dionica Hinojos
Project Location:	BTA (32.065054,-103.64362)		

Sample ID: BH 07 1' (H234927-13)

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	09/14/2023	ND	1.92	95.9	2.00	2.05	
Toluene*	<0.050	0.050	09/14/2023	ND	1.98	98.8	2.00	1.15	
Ethylbenzene*	<0.050	0.050	09/14/2023	ND	2.02	101	2.00	0.924	GC-NC
Total Xylenes*	<0.150	0.150	09/14/2023	ND	5.68	94.7	6.00	0.00354	
Total BTEX	<0.300	0.300	09/14/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *167 %* *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	09/14/2023	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*	**23.0**	10.0	09/14/2023	ND	191	95.3	200	1.24	
DRO >C10-C28*	**2410**	10.0	09/14/2023	ND	211	105	200	1.71	
EXT DRO >C28-C36	**829**	10.0	09/14/2023	ND					

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

Surrogate: 1-Chlorooctadecane *112 %* *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:	09/12/2023	Sampling Date:	09/12/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	MESA 8105 JVP #004H	Sampling Condition:	Cool & Intact
Project Number:	03C2012046	Sample Received By:	Dionica Hinojos
Project Location:	BTA (32.065054,-103.64362)		

Sample ID: BH 07 A 4' (H234927-14)

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	09/14/2023	ND	1.92	95.9	2.00	2.05	
Toluene*	<0.050	0.050	09/14/2023	ND	1.98	98.8	2.00	1.15	
Ethylbenzene*	<0.050	0.050	09/14/2023	ND	2.02	101	2.00	0.924	
Total Xylenes*	<0.150	0.150	09/14/2023	ND	5.68	94.7	6.00	0.00354	
Total BTEX	<0.300	0.300	09/14/2023	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	**48.0**	16.0	09/14/2023	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/14/2023	ND	191	95.3	200	1.24	
DRO >C10-C28*	<10.0	10.0	09/14/2023	ND	211	105	200	1.71	
EXT DRO >C28-C36	<10.0	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane *106 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *124 %* *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:	09/12/2023	Sampling Date:	09/12/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	MESA 8105 JVP #004H	Sampling Condition:	Cool & Intact
Project Number:	03C2012046	Sample Received By:	Dionica Hinojos
Project Location:	BTA (32.065054,-103.64362)		

Sample ID: BH 08 2' (H234927-15)

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	09/14/2023	ND	1.92	95.9	2.00	2.05	
Toluene*	<0.050	0.050	09/14/2023	ND	1.98	98.8	2.00	1.15	
Ethylbenzene*	<0.050	0.050	09/14/2023	ND	2.02	101	2.00	0.924	
Total Xylenes*	<0.150	0.150	09/14/2023	ND	5.68	94.7	6.00	0.00354	
Total BTEX	<0.300	0.300	09/14/2023	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	09/14/2023	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/14/2023	ND	191	95.3	200	1.24	
DRO >C10-C28*	<10.0	10.0	09/14/2023	ND	211	105	200	1.71	
EXT DRO >C28-C36	<10.0	10.0	09/14/2023	ND					

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

Surrogate: 1-Chlorooctadecane *134 %* *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:	09/12/2023	Sampling Date:	09/12/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	MESA 8105 JVP #004H	Sampling Condition:	Cool & Intact
Project Number:	03C2012046	Sample Received By:	Dionica Hinojos
Project Location:	BTA (32.065054,-103.64362)		

Sample ID: BH 08 A 4' (H234927-16)

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	09/14/2023	ND	1.92	95.9	2.00	2.05	
Toluene*	<0.050	0.050	09/14/2023	ND	1.98	98.8	2.00	1.15	
Ethylbenzene*	<0.050	0.050	09/14/2023	ND	2.02	101	2.00	0.924	
Total Xylenes*	<0.150	0.150	09/14/2023	ND	5.68	94.7	6.00	0.00354	
Total BTEX	<0.300	0.300	09/14/2023	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	09/14/2023	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/14/2023	ND	191	95.3	200	1.24	
DRO >C10-C28*	<10.0	10.0	09/14/2023	ND	211	105	200	1.71	
EXT DRO >C28-C36	<10.0	10.0	09/14/2023	ND					

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

Surrogate: 1-Chlorooctadecane *121 %* *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:	09/12/2023	Sampling Date:	09/12/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	MESA 8105 JVP #004H	Sampling Condition:	Cool & Intact
Project Number:	03C2012046	Sample Received By:	Dionica Hinojos
Project Location:	BTA (32.065054,-103.64362)		

Sample ID: SS 01 0.5' (H234927-17)

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	09/14/2023	ND	1.92	95.9	2.00	2.05	
Toluene*	<0.050	0.050	09/14/2023	ND	1.98	98.8	2.00	1.15	
Ethylbenzene*	<0.050	0.050	09/14/2023	ND	2.02	101	2.00	0.924	
Total Xylenes*	<0.150	0.150	09/14/2023	ND	5.68	94.7	6.00	0.00354	
Total BTEX	<0.300	0.300	09/14/2023	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	09/14/2023	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/14/2023	ND	191	95.3	200	1.24	
DRO >C10-C28*	<10.0	10.0	09/14/2023	ND	211	105	200	1.71	
EXT DRO >C28-C36	<10.0	10.0	09/14/2023	ND					

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

Surrogate: 1-Chlorooctadecane *128 %* *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:	09/12/2023	Sampling Date:	09/12/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	MESA 8105 JVP #004H	Sampling Condition:	Cool & Intact
Project Number:	03C2012046	Sample Received By:	Dionica Hinojos
Project Location:	BTA (32.065054,-103.64362)		

Sample ID: SS 02 0.5' (H234927-18)

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	09/15/2023	ND	1.92	95.9	2.00	2.05	
Toluene*	<0.050	0.050	09/15/2023	ND	1.98	98.8	2.00	1.15	
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	2.02	101	2.00	0.924	
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.68	94.7	6.00	0.00354	
Total BTEX	<0.300	0.300	09/15/2023	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	09/14/2023	ND	432	108	400	3.64	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/14/2023	ND	191	95.3	200	1.24	
DRO >C10-C28*	<10.0	10.0	09/14/2023	ND	211	105	200	1.71	
EXT DRO >C28-C36	<10.0	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane *106 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *123 %* *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:	09/12/2023	Sampling Date:	09/12/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	MESA 8105 JVP #004H	Sampling Condition:	Cool & Intact
Project Number:	03C2012046	Sample Received By:	Dionica Hinojos
Project Location:	BTA (32.065054,-103.64362)		

Sample ID: SS 03 0.5' (H234927-19)

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	09/15/2023	ND	1.92	95.9	2.00	2.05	
Toluene*	<0.050	0.050	09/15/2023	ND	1.98	98.8	2.00	1.15	
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	2.02	101	2.00	0.924	
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.68	94.7	6.00	0.00354	
Total BTEX	<0.300	0.300	09/15/2023	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	<16.0	16.0	09/14/2023	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/14/2023	ND	191	95.3	200	1.24	
DRO >C10-C28*	<10.0	10.0	09/14/2023	ND	211	105	200	1.71	
EXT DRO >C28-C36	<10.0	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane *106 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *122 %* *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:	09/12/2023	Sampling Date:	09/12/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	MESA 8105 JVP #004H	Sampling Condition:	Cool & Intact
Project Number:	03C2012046	Sample Received By:	Dionica Hinojos
Project Location:	BTA (32.065054,-103.64362)		

Sample ID: SS 04 0.5' (H234927-20)

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	09/15/2023	ND	1.92	95.9	2.00	2.05	
Toluene*	<0.050	0.050	09/15/2023	ND	1.98	98.8	2.00	1.15	
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	2.02	101	2.00	0.924	
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.68	94.7	6.00	0.00354	
Total BTEX	<0.300	0.300	09/15/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *111 %* *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	09/14/2023	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/14/2023	ND	191	95.3	200	1.24	
DRO >C10-C28*	<10.0	10.0	09/14/2023	ND	211	105	200	1.71	
EXT DRO >C28-C36	<10.0	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane *94.4 %* *48.2-134*

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

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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

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 #: 03C1012046 Project Owner:	City: Midland
Project Name: Mesa 8105 JVP #004H	State: TX Zip: 79701
Project Location: 32.065054, -103.64362	Phone #:
Sampler Name: Meredith Roberts/ Chad Hamilton	Fax #:

FOR LAB USE ONLY

Lab I.D.: H234927

#	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	ANALYSIS REQUEST: BTEX	Chlorides	TPH
11	BH01	2'	G	1			X					X		1105	9/12/23	X	X	X
12	BH01A	4'												1115				
13	BH02	1'												1040				
14	BH02A	4'												1055				
15	BH03	2'												1025				
16	BH03A	4'												1035				
17	BH04	2'												1005				
18	BH04A	4'												1015				
19	BH05	2'												0945				
20	BH05A	4'												0955				

Relinquished By: Meredith	Date: 9/12/23	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Time: 13:45	Received By:	All Results are emailed. Please provide Email address: hgreen@ensolum.com mroberts@ensolum.com
	Date:		REMARKS: Incident #: nOY1831160155
	Time:		

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

Observed Temp. °C 4.9°C
Corrected Temp. °C

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

CHECKED BY: (Initials) MH

Turnaround Time: Standard ☑ Rush ☐

Thermometer ID #113 ~~#113~~ #140
Correction Factor ~~0.5°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 3.2 10/07/21

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Pg 2 of 2

Company Name: Ensolum, LLC	**BILL TO**
Project Manager: See Pg 1	P.O. #:
Address:	Company: BTA Oil
City: State: Zip:	Attn: See Pg 1
Phone #: Fax #:	Address:
Project #: 03C2012046 Project Owner:	City:
Project Name: Mesa 8105 JVP #004H	State: Zip:
Project Location: 32.065054, -103.64362	Phone #:
Sampler Name: Meredith Roberts / Chad Hamilton	Fax #:

FOR LAB USE ONLY: H234927

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	ANALYSIS REQUEST: BTEX	Chlorides	TPH
11	BH06	1'	G	1			X							9/12/23	0920	X	X	X
12	BH06A	4'													0935			
13	BH07	1'													0900			
14	BH07A	4'													0915			
15	BH08	2'													0845			
16	BH08A	4'													0855			
17	SS01	0.5'													1120			
18	SS02														1125			
19	SS03														1130			
20	SS04														1135			

Relinquished By: Mears	Date: 9/12/23 Time: 13:45	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	All Results are emailed. Please provide Email address: hgreen@ensolum.com mroberts@ensolum.com
			REMARKS: Incident ID: nOY1831160155

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 24.9	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; Observed Temp. °C
	Corrected Temp. °C			Thermometer ID #113 #140 Correction Factor -0.5°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

CARDINAL Laboratories

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

January 12, 2024

HADLIE GREEN

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MESA 8105 - JV-P 004H

Enclosed are the results of analyses for samples received by the laboratory on 01/09/24 14:25.

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:	01/09/2024	Sampling Date:	01/05/2024
Reported:	01/12/2024	Sampling Type:	Soil
Project Name:	MESA 8105 - JV-P 004H	Sampling Condition:	Cool & Intact
Project Number:	03C2012046	Sample Received By:	Tamara Oldaker
Project Location:	BTA		

Sample ID: FS 01 4' (H240079-01)

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	01/10/2024	ND	2.20	110	2.00	0.386	
Toluene*	<0.050	0.050	01/10/2024	ND	2.16	108	2.00	0.846	
Ethylbenzene*	<0.050	0.050	01/10/2024	ND	2.14	107	2.00	0.560	
Total Xylenes*	<0.150	0.150	01/10/2024	ND	6.25	104	6.00	0.435	
Total BTEX	<0.300	0.300	01/10/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.1 %* *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	01/10/2024	ND	448	112	400	3.51	

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	01/10/2024	ND	197	98.3	200	3.37	
DRO >C10-C28*	<10.0	10.0	01/10/2024	ND	205	102	200	2.65	
EXT DRO >C28-C36	<10.0	10.0	01/10/2024	ND					

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

Surrogate: 1-Chlorooctadecane *90.5 %* *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:	01/09/2024	Sampling Date:	01/08/2024
Reported:	01/12/2024	Sampling Type:	Soil
Project Name:	MESA 8105 - JV-P 004H	Sampling Condition:	Cool & Intact
Project Number:	03C2012046	Sample Received By:	Tamara Oldaker
Project Location:	BTA		

Sample ID: FS 02 4' (H240079-02)

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	01/10/2024	ND	2.20	110	2.00	0.386	
Toluene*	<0.050	0.050	01/10/2024	ND	2.16	108	2.00	0.846	
Ethylbenzene*	<0.050	0.050	01/10/2024	ND	2.14	107	2.00	0.560	
Total Xylenes*	<0.150	0.150	01/10/2024	ND	6.25	104	6.00	0.435	
Total BTEX	<0.300	0.300	01/10/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.7 %* *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	**192**	16.0	01/10/2024	ND	448	112	400	3.51	

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	01/10/2024	ND	197	98.3	200	3.37	
DRO >C10-C28*	<10.0	10.0	01/10/2024	ND	205	102	200	2.65	
EXT DRO >C28-C36	<10.0	10.0	01/10/2024	ND					

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

Surrogate: 1-Chlorooctadecane *90.5 %* *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:	01/09/2024	Sampling Date:	01/08/2024
Reported:	01/12/2024	Sampling Type:	Soil
Project Name:	MESA 8105 - JV-P 004H	Sampling Condition:	Cool & Intact
Project Number:	03C2012046	Sample Received By:	Tamara Oldaker
Project Location:	BTA		

Sample ID: SW 01 0-4' (H240079-03)

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	01/10/2024	ND	2.20	110	2.00	0.386	
Toluene*	<0.050	0.050	01/10/2024	ND	2.16	108	2.00	0.846	
Ethylbenzene*	<0.050	0.050	01/10/2024	ND	2.14	107	2.00	0.560	
Total Xylenes*	<0.150	0.150	01/10/2024	ND	6.25	104	6.00	0.435	
Total BTEX	<0.300	0.300	01/10/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.5 %* *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	**224**	16.0	01/10/2024	ND	448	112	400	3.51	

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	01/10/2024	ND	197	98.3	200	3.37	
DRO >C10-C28*	<10.0	10.0	01/10/2024	ND	205	102	200	2.65	
EXT DRO >C28-C36	<10.0	10.0	01/10/2024	ND					

Surrogate: 1-Chlorooctane *97.3 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *88.8 %* *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:	01/09/2024	Sampling Date:	01/08/2024
Reported:	01/12/2024	Sampling Type:	Soil
Project Name:	MESA 8105 - JV-P 004H	Sampling Condition:	Cool & Intact
Project Number:	03C2012046	Sample Received By:	Tamara Oldaker
Project Location:	BTA		

Sample ID: SW 02 0-4' (H240079-04)

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	01/10/2024	ND	2.20	110	2.00	0.386	
Toluene*	<0.050	0.050	01/10/2024	ND	2.16	108	2.00	0.846	
Ethylbenzene*	<0.050	0.050	01/10/2024	ND	2.14	107	2.00	0.560	
Total Xylenes*	<0.150	0.150	01/10/2024	ND	6.25	104	6.00	0.435	
Total BTEX	<0.300	0.300	01/10/2024	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	**208**	16.0	01/10/2024	ND	448	112	400	3.51	

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	01/10/2024	ND	197	98.3	200	3.37	
DRO >C10-C28*	<10.0	10.0	01/10/2024	ND	205	102	200	2.65	
EXT DRO >C28-C36	<10.0	10.0	01/10/2024	ND					

Surrogate: 1-Chlorooctane *97.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *87.5 %* *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:	01/09/2024	Sampling Date:	01/08/2024
Reported:	01/12/2024	Sampling Type:	Soil
Project Name:	MESA 8105 - JV-P 004H	Sampling Condition:	Cool & Intact
Project Number:	03C2012046	Sample Received By:	Tamara Oldaker
Project Location:	BTA		

Sample ID: SW 03 0-4' (H240079-05)

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	01/10/2024	ND	2.20	110	2.00	0.386	
Toluene*	<0.050	0.050	01/10/2024	ND	2.16	108	2.00	0.846	
Ethylbenzene*	<0.050	0.050	01/10/2024	ND	2.14	107	2.00	0.560	
Total Xylenes*	<0.150	0.150	01/10/2024	ND	6.25	104	6.00	0.435	
Total BTEX	<0.300	0.300	01/10/2024	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	**208**	16.0	01/10/2024	ND	448	112	400	3.51	

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	01/10/2024	ND	197	98.3	200	3.37	
DRO >C10-C28*	<10.0	10.0	01/10/2024	ND	205	102	200	2.65	
EXT DRO >C28-C36	<10.0	10.0	01/10/2024	ND					

Surrogate: 1-Chlorooctane *91.9 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *82.0 %* *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:	01/09/2024	Sampling Date:	01/08/2024
Reported:	01/12/2024	Sampling Type:	Soil
Project Name:	MESA 8105 - JV-P 004H	Sampling Condition:	Cool & Intact
Project Number:	03C2012046	Sample Received By:	Tamara Oldaker
Project Location:	BTA		

Sample ID: FS 03 4' (H240079-06)

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	01/10/2024	ND	2.20	110	2.00	0.386	
Toluene*	<0.050	0.050	01/10/2024	ND	2.16	108	2.00	0.846	
Ethylbenzene*	<0.050	0.050	01/10/2024	ND	2.14	107	2.00	0.560	
Total Xylenes*	<0.150	0.150	01/10/2024	ND	6.25	104	6.00	0.435	
Total BTEX	<0.300	0.300	01/10/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.4 %* *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	**208**	16.0	01/10/2024	ND	448	112	400	3.51	

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	01/10/2024	ND	197	98.3	200	3.37	
DRO >C10-C28*	<10.0	10.0	01/10/2024	ND	205	102	200	2.65	
EXT DRO >C28-C36	<10.0	10.0	01/10/2024	ND					

Surrogate: 1-Chlorooctane *91.5 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *82.1 %* *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:	01/09/2024	Sampling Date:	01/08/2024
Reported:	01/12/2024	Sampling Type:	Soil
Project Name:	MESA 8105 - JV-P 004H	Sampling Condition:	Cool & Intact
Project Number:	03C2012046	Sample Received By:	Tamara Oldaker
Project Location:	BTA		

Sample ID: FS 04 4' (H240079-07)

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	01/10/2024	ND	2.20	110	2.00	0.386	
Toluene*	<0.050	0.050	01/10/2024	ND	2.16	108	2.00	0.846	
Ethylbenzene*	<0.050	0.050	01/10/2024	ND	2.14	107	2.00	0.560	
Total Xylenes*	<0.150	0.150	01/10/2024	ND	6.25	104	6.00	0.435	
Total BTEX	<0.300	0.300	01/10/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.6 %* *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	**224**	16.0	01/10/2024	ND	416	104	400	7.41	

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	01/10/2024	ND	197	98.3	200	3.37	
DRO >C10-C28*	<10.0	10.0	01/10/2024	ND	205	102	200	2.65	
EXT DRO >C28-C36	<10.0	10.0	01/10/2024	ND					

Surrogate: 1-Chlorooctane *97.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *86.6 %* *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:	01/09/2024	Sampling Date:	01/08/2024
Reported:	01/12/2024	Sampling Type:	Soil
Project Name:	MESA 8105 - JV-P 004H	Sampling Condition:	Cool & Intact
Project Number:	03C2012046	Sample Received By:	Tamara Oldaker
Project Location:	BTA		

Sample ID: FS 05 4' (H240079-08)

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	01/10/2024	ND	2.20	110	2.00	0.386	
Toluene*	<0.050	0.050	01/10/2024	ND	2.16	108	2.00	0.846	
Ethylbenzene*	<0.050	0.050	01/10/2024	ND	2.14	107	2.00	0.560	
Total Xylenes*	<0.150	0.150	01/10/2024	ND	6.25	104	6.00	0.435	
Total BTEX	<0.300	0.300	01/10/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.6 %* *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	**240**	16.0	01/10/2024	ND	416	104	400	7.41	

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	01/10/2024	ND	197	98.3	200	3.37	
DRO >C10-C28*	<10.0	10.0	01/10/2024	ND	205	102	200	2.65	
EXT DRO >C28-C36	<10.0	10.0	01/10/2024	ND					

Surrogate: 1-Chlorooctane *95.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *86.4 %* *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:	01/09/2024	Sampling Date:	01/08/2024
Reported:	01/12/2024	Sampling Type:	Soil
Project Name:	MESA 8105 - JV-P 004H	Sampling Condition:	Cool & Intact
Project Number:	03C2012046	Sample Received By:	Tamara Oldaker
Project Location:	BTA		

Sample ID: FS 06 4' (H240079-09)

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	01/10/2024	ND	2.20	110	2.00	0.386	
Toluene*	<0.050	0.050	01/10/2024	ND	2.16	108	2.00	0.846	
Ethylbenzene*	<0.050	0.050	01/10/2024	ND	2.14	107	2.00	0.560	
Total Xylenes*	<0.150	0.150	01/10/2024	ND	6.25	104	6.00	0.435	
Total BTEX	<0.300	0.300	01/10/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.5 %* *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	**208**	16.0	01/10/2024	ND	416	104	400	7.41	

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	01/10/2024	ND	197	98.3	200	3.37	
DRO >C10-C28*	<10.0	10.0	01/10/2024	ND	205	102	200	2.65	
EXT DRO >C28-C36	<10.0	10.0	01/10/2024	ND					

Surrogate: 1-Chlorooctane *93.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *85.1 %* *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

Notes and Definitions

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

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC	**BILL TO**
Project Manager: Hadlie Green	P.O. #:
Address: 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 #: 03C2012046 Project Owner: BTA	City: Midland
Project Name: Mesa 8105-JV-P 004H	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: BTEX	TPH	Chloride
H240079																		
1	FS01	4	C	1								✓		1/5/24	1130	✓	✓	✓
2	FS02	4		1										1/8/24	1100			
3	SV01	0-4		1											1120			
4	SV02	0-4		1											1125			
5	SV03	0-4		1											1130			
6	FS03	4		1											1145			
7	FS04	4		1											1250			
8	FS05	4		1											1255			
9	FS06	4		1											1310			

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: 1-9-24	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 1425		All Results are emailed. Please provide Email address: HGreen@ensolum.com
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		

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

Observed Temp. °C 3.6 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 #140 1/9/24

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 3.2 10/07/21

ENSOLUM

APPENDIX E

NMOCD Notifications

From:	Wells, Shelly, EMNRD
To:	Hadlie Green; Hamlet, Robert, EMNRD; Velez, Nelson, EMNRD; Maxwell, Ashley, EMNRD; Bratcher, Michael, EMNRD
Cc:	Kelton Beaird; Aimee Cole; Tacoma Morrissey
Subject:	RE: [EXTERNAL] BTA - Sampling Notification - Week of 10/23/2023
Date:	Thursday, October 19, 2023 11:11:07 AM
Attachments:	image001.png image002.png image003.png image004.png

[**EXTERNAL EMAIL**]

Good morning Hadlie,

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

Thank you,

Shelly

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

From: Hadlie Green <hgreen@ensolum.com>
Sent: Thursday, October 19, 2023 9:57 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Kelton Beaird <KBeaird@btaoil.com>; Aimee Cole <acole@ensolum.com>; Tacoma Morrissey <tmorrissey@ensolum.com>
Subject: [EXTERNAL] BTA - Sampling Notification - Week of 10/23/2023

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 23, 2023.

- RGA #1 / nAPP2228347919

Sampling Date: 10/24/2023 @ 9:00 AM MST

- Mesa 8105 JV-P #4H Battery / NRM2004549559
  - Sampling Date: 10/24-27/2023 @ 9:00 AM MST

- Mesa 8105-JV-P 004H / NOY1831160155
  - Sampling Date: 10/25-26/2023 @ 9:00 AM MST

- Vaca West Tank Battery / nAPP2202849030
  - Sampling Date: 10/25-27/2023 @ 9:00 AM MST

- Ogden 20509 1-3H Tank Battery / NAB1905943420
  - Sampling Date: 10/27/2023 @ 9:00 AM MST

Thank you,

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

From: Maxwell, Ashley, EMNRD
To: Wells, Shelly, EMNRD; Hadlie Green; kbeaird@btoil.com; Tacoma Morrissey; Aimee Cole
Cc: Bratcher, Michael, EMNRD
Subject: RE: [EXTERNAL] BTA - Extension Request - Mesa 8105-JV-P 004H (Incident Number NOY1831160155)
Date: Monday, November 13, 2023 11:30:05 AM
Attachments: image001.png
image002.png
image003.png
image004.png

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

[**EXTERNAL EMAIL**]

Good morning,

Your extension request of February 14, 2024 has been approved.

Thanks,
Ashley

Ashley Maxwell • Environmental Specialist
Environmental Bureau Projects Group
EMNRD - Oil Conservation Division
1000 Rio Brazos Road | Aztec, NM 87110
505.635.5000 | Ashley.Maxwell@emnrd.nm.gov
http://www.emnrd.state.nm.us/OCD/

From: Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>
Sent: Monday, November 13, 2023 9:16 AM
To: Maxwell, Ashley, EMNRD <Ashley.Maxwell@emnrd.nm.gov>
Cc: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>
Subject: FW: [EXTERNAL] BTA - Extension Request - Mesa 8105-JV-P 004H (Incident Number NOY1831160155)

From: Hadlie Green <hgreen@ensolum.com>
Sent: Friday, November 10, 2023 8:10 AM
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 - Extension Request - Mesa 8105-JV-P 004H (Incident Number NOY1831160155)

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

All,

BTA is requesting an extension for the current deadline of November 16, 2023, for submitting a remediation work plan or closure request required in 19.15.29.12.B.(1) NMAC at the Mesa 8105-JV-P 004H (Incident Number NOY1831160155). The historical release occurred on October 23, 2018. Initial assessment of the release has been completed; however, fracing operations at the facility have delayed remediation activities. Once operations have been completed at the Site, remediation activities will proceed. In order to complete the remediation activities and submit a remediation work plan or closure request, BTA is requesting a 90-day extension until February 14, 2024.

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	pOY1831158528
District RP	1RP-5261
Facility ID	
Application ID	NOY1831160155

Release Notification

Responsible Party

Responsible Party BTA Oil Producers	OGRID NM1195/NMB000849 260297
Contact Name Ben Grimes	Contact Telephone 432-682-3753
Contact email bgrimes@btaoil.com	Incident # *(assigned by OCD)* NOY1831160155
Contact mailing address 104 South Pecos St. Midland, TX 79701	

Location of Release Source

Latitude 32.065054 Longitude 103.64362
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Mesa 8105-JV-P 004H (Closest well related)	Site Type flowline/transfer
Date Release Discovered Oct 23rd, 2018	API# *(if applicable)* 30-025-42842

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

Federal minerals

Medium cave karst

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	15 bbl. released	Volume Recovered 8 bbl.
☒ Produced Water	Volume Released- 60 bbl.	Volume Recovered 50 bbl
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No not known at this time
☐ Condensate	Volume Released (bbl.)	Volume Recovered (bbl.)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release; On October 23rd,2018 at approx. 10am the foreman found a spill on the south side of pipeline road. The water transfer line was cut in half which appeared to be from a piece of equipment most likely used during the pipeline construction currently on the same road. The line was isolated and repaired. A vacuum truck was called and recovered approx.. 8 bbl of oil and approx. 50 bbl. of water. The spill area is approx. 9688 square ft. and prob has migrated at least 1 ft, BGS due to rain and sandy soil in spill area. The spill area was calculated by google earths measuring system using GPS points of spill.
Environmental consultants will be retained to remediate spill and submit documentation.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? Spill falls under 19.15.29.7 (A) (1) an un authorized release of 25 bbl or more.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc.)?

At 2:59 pm on October 23rd notice was sent in an email to Maxey G with the NMOCD

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: Ben Grimes Title: Production Manager
Signature: Ben Grimes Date: 11/7/2018
email: Bgrimes@BTAOil.com Telephone: 432-682-3753

OCD Only

Received by: RECEIVED By Olivia Yu at 8:18 am, Nov 08, 2018 Date:

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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

Printed Name: Ben Grimes Title: Production Manager

Signature: Ben Grimes Date: 11/7/2018

email: BGrimes@BTAOil.com Telephone: 432-682-3753

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	nOY1831160155
District RP	1RP-5261
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	nOY1831160155
District RP	1RP-5261
Facility ID	
Application ID	

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

Printed Name: __Kelton Beaird_____ Title: __Environmental Manager_____

Signature:_____ Date: _____2/14/2024_____

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

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	nOY1831160155
District RP	1RP-5261
Facility ID	
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: __Kelton Beaird_____ Title: _Environmental Manager_____

Signature: _____ Date: _____2/14/2024_____

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
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QUESTIONS

Action 325392

QUESTIONS

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID: 260297
	Action Number: 325392
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nOY1831160155**
Incident Name	**NOY1831160155 MESA 8105 JV P #004H @ 30-025-42842**
Incident Type	**Oil Release**
Incident Status	**Remediation Closure Report Received**
Incident Well	**[30-025-42842] MESA 8105 JV P #004H**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	MESA 8105 JV P #004H
Date Release Discovered	10/23/2018
Surface Owner	Federal

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	No
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 | Flow Line - Production | Crude Oil | Released: 15 BBL | Recovered: 8 BBL | Lost: 7 BBL.
Produced Water Released (bbls) Details	Cause: Equipment Failure | Flow Line - Production | Produced Water | Released: 60 BBL | Recovered: 50 BBL | Lost: 10 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	No
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)	*Not answered.*

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QUESTIONS (continued)

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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.**
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	False
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	off pad release
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)

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	Action Number: 325392
	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 100 and 500 (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 1 and 5 (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	Between 1 and 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)	240
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	3262
GRO+DRO (EPA SW-846 Method 8015M)	2433
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	09/12/2023
On what date will (or did) the final sampling or liner inspection occur	01/15/2024
On what date will (or was) the remediation complete(d)	01/15/2024
What is the estimated surface area (in square feet) that will be reclaimed	1520
What is the estimated volume (in cubic yards) that will be reclaimed	225
What is the estimated surface area (in square feet) that will be remediated	1520
What is the estimated volume (in cubic yards) that will be remediated	225
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)

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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	LEA LAND LANDFILL [fEEM0112342028]
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	No
OR is the **off-site** disposal site, to be used, an NMED facility	No
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	No
(In Situ) Soil Vapor Extraction	No
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	No
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	No
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	No
Ground Water Abatement pursuant to 19.15.30 NMAC	No
OTHER (Non-listed remedial process)	No
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)

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	Action Number: 325392
	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)

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QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**301414**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**01/15/2024**
What was the (estimated) number of samples that were to be gathered	**5**
What was the sampling surface area in square feet	**1520**

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	1520
What was the total volume (cubic yards) remediated	225
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	1520
What was the total volume (in cubic yards) reclaimed	225
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)

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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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COMMENTS

Action 325392

COMMENTS

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COMMENTS

Created By	Comment	Comment Date
csmith	Returned to Review, Typo on Approval.	3/22/2024

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CONDITIONS

Action 325392

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CONDITIONS

Created By	Condition	Condition Date
amaxwell	Remediation closure approved.	3/22/2024
amaxwell	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.	3/22/2024