



August 2, 2023

New Mexico Oil Conservation Division

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

**Re: Closure Request
Mesa #2H Production Facility
Incident Number nAPP2115531696
Lea County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of BTA Oil Producers, LLC (BTA), has prepared this *Closure Request* to document assessment, delineation, and soil sampling activities performed at the Mesa #2H Production Facility (Site). The purpose of the Site assessment, delineation, and soil sampling activities was to assess for the presence or absence of impacts to soil resulting from a produced water release at the Site. Based on field observations, field screening activities, and soil sample laboratory analytical results, BTA is submitting this *Closure Request*, describing Site assessment and delineation activities that have occurred and requesting closure for Incident Number nAPP2115531696.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit D, Section 11, Township 26 South, Range 32 East, in Lea County, New Mexico (32.063888°, -103.65331°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On June 2, 2021, structural failure of a dump valve on a separator vessel caused the release of approximately 15 barrels (bbls) of produced water onto the well pad. The water saturated the immediate area of the equipment, and no fluid was recovered. BTA reported the release to the New Mexico Oil Conservation Division (NMOCD) and submitted a Release Notification Form C-141 (Form C-141) on June 4, 2021. The release was assigned Incident Number nAPP2115531696.

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 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 the New Mexico Office of the State Engineer (NMOSE) well C-4549-POD1, located approximately 0.1 miles west of the Site. The well was drilled in July 2021 to a total depth of 103 feet bgs to determine depth to water for the region, which determined groundwater was greater than 103 feet bgs beneath the

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Site. 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 stream, located approximately 260 feet west of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (medium potential karst designation area). Site receptors are identified on Figure 1.

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

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH): 100 mg/kg
- Chloride: 600 mg/kg

SITE ASSESSMENT ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On May 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 release were observed. Seven assessment soil samples (SS01 through SS07) were collected within and around the inferred release area at a depth of approximately 0.5 feet bgs, to assess for the presence or absence of impacted soil. The soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was completed during the Site visit and a photographic log is included as Appendix B.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Cardinal Laboratories (Cardinal) in Hobbs, New Mexico, for analysis of the following chemicals of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following Standard Method SM4500.

Laboratory analytical results for assessment soil samples SS01 through SS07 indicated all COC concentrations were compliant with the Site Closure Criteria. Additional delineation activities within the inferred release area were required, to further confirm the absence of impacted soil.

DELINEATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On May 25, 2023, Ensolum returned to the Site to further confirm the absence of impacted soil in the soil sample locations of SS05 through SS07, which were located within the presumed release extent, for vertical delineation purposes. Based on field screening for VOCs and chloride, delineation soil samples were collected at a depth of 4 feet bgs. The delineation soil samples were collected, handled, and analyzed following the same procedures previously described. Field screening results and observations were logged on lithologic/soil sampling logs, which are included in Appendix C. The delineation soil sample locations were mapped utilizing a handheld GPS unit and are depicted on Figure 2. Photographic documentation was completed during the Site visit and is included in Appendix B.

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Laboratory analytical results for delineation soil samples SS05 through SS07 collected at a depth of 4 feet bgs, all COC concentrations were compliant with the Site Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete analytical reports are included as Appendix D.

CLOSURE REQUEST

Site assessment and delineation activities were conducted at the Site to assess for the presence or absence of impacted soil from the June 2, 2021, release of produced water at the Site. Laboratory analytical results for delineation soil samples indicated all COC concentrations were compliant with the Site Closure Criteria and vertically and laterally delineated to the most stringent Table I Closure Criteria. Additionally, no visible indications of the release were observed. Based on laboratory analytical results, impacted soil was not identified and as such, no further remediation is required.

BTA believes these remedial actions are protective of human health, the environment, and groundwater. As such, BTA respectfully requests closure for Incident Number nAPP2115531696. Notifications submitted to the NMOCD are included in Appendix E and the final Form C-141 is included in Appendix F.

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

Sincerely,
Ensolum, LLC



Peter Van Patten
Project Geologist



Daniel R. Moir, PG
Senior Managing Geologist

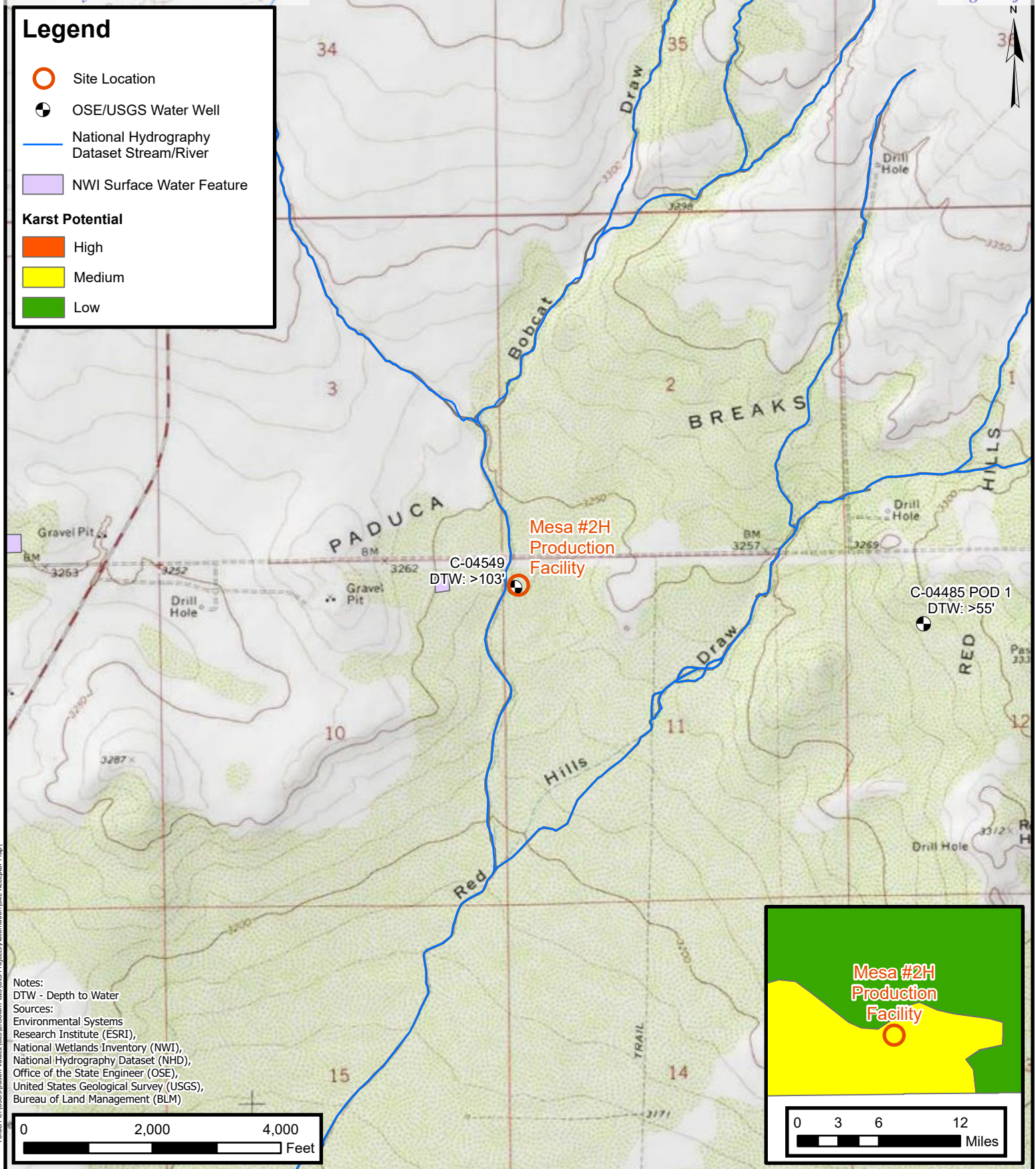
cc: Kelton Beaird, BTA
Nathan Sirgo, BTA
Bureau of Land Management

Appendices:

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



FIGURES



Site Receptor Map

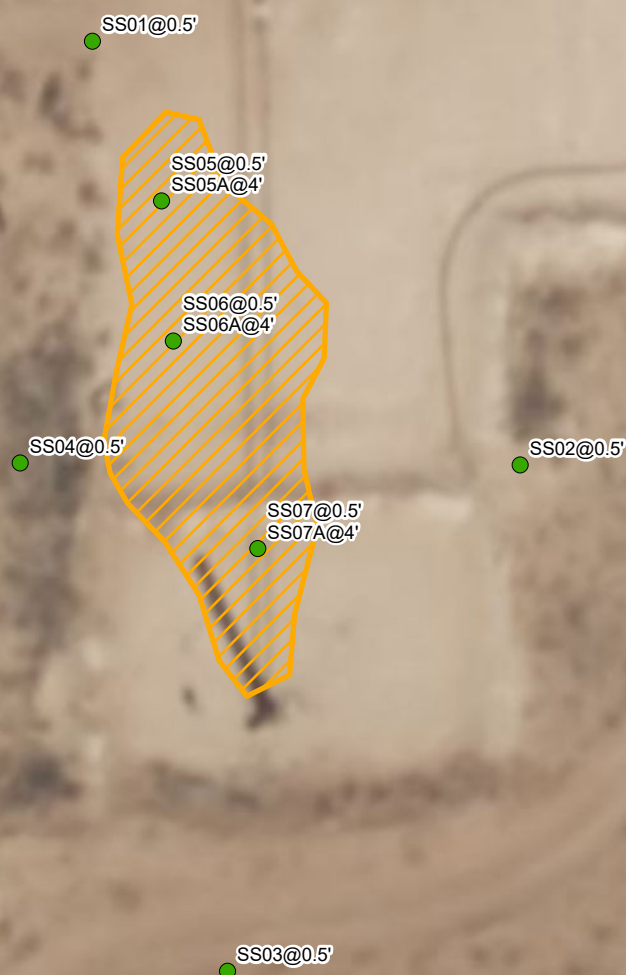
BTA Oil Producers
Mesa #2H Production Facility
Incident Number: nAPP2115531696
Unit D, Sec 11, T26S, R32E
Lea County, New Mexico

FIGURE

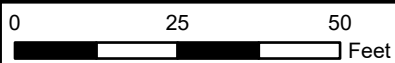
1

Legend

- Preliminary Soil Sample
in Compliance with
Closure Criteria
- Release Extent



Notes:
Sample ID @ Depth Below Ground Surface.



Sources: Environmental Systems Research Institute (ESRI)



Preliminary Soil Sample Locations

BTA Oil Producers, LLC
Mesa #2H Production Facility
Incident Number: nAPP2115531696
Unit D, Sec 11, T26S, R32E
Lea County, New Mexico

FIGURE
2



TABLES



TABLE I
SOIL SAMPLE ANALYTICAL RESULTS
Mesa #2H Production Facility
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 | NE | 100 | 600 |
| Assessment Soil Samples | | | | | | | | | | |
| SS01 | 05/12/2023 | 0.5 | <0.050 | <0.300 | <10.0 | 52.2 | 30.5 | 52.2 | 82.7 | 64.0 |
| SS02 | 05/12/2023 | 0.5 | <0.050 | <0.300 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | 48.0 |
| SS03 | 05/12/2023 | 0.5 | <0.050 | <0.300 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | 32.0 |
| SS04 | 05/12/2023 | 0.5 | <0.050 | <0.300 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | 32.0 |
| SS05 | 05/12/2023 | 0.5 | <0.050 | <0.300 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | 48.0 |
| SS05A | 05/25/2023 | 4 | <0.050 | <0.300 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | 64.0 |
| SS06 | 05/12/2023 | 0.5 | <0.050 | <0.300 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | 64.0 |
| SS06A | 05/25/2023 | 4 | <0.050 | <0.300 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | 48.0 |
| SS07 | 05/12/2023 | 0.5 | <0.050 | <0.300 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | 80.0 |
| SS07A | 05/25/2023 | 4 | <0.050 | <0.300 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <16.0 |

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

NMAC: New Mexico Administrative Code

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

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

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon



APPENDIX A

Referenced Well Records



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

OSE DJT AUG 2 2021 PM 4:45

| | | | | | | | | |
|---|---|---------------------------|--|--|---|--|---|--------------------|
| 1. GENERAL AND WELL LOCATION | OSE POD NO. (WELL NO.) POD1 (MW-1) | | WELL TAG ID NO. n/a | | OSE FILE NO(S). C-4549 | | | |
| | WELL OWNER NAME(S) BTA Oil Producers | | | | PHONE (OPTIONAL) | | | |
| | WELL OWNER MAILING ADDRESS 104 S. Pecos St. | | | | CITY Midland | STATE TX | ZIP 79701 | |
| | WELL LOCATION (FROM GPS) | DEGREES LATITUDE 32 | MINUTES 4 | SECONDS 40.92 | N | * ACCURACY REQUIRED: ONE TENTH OF A SECOND | | |
| | LONGITUDE 103 | 37 | 53.68 | W | * 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. 1249 | | NAME OF LICENSED DRILLER Jackie D. Atkins | | | NAME OF WELL DRILLING COMPANY Atkins Engineering Associates, Inc. | | |
| | DRILLING STARTED 07/14/2021 | | DRILLING ENDED 07/14/2021 | | DEPTH OF COMPLETED WELL (FT) temporary well material | BORE HOLE DEPTH (FT) 103 | DEPTH WATER FIRST ENCOUNTERED (FT) n/a | |
| | COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input checked="" type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED) | | | | | STATIC WATER LEVEL IN COMPLETED WELL (FT) n/a | | |
| | DRILLING FLUID: <input checked="" type="checkbox"/> AIR <input type="checkbox"/> MUD ADDITIVES - SPECIFY: | | | | | | | |
| | DRILLING METHOD: <input type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input checked="" type="checkbox"/> OTHER - SPECIFY: Hollow Stem Auger | | | | | | | |
| | DEPTH (feet bgl) FROM 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 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 DTI AUG 2 2021 PM4:45

| 4. HYDROGEOLOGIC LOG OF WELL | DEPTH (feet bgl) | | 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) |
|---|------------------|----|---------------------|--|--|--|
| | FROM | TO | | | | |
| | 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 | |
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| | | | | | Y N | |
| | | | | | Y N | |
| | | | | | Y N | |
| | | | | | Y N | |
| | | | | | Y N | |
| | | | | | Y N | |
| METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: <input type="checkbox"/> PUMP <input type="checkbox"/> AIR LIFT <input type="checkbox"/> BAILER <input type="checkbox"/> 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: | |
|---|---|--|
|  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 |

Available data for this site

Groundwater: Field measurements

GO

Lea County, New Mexico

Hydrologic Unit Code 13070001

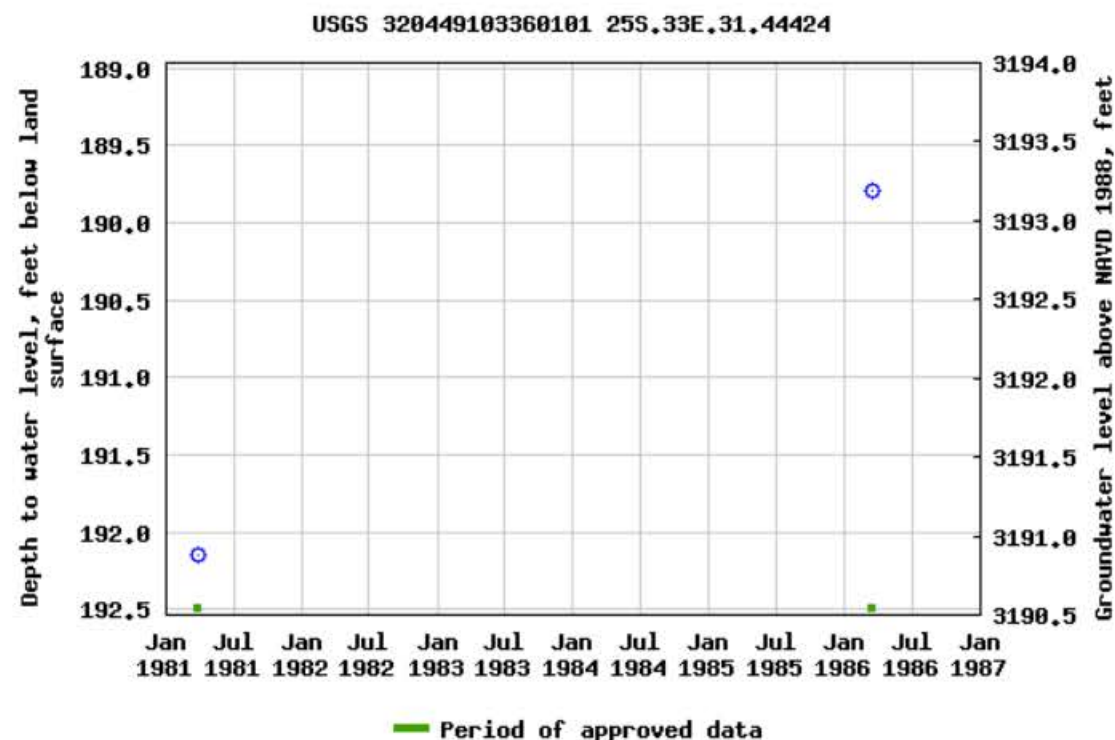
Latitude 32°04'49", Longitude 103°36'01" NAD27

Land-surface elevation 3,383 feet above NAVD88

This well is completed in the Other aquifers (N9999OTHER) national aquifer.

This well is completed in the Chinle Formation (231CHNL) local aquifer.

Output formats

[Table of data](#)[Tab-separated data](#)[Graph of data](#)[Reselect period](#)



APPENDIX B

Photographic Log



Photographic Log

BTA Oil Producers, LLC

Mesa #2H Production Facility

Incident Number: nAPP2115531696



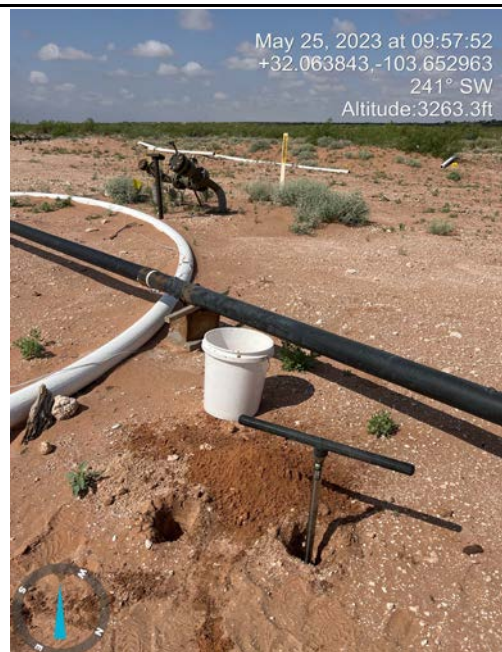
Photograph: 1 Date: 5/12/2023
Description: Initial assessment activities
View: North



Photograph: 2 Date: 5/12/2023
Description: Initial assessment activities
View: South



Photograph: 3 Date: 5/25/2023
Description: Delineation activities
View: North





Photograph: 4 Date: 5/25/2023
Description: Delineation activities
View: Southwest




APPENDIX C

Lithologic Soil Sampling Logs

|  | | | | | | | | Sample Name: SS05 | | Date: 5/25/2023 | |
|---|----------------|-------------|----------|-----------|-----------------------|----------------|------------------|--|--|--------------------|--|
| | | | | | | | | Site Name: Mesa #2H Production Facility | | | |
| | | | | | | | | Incident Number: nAPP2115531696 | | | |
| | | | | | | | | Job Number: 03C2012039 | | | |
| LITHOLOGIC / SOIL SAMPLING LOG | | | | | | | | Logged By: Meredith Roberts | | Method: Hand Auger | |
| Coordinates: 32.063923,-103.653392 | | | | | | | | Hole Diameter: | | 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. 40% correction factor included. | | | | | | | | | | | |
| Moisture Content | Chloride (ppm) | Vapor (ppm) | Staining | Sample ID | Sample Depth (ft bgs) | Depth (ft bgs) | USCS/Rock Symbol | Lithologic Descriptions | | | |
| Dry | <173 | 0.0 | N | SS05A | | 1 | SP-SM | Sand: medium brown, fine grain, poorly graded, no stain, no odor | | | |
| Dry | <173 | 0.1 | N | | | 2 | SP-SM | SAA (same as above) | | | |
| Dry | <173 | 0.0 | N | | | 3 | SP-SM | SAA | | | |
| Dry | <173 | 0.0 | N | | | 4 | SP-SM | SAA | | | |
| | | | | | | | | TD 4 feet bgs | | | |

|  | | | | | | | | Sample Name: SS06 | | Date: 5/25/2023 | |
|---|----------------|-------------|----------|-----------|-----------------------|----------------|------------------|--|--|--------------------|--|
| | | | | | | | | Site Name: Mesa #2H Production Facility | | | |
| | | | | | | | | Incident Number: nAPP2115531696 | | | |
| | | | | | | | | Job Number: 03C2012039 | | | |
| LITHOLOGIC / SOIL SAMPLING LOG | | | | | | | | Logged By: Meredith Roberts | | Method: Hand Auger | |
| Coordinates: 32.063864,-103.653387 | | | | | | | | Hole Diameter: | | 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. 40% correction factor included. | | | | | | | | | | | |
| Moisture Content | Chloride (ppm) | Vapor (ppm) | Staining | Sample ID | Sample Depth (ft bgs) | Depth (ft bgs) | USCS/Rock Symbol | Lithologic Descriptions | | | |
| Dry | <173 | 0.0 | N | SS06A | | 1 | SP-SM | Sand: medium brown, fine grain, poorly graded, no stain, no odor | | | |
| Dry | <173 | 0.2 | N | | | 2 | SP-SM | SAA (same as above) | | | |
| Dry | <173 | 0.0 | N | | | 3 | SP-SM | SAA | | | |
| Dry | <173 | 0.1 | N | | 4 | 4 | SP-SM | SAA TD 4 feet bgs | | | |

|  | | | | | | | | Sample Name: SS07 | | Date: 5/25/2023 | |
|---|----------------|-------------|----------|-----------|-----------------------|----------------|------------------|--|--|--------------------|--|
| | | | | | | | | Site Name: Mesa #2H Production Facility | | | |
| | | | | | | | | Incident Number: nAPP2115531696 | | | |
| | | | | | | | | Job Number: 03C2012039 | | | |
| LITHOLOGIC / SOIL SAMPLING LOG | | | | | | | | Logged By: Meredith Roberts | | Method: Hand Auger | |
| Coordinates: 32.063776,-103.653346 | | | | | | | | Hole Diameter: | | 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. 40% correction factor included. | | | | | | | | | | | |
| Moisture Content | Chloride (ppm) | Vapor (ppm) | Staining | Sample ID | Sample Depth (ft bgs) | Depth (ft bgs) | USCS/Rock Symbol | Lithologic Descriptions | | | |
| Dry | <173 | 0.0 | N | SS07A | | 1 | SP-SM | Sand: medium brown, fine grain, poorly graded, no stain, no odor | | | |
| Dry | <173 | 0.0 | N | | | 2 | SP-SM | SAA (same as above) | | | |
| Dry | <173 | 0.1 | N | | | 3 | SP-SM | SAA | | | |
| Dry | <173 | 0.0 | N | | | 4 | SP-SM | SAA | | | |
| | | | | | | | | TD 4 feet bgs | | | |



APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation



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

May 17, 2023

HADLIE GREEN

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MESA #2H PRODUCTION FACILITY

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

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

Cardinal Laboratories is accredited 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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 05/12/2023
Reported: 05/17/2023
Project Name: MESA #2H PRODUCTION FACILITY
Project Number: 03C2012028
Project Location: BTA 32.063888,-103.65331

Sampling Date: 05/12/2023
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SS 01 0.5' (H232402-01)

| BTX 8021B | | mg/kg | | Analyzed By: JH | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 05/16/2023 | ND | 2.23 | 112 | 2.00 | 4.60 | |
| Toluene* | <0.050 | 0.050 | 05/16/2023 | ND | 2.22 | 111 | 2.00 | 4.51 | |
| Ethylbenzene* | <0.050 | 0.050 | 05/16/2023 | ND | 2.20 | 110 | 2.00 | 5.22 | |
| Total Xylenes* | <0.150 | 0.150 | 05/16/2023 | ND | 6.69 | 112 | 6.00 | 5.03 | |
| Total BTX | <0.300 | 0.300 | 05/16/2023 | ND | | | | | |

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

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AC | | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Chloride | 64.0 | 16.0 | 05/16/2023 | ND | 432 | 108 | 400 | 3.64 | | |

| TPH 8015M | | mg/kg | | Analyzed By: MS | | | | | |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|--------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 05/15/2023 | ND | 185 | 92.6 | 200 | 3.93 | |
| DRO >C10-C28* | 52.2 | 10.0 | 05/15/2023 | ND | 194 | 96.9 | 200 | 0.0656 | |
| EXT DRO >C28-C36 | 30.5 | 10.0 | 05/15/2023 | ND | | | | | |

Surrogate: 1-Chlorooctane 93.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 122 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 05/12/2023
Reported: 05/17/2023
Project Name: MESA #2H PRODUCTION FACILITY
Project Number: 03C2012028
Project Location: BTA 32.063888,-103.65331

Sampling Date: 05/12/2023
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SS 02 0.5' (H232402-02)

| BTEx 8021B | | mg/kg | | Analyzed By: JH | | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Benzene* | <0.050 | 0.050 | 05/16/2023 | ND | 2.23 | 112 | 2.00 | 4.60 | | |
| Toluene* | <0.050 | 0.050 | 05/16/2023 | ND | 2.22 | 111 | 2.00 | 4.51 | | |
| Ethylbenzene* | <0.050 | 0.050 | 05/16/2023 | ND | 2.20 | 110 | 2.00 | 5.22 | | |
| Total Xylenes* | <0.150 | 0.150 | 05/16/2023 | ND | 6.69 | 112 | 6.00 | 5.03 | | |
| Total BTEx | <0.300 | 0.300 | 05/16/2023 | ND | | | | | | |

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

| Chloride, SM4500CI-B | | mg/kg | | Analyzed By: AC | | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Chloride | 48.0 | 16.0 | 05/16/2023 | ND | 432 | 108 | 400 | 3.64 | | |

| TPH 8015M | | mg/kg | | Analyzed By: MS | | | | | |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|--------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 05/15/2023 | ND | 185 | 92.6 | 200 | 3.93 | |
| DRO >C10-C28* | <10.0 | 10.0 | 05/15/2023 | ND | 194 | 96.9 | 200 | 0.0656 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 05/15/2023 | ND | | | | | |

Surrogate: 1-Chlorooctane 94.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 121 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received: 05/12/2023
Reported: 05/17/2023
Project Name: MESA #2H PRODUCTION FACILITY
Project Number: 03C2012028
Project Location: BTA 32.063888,-103.65331

Sampling Date: 05/12/2023
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SS 03 0.5' (H232402-03)

| BTEx 8021B | | mg/kg | | Analyzed By: JH | | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Benzene* | <0.050 | 0.050 | 05/16/2023 | ND | 2.23 | 112 | 2.00 | 4.60 | | |
| Toluene* | <0.050 | 0.050 | 05/16/2023 | ND | 2.22 | 111 | 2.00 | 4.51 | | |
| Ethylbenzene* | <0.050 | 0.050 | 05/16/2023 | ND | 2.20 | 110 | 2.00 | 5.22 | | |
| Total Xylenes* | <0.150 | 0.150 | 05/16/2023 | ND | 6.69 | 112 | 6.00 | 5.03 | | |
| Total BTEx | <0.300 | 0.300 | 05/16/2023 | ND | | | | | | |

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

| Chloride, SM4500CI-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 | 05/16/2023 | ND | 432 | 108 | 400 | 3.64 | | |

| TPH 8015M | | mg/kg | | Analyzed By: MS | | | | | |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|--------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 05/15/2023 | ND | 185 | 92.6 | 200 | 3.93 | |
| DRO >C10-C28* | <10.0 | 10.0 | 05/15/2023 | ND | 194 | 96.9 | 200 | 0.0656 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 05/15/2023 | ND | | | | | |

Surrogate: 1-Chlorooctane 85.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 111 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received: 05/12/2023
Reported: 05/17/2023
Project Name: MESA #2H PRODUCTION FACILITY
Project Number: 03C2012028
Project Location: BTA 32.063888,-103.65331

Sampling Date: 05/12/2023
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SS 04 0.5' (H232402-04)

| BTEx 8021B | | mg/kg | | Analyzed By: JH | | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Benzene* | <0.050 | 0.050 | 05/16/2023 | ND | 2.23 | 112 | 2.00 | 4.60 | | |
| Toluene* | <0.050 | 0.050 | 05/16/2023 | ND | 2.22 | 111 | 2.00 | 4.51 | | |
| Ethylbenzene* | <0.050 | 0.050 | 05/16/2023 | ND | 2.20 | 110 | 2.00 | 5.22 | | |
| Total Xylenes* | <0.150 | 0.150 | 05/16/2023 | ND | 6.69 | 112 | 6.00 | 5.03 | | |
| Total BTEx | <0.300 | 0.300 | 05/16/2023 | ND | | | | | | |

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

| Chloride, SM4500CI-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 | 05/16/2023 | ND | 432 | 108 | 400 | 3.64 | | |

| TPH 8015M | | mg/kg | | Analyzed By: MS | | | | | |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|--------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 05/15/2023 | ND | 185 | 92.6 | 200 | 3.93 | |
| DRO >C10-C28* | <10.0 | 10.0 | 05/15/2023 | ND | 194 | 96.9 | 200 | 0.0656 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 05/15/2023 | ND | | | | | |

Surrogate: 1-Chlorooctane 100 % 48.2-134

Surrogate: 1-Chlorooctadecane 127 % 49.1-148

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Analytical Results For:

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

Received: 05/12/2023
Reported: 05/17/2023
Project Name: MESA #2H PRODUCTION FACILITY
Project Number: 03C2012028
Project Location: BTA 32.063888,-103.65331

Sampling Date: 05/12/2023
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SS 05 0.5' (H232402-05)

| BTEx 8021B | | mg/kg | | Analyzed By: JH | | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Benzene* | <0.050 | 0.050 | 05/16/2023 | ND | 2.23 | 112 | 2.00 | 4.60 | | |
| Toluene* | <0.050 | 0.050 | 05/16/2023 | ND | 2.22 | 111 | 2.00 | 4.51 | | |
| Ethylbenzene* | <0.050 | 0.050 | 05/16/2023 | ND | 2.20 | 110 | 2.00 | 5.22 | | |
| Total Xylenes* | <0.150 | 0.150 | 05/16/2023 | ND | 6.69 | 112 | 6.00 | 5.03 | | |
| Total BTEx | <0.300 | 0.300 | 05/16/2023 | ND | | | | | | |

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

| Chloride, SM4500CI-B | | mg/kg | | Analyzed By: AC | | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Chloride | 48.0 | 16.0 | 05/16/2023 | ND | 432 | 108 | 400 | 3.64 | | |

| TPH 8015M | | mg/kg | | Analyzed By: MS | | | | | |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|--------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 05/15/2023 | ND | 185 | 92.6 | 200 | 3.93 | |
| DRO >C10-C28* | <10.0 | 10.0 | 05/15/2023 | ND | 194 | 96.9 | 200 | 0.0656 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 05/15/2023 | ND | | | | | |

Surrogate: 1-Chlorooctane 100 % 48.2-134

Surrogate: 1-Chlorooctadecane 130 % 49.1-148

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Analytical Results For:

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

Received: 05/12/2023
Reported: 05/17/2023
Project Name: MESA #2H PRODUCTION FACILITY
Project Number: 03C2012028
Project Location: BTA 32.063888,-103.65331

Sampling Date: 05/12/2023
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SS 06 0.5' (H232402-06)

| BTEx 8021B | | mg/kg | | Analyzed By: JH | | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Benzene* | <0.050 | 0.050 | 05/16/2023 | ND | 2.23 | 112 | 2.00 | 4.60 | | |
| Toluene* | <0.050 | 0.050 | 05/16/2023 | ND | 2.22 | 111 | 2.00 | 4.51 | | |
| Ethylbenzene* | <0.050 | 0.050 | 05/16/2023 | ND | 2.20 | 110 | 2.00 | 5.22 | | |
| Total Xylenes* | <0.150 | 0.150 | 05/16/2023 | ND | 6.69 | 112 | 6.00 | 5.03 | | |
| Total BTEx | <0.300 | 0.300 | 05/16/2023 | ND | | | | | | |

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

| Chloride, SM4500CI-B | | mg/kg | | Analyzed By: AC | | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Chloride | 64.0 | 16.0 | 05/16/2023 | ND | 432 | 108 | 400 | 3.64 | | |

| TPH 8015M | | mg/kg | | Analyzed By: MS | | | | | |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|--------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 05/15/2023 | ND | 185 | 92.6 | 200 | 3.93 | |
| DRO >C10-C28* | <10.0 | 10.0 | 05/15/2023 | ND | 194 | 96.9 | 200 | 0.0656 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 05/15/2023 | ND | | | | | |

Surrogate: 1-Chlorooctane 102 % 48.2-134

Surrogate: 1-Chlorooctadecane 134 % 49.1-148

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Analytical Results For:

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

Received: 05/12/2023
Reported: 05/17/2023
Project Name: MESA #2H PRODUCTION FACILITY
Project Number: 03C2012028
Project Location: BTA 32.063888,-103.65331

Sampling Date: 05/12/2023
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SS 07 0.5' (H232402-07)

| BTX 8021B | | mg/kg | | Analyzed By: JH/ | | | | | | |
|----------------|--------|-----------------|------------|------------------|------|------------|---------------|--------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Benzene* | <0.050 | 0.050 | 05/15/2023 | ND | 2.11 | 106 | 2.00 | 2.73 | | |
| Toluene* | <0.050 | 0.050 | 05/15/2023 | ND | 2.17 | 109 | 2.00 | 0.935 | | |
| Ethylbenzene* | <0.050 | 0.050 | 05/15/2023 | ND | 2.13 | 107 | 2.00 | 0.976 | | |
| Total Xylenes* | <0.150 | 0.150 | 05/15/2023 | ND | 6.57 | 110 | 6.00 | 0.0201 | | |
| Total BTX | <0.300 | 0.300 | 05/15/2023 | ND | | | | | | |

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

| Chloride, SM4500CI-B | | mg/kg | | Analyzed By: AC | | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Chloride | 80.0 | 16.0 | 05/16/2023 | ND | 432 | 108 | 400 | 3.64 | | |

| TPH 8015M | | mg/kg | | Analyzed By: MS | | | | | |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|--------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 05/15/2023 | ND | 185 | 92.6 | 200 | 3.93 | |
| DRO >C10-C28* | <10.0 | 10.0 | 05/15/2023 | ND | 194 | 96.9 | 200 | 0.0656 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 05/15/2023 | ND | | | | | |

Surrogate: 1-Chlorooctane 93.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 119 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager

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Notes and Definitions

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

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



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 | | | | ANALYSIS REQUEST | | | | | | | | | | | | | | | | | | | | |
| Project Manager: Hadlie Green | | | | P.O. #: | | | | | | | | | | | | | | | | | | | | | | | | |
| Address: 3122 National Parks Hwy | | | | Company: BTA Oil | | | | | | | | | | | | | | | | | | | | | | | | |
| City: Carlsbad | | State: NM Zip: 88220 | | Attn: Kevin Jones | | | | | | | | | | | | | | | | | | | | | | | | |
| Phone #: 432-557-8895 | | Fax #: | | Address: 104 S Pecos St | | | | | | | | | | | | | | | | | | | | | | | | |
| Project #: 03C2012028 | | Project Owner: BTA Oil Producers | | City: Midland | | | | | | | | | | | | | | | | | | | | | | | | |
| Project Name: Mesa #2H Production Facility | | | | State: TX Zip: 79701 | | | | | | | | | | | | | | | | | | | | | | | | |
| Project Location: 32.063888, -103.65331 | | | | Phone #: 432-312-2203 | | | | | | | | | | | | | | | | | | | | | | | | |
| Sampler Name: Ronni Hayes | | | | Fax #: | | | | | | | | | | | | | | | | | | | | | | | | |
| FOR LAB USE ONLY | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lab I.D. | Sample I.D. | Depth (feet) | (G)RAB OR (C)OMP. | # CONTAINERS | MATRIX | | | | PRESERV. | | SAMPLING | | DATE | | | TIME | | | BTEX | | | TPH | | | C | | | |
| | | | | | GROUNDWATER | WASTEWATER | SOIL | OIL | SLUDGE | OTHER | ACID/BASE | ICE/COOL | | | | | | | | | | | | | | | | OTHER |
| 1232402 | SS01 | 0.5' | G | | | | X | | | | | X | | | 5/12/23 | 0810 | | X | X | X | | | | | | | | |
| 2 | SS02 | | | | | | | | | | | | | | | 0845 | | | | | | | | | | | | |
| 3 | SS03 | | | | | | | | | | | | | | | 0820 | | | | | | | | | | | | |
| 4 | SS04 | | | | | | | | | | | | | | | 0825 | | | | | | | | | | | | |
| 5 | SS05 | | | | | | | | | | | | | | | 0830 | | | | | | | | | | | | |
| 6 | SS06 | | | | | | | | | | | | | | | 0835 | | | | | | | | | | | | |
| 7 | SS07 | | | | | | | | | | | | | | | 0840 | | | | | | | | | | | | |
| RH | | 5/12/23 | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| | | | | |
|------------------------------|------------------------|---|---|--|
| Relinquished By: | Date: 5-12-23 | Received By: | Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No | Add'l Phone #: |
| | Time: 1435 | | All Results are emailed. Please provide Email address: | |
| Relinquished By: | Date: | Received By: | REMARKS: | |
| | Time: | | | |
| Delivered By: (Circle One) | Observed Temp. °C 4.4 | Sample Condition | Turnaround Time: Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/> | Bacteria (only) Sample Condition |
| Sampler - UPS - Bus - Other: | Corrected Temp. °C 3.8 | Cool <input checked="" type="checkbox"/> Intact <input type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No | Thermometer ID #113 Correction Factor -0.5°C | Cool <input type="checkbox"/> Intact <input type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No |
| FORM-006 R 3.2 10/07/21 | | CHECKED BY: (Initials) T.O. | Observed Temp. °C Corrected Temp. °C | |

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



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

May 31, 2023

HADLIE GREEN

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MESA #2H PRODUCTION FACILITY

Enclosed are the results of analyses for samples received by the laboratory on 05/25/23 13:40.

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

Cardinal Laboratories is accredited 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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 05/25/2023
Reported: 05/31/2023
Project Name: MESA #2H PRODUCTION FACILITY
Project Number: 03C2012028
Project Location: BTA 32.063888,-103.65331

Sampling Date: 05/25/2023
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SS 05 A 4' (H232671-01)

| BTEX 8021B | | mg/kg | | Analyzed By: JH | | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Benzene* | <0.050 | 0.050 | 05/25/2023 | ND | 2.06 | 103 | 2.00 | 3.82 | | |
| Toluene* | <0.050 | 0.050 | 05/25/2023 | ND | 2.09 | 105 | 2.00 | 5.06 | | |
| Ethylbenzene* | <0.050 | 0.050 | 05/25/2023 | ND | 2.17 | 109 | 2.00 | 4.68 | | |
| Total Xylenes* | <0.150 | 0.150 | 05/25/2023 | ND | 6.39 | 106 | 6.00 | 5.17 | | |
| Total BTEX | <0.300 | 0.300 | 05/25/2023 | ND | | | | | | |

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

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AC | | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Chloride | 64.0 | 16.0 | 05/25/2023 | ND | 416 | 104 | 400 | 3.77 | | |

| TPH 8015M | | mg/kg | | Analyzed By: MS | | | | | |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|-------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 05/25/2023 | ND | 206 | 103 | 200 | 0.931 | |
| DRO >C10-C28* | <10.0 | 10.0 | 05/25/2023 | ND | 212 | 106 | 200 | 1.07 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 05/25/2023 | ND | | | | | |

Surrogate: 1-Chlorooctane 106 % 48.2-134

Surrogate: 1-Chlorooctadecane 118 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 05/25/2023
Reported: 05/31/2023
Project Name: MESA #2H PRODUCTION FACILITY
Project Number: 03C2012028
Project Location: BTA 32.063888,-103.65331

Sampling Date: 05/25/2023
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SS 06 A 4' (H232671-02)

| BTEX 8021B | | mg/kg | | Analyzed By: JH | | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Benzene* | <0.050 | 0.050 | 05/25/2023 | ND | 2.06 | 103 | 2.00 | 3.82 | | |
| Toluene* | <0.050 | 0.050 | 05/25/2023 | ND | 2.09 | 105 | 2.00 | 5.06 | | |
| Ethylbenzene* | <0.050 | 0.050 | 05/25/2023 | ND | 2.17 | 109 | 2.00 | 4.68 | | |
| Total Xylenes* | <0.150 | 0.150 | 05/25/2023 | ND | 6.39 | 106 | 6.00 | 5.17 | | |
| Total BTEX | <0.300 | 0.300 | 05/25/2023 | ND | | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 99.6 % 71.5-134

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AC | | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Chloride | 48.0 | 16.0 | 05/25/2023 | ND | 416 | 104 | 400 | 3.77 | | |

| TPH 8015M | | mg/kg | | Analyzed By: MS | | | | | |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|-------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 05/25/2023 | ND | 206 | 103 | 200 | 0.931 | |
| DRO >C10-C28* | <10.0 | 10.0 | 05/25/2023 | ND | 212 | 106 | 200 | 1.07 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 05/25/2023 | ND | | | | | |

Surrogate: 1-Chlorooctane 107 % 48.2-134

Surrogate: 1-Chlorooctadecane 119 % 49.1-148

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 05/25/2023
Reported: 05/31/2023
Project Name: MESA #2H PRODUCTION FACILITY
Project Number: 03C2012028
Project Location: BTA 32.063888,-103.65331

Sampling Date: 05/25/2023
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SS 07 A 4' (H232671-03)

| BTEx 8021B | | mg/kg | | Analyzed By: JH | | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Benzene* | <0.050 | 0.050 | 05/25/2023 | ND | 2.06 | 103 | 2.00 | 3.82 | | |
| Toluene* | <0.050 | 0.050 | 05/25/2023 | ND | 2.09 | 105 | 2.00 | 5.06 | | |
| Ethylbenzene* | <0.050 | 0.050 | 05/25/2023 | ND | 2.17 | 109 | 2.00 | 4.68 | | |
| Total Xylenes* | <0.150 | 0.150 | 05/25/2023 | ND | 6.39 | 106 | 6.00 | 5.17 | | |
| Total BTEx | <0.300 | 0.300 | 05/25/2023 | ND | | | | | | |

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

| Chloride, SM4500CI-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 | 05/25/2023 | ND | 416 | 104 | 400 | 3.77 | | |

| TPH 8015M | | mg/kg | | Analyzed By: MS | | | | | |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|-------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 05/25/2023 | ND | 206 | 103 | 200 | 0.931 | |
| DRO >C10-C28* | <10.0 | 10.0 | 05/25/2023 | ND | 212 | 106 | 200 | 1.07 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 05/25/2023 | ND | | | | | |

Surrogate: 1-Chlorooctane 116 % 48.2-134

Surrogate: 1-Chlorooctadecane 129 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

| | |
|------|--|
| S-04 | The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect. |
| ND | Analyte NOT DETECTED at or above the reporting limit |
| RPD | Relative Percent Difference |
| ** | Samples not received at proper temperature of 6°C or below. |
| *** | Insufficient time to reach temperature. |
| - | Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report |

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*=Accredited Analyte

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

| BILL TO | | | | | | | | | | ANALYSIS REQUEST | | | | | | | | | | |
|---|------------|----------|-------------|--------------|-------------------|--------------|--------|-----|--------|------------------------|-----------|------------|-------|----------|---------|------|------|------|-----------|-----|
| Company Name: Ensolum, LLC | | | | | | | | | | P.O. #: | | | | | | | | | | |
| Project Manager: Hadlie Green | | | | | | | | | | Company: BTA Oil | | | | | | | | | | |
| Address: 3122 Nat'l Parks Hwy | | | | | | | | | | Attn: Kevin Jones | | | | | | | | | | |
| City: Carlsbad State: NM Zip: 88220 | | | | | | | | | | Address: 1045 Peros St | | | | | | | | | | |
| Phone #: 432-557-8895 Fax #: | | | | | | | | | | City: Midland | | | | | | | | | | |
| Project #: 0302012028 Project Owner: | | | | | | | | | | State: TX Zip: 79701 | | | | | | | | | | |
| Project Name: MESA #2 H PRODUCTION FACILITY | | | | | | | | | | Phone #: 432-312-2203 | | | | | | | | | | |
| Project Location: 32.063888, -103.65331 | | | | | | | | | | Fax #: | | | | | | | | | | |
| Sampler Name: Meredith Roberts | | | | | | | | | | | | | | | | | | | | |
| FOR LAB USE ONLY | | Lab I.D. | Sample I.D. | Depth (feet) | (G)RAB OR (C)OMP. | # CONTAINERS | MATRIX | | | | | PRESERV. | | SAMPLING | | DATE | TIME | BTEX | Chlorides | TPH |
| GROUNDWATER | WASTEWATER | | | | | | SOIL | OIL | SLUDGE | OTHER | ACID/BASE | ICE / COOL | OTHER | | | | | | | |
| 1 | SS05A | 4' | G | 1 | | | X | | | | | X | | | 5/25/23 | 1020 | X | X | X | |
| 2 | SS06A | ↓ | ↓ | ↓ | | | ↓ | | | | | ↓ | | | ↓ | 1040 | ↓ | ↓ | ↓ | |
| 3 | SS07A | ↓ | ↓ | ↓ | | | ↓ | | | | | ↓ | | | ↓ | 1100 | ↓ | ↓ | ↓ | |

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| | | | |
|-------------------------------|-----------------------------|---|---|
| Relinquished By: <i>meary</i> | Date: 5-25-23 Time: 1340 | Received By: <i>Meredith Roberts</i> | Verbal Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Phone #: |
| Relinquished By: | Date: | Received By: | All Results are emailed. Please provide Email address: <i>hgreen@ensolum.com</i> <i>mroberts@ensolum.com</i> |
| Delivered By: (Circle One) | Observed Temp. °C: 4.4 | Sample Condition: Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> No | REMARKS: Incident #: NAPP 2115531696 |
| Sampler - UPS - Bus - Other: | Corrected Temp. °C: 3.8 | CHECKED BY: (Initials) <i>YO</i> | Turnaround Time: Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/> Thermometer ID #113 Correction Factor: -0.6°C |
| | | | Bacteria (only) Sample Condition: Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> No |

FORM-500-R-3.2 10/07/21

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



APPENDIX E

NMOCD Notifications

From: [Enviro, OCD, EMNRD](#)
To: [Hadlie Green](#)
Cc: [Bratcher, Michael, EMNRD](#); [Hamlet, Robert, EMNRD](#)
Subject: RE: [EXTERNAL] BTA - Sampling Notification - Week of 05/22/2023
Date: Friday, May 19, 2023 1:25:29 PM
Attachments: [image005.jpg](#)
[image006.png](#)
[image007.png](#)
[image008.png](#)
[image009.png](#)

[**EXTERNAL EMAIL**]

Hadlie,

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

JH

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



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

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

All,

BTA anticipates collecting confirmation samples at the following locations the week of May 22, 2023.

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

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

Thank you,



Hadlie Green

Project Geologist

432-557-8895

hgreen@ensolum.com

Ensolum, LLC



From: [Enviro, OCD, EMNRD](#)
To: [Hadlie Green](#)
Cc: [Bratcher, Michael, EMNRD](#); [Hamlet, Robert, EMNRD](#)
Subject: RE: [EXTERNAL] BTA - Sampling Notification - Week of 05/29/2023
Date: Wednesday, May 24, 2023 3:30:12 PM
Attachments: [image005.jpg](#)
[image006.png](#)
[image007.png](#)
[image008.png](#)
[image009.png](#)

[**EXTERNAL EMAIL**]

Hadlie,

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

JH

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



From: Hadlie Green <hgreen@ensolum.com>
Sent: Wednesday, May 24, 2023 2:14 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Tacoma Morrissey <tmorrissey@ensolum.com>; Nathan Sirgo <nsirgo@btaoil.com>; Kevin Jones (kjones@btaoil.com) <kjones@btaoil.com>; Kelton Beaird <KBeaird@btaoil.com>
Subject: [EXTERNAL] BTA - Sampling Notification - Week of 05/29/2023

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

All,

BTA anticipates collecting confirmation samples at the following locations the week of May 29, 2023.

- Rojo D 7811 JV P Com #003H / nOY1814130699
 - Sampling Date: 6/1/2023 @ 9:00 AM MST

- Harroun Ranch #005 / nAPP2200455573
 - Sampling Date: 6/2/2023 @ 9:00 AM MST
- Mesa Dolphin CTB / nAPP2313555368
 - Sampling Date: 5/25/2023 @ 9:00 AM MST
- Mesa #2H Production Facility / nAPP2115531696
 - Sampling Date: 5/25/2023 @ 9:00 AM MST
- Chiso 14 #3 & 4 Tank Flare / nOY1829542961
- Chiso 14 Sate 8711 #3H Flare Stack / nCH1903548008
- Chiso 14 State 8711 #003H Wellhead / nAB1917652490
- Chiso 14 State 8711 Flowline / nRM2034960665
 - Sampling Dates: 6/1-5/2023 @ 9:00 AM MST

Thank you,



Hadlie Green

Project Geologist

432-557-8895

hgreen@ensolum.com

Ensolum, LLC





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 | nAPP2115531696 |
| District RP | |
| Facility ID | |
| Application ID | |

Release Notification

Responsible Party

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

Location of Release Source

Latitude: **32.063888** Longitude: **-103.65331°**
(NAD 83 in decimal degrees to 5 decimal places)

| | |
|--|--|
| Site Name: Mesa #2H Production Facility | Site Type: Production Facility |
| Date Release Discovered: 6/2/2021 | API# (if applicable) Nearest well: Mesa #2H API #30-025-41289 |

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

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

Nature and Volume of Release

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

| | | |
|--|--|---|
| <input type="checkbox"/> Crude Oil | Volume Released (bbls) | Volume Recovered (bbls) |
| <input checked="" type="checkbox"/> Produced Water | Volume Released (bbls) 15 BBL | Volume Recovered (bbls) 0 BBL |
| | Is the concentration of dissolved chloride in the produced water >10,000 mg/l? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| <input type="checkbox"/> Condensate | Volume Released (bbls) | Volume Recovered (bbls) |
| <input type="checkbox"/> Natural Gas | Volume Released (Mcf) | Volume Recovered (Mcf) |
| <input type="checkbox"/> Other (describe) | Volume/Weight Released (provide units) | Volume/Weight Recovered (provide units) |

Cause of Release

Structural Failure of Dump Valve

The body of the water dump valve on the Mesa 46H separator cut out and sent a stream of water across the floor of the unlined area of the production equipment. The water saturated the immediate area of the equipment, and no fluid was recovered.

The separator vessel was isolated, and the volume of the release was estimated by the size of the vessel compartment that was drained.

State of New Mexico
Oil Conservation Division

| | |
|----------------|----------------|
| Incident ID | nAPP2115531696 |
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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?

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

Initial Response

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

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

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

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

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

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

Signature:  Date: **6/4/2021**

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

OCD Only

Received by: Ramona Marcus Date: 6/6/2021

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

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

CONDITIONS

Action 30621

CONDITIONS

| | |
|---|---|
| Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701 | OGRID: 260297 |
| | Action Number: 30621 |
| | Action Type: [C-141] Release Corrective Action (C-141) |

CONDITIONS

| | | |
|------------|-----------|----------------|
| Created By | Condition | Condition Date |
| marcus | None | 6/6/2021 |

| | |
|----------------|----------------|
| Incident ID | nAPP2115531696 |
| District RP | |
| Facility ID | |
| Application ID | |

Site Assessment/Characterization

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

| | |
|---|---|
| What is the shallowest depth to groundwater beneath the area affected by the release? | <u>>100</u> (ft bgs) |
| Did this release impact groundwater or surface water? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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)? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 1000 feet of any other fresh water well or spring? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of a wetland? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release overlying a subsurface mine? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release overlying an unstable area such as karst geology? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within a 100-year floodplain? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Did the release impact areas not on an exploration, development, production, or storage site? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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.

State of New Mexico
Oil Conservation Division

Page 4

| | |
|----------------|----------------|
| Incident ID | nAPP2115531696 |
| District RP | |
| Facility ID | |
| Application ID | |

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

Printed Name: Kelton Beaird

Title: Environmental Manager

Signature: 

Date: 8/2/2023

email: KBeaird@btaoil.com

Telephone: 432-312-2203

OCD Only

Received by: Shelly Wells

Date: 8/3/2023

| | |
|----------------|----------------|
| Incident ID | nAPP2115531696 |
| District RP | |
| Facility ID | |
| Application ID | |


Closure

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

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

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities


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

Printed Name: Kelton Beaird Title: Environmental Manager
Signature:  Date: 8/2/2023
email: KBeaird@btaoil.com Telephone: 432-312-2203

OCD Only

Received by: Shelly Wells Date: 8/3/2023

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

Closure Approved by:  Date: 11/01/2023
Printed Name: Nelson Velez Title: Environmental Specialist - Adv

District I
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Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 247152

CONDITIONS

| | |
|---|---|
| Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701 | OGRID: 260297 |
| | Action Number: 247152 |
| | Action Type: [C-141] Release Corrective Action (C-141) |

CONDITIONS

| | | |
|------------|-----------|----------------|
| Created By | Condition | Condition Date |
| nvelez | None | 11/1/2023 |