



October 31, 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
Rojo 10H-13H, 34H-37H
Incident Number nAPP2313055442
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)* to document assessment, delineation, and soil sampling activities completed to date and propose remedial actions to address the impacted soil identified at the Rojo 10H-13H, 34H-37H (Site). The following *Work Plan* proposes additional delineation activities and excavation of impacted soil.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit A, Section 27, Township 25 South, Range 33 East, in Lea County, New Mexico (32.108028°, -103.553151°) and is associated with oil and gas exploration and production operations on private land owned by CAML, LTD.

On April 27, 2023, failure of a fused seam on a 6-inch poly line resulted in the release of approximately 650 barrels (bbls) of produced water onto the surface of well pad and into the surrounding pasture west of the pad. A vacuum truck was dispatched to the Site to recover free-standing fluids; approximately 130 bbls of produced water were recovered. BTA reported the release immediately to the New Mexico Oil Conservation Division (NMOCD) via email and submitted a Release Notification Form C-141 (Form C-141) on May 16, 2023. The release was assigned Incident Number nAPP2313055442.

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, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented on the Form C-141, Site Assessment/Characterization. Potential Site receptors are identified on Figure 1.

Depth to groundwater at the Site is estimated to be between 51 feet to 100 feet below ground surface (bgs) based on the closest groundwater well data. The closest groundwater well with depth to groundwater data is New Mexico Office of the State Engineer (NMOSE) soil boring C-04698, located approximately 0.4 miles west of the Site. The soil boring was drilled to a total depth of 60 feet bgs and no groundwater was encountered. The soil boring was subsequently plugged following approved

BTA Oil Producers, LLC
Remediation Work Plan
Rojo 10H-13H, 34H-37H

NMOSE methods. All wells used for depth to groundwater determination are depicted on Figure 1 and the referenced well records are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is an emergent wetland, located approximately 4,246 feet southeast of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

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

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

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

SITE ASSESSMENT ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On May 19, 2023, Ensolum personnel were at the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. Assessment soil samples SS01 through SS08 were collected within the release extent at a depth of 0.5 feet bgs to assess the surficial soil within the release. Assessment soil samples SS09 through SS16 were collected at a depth of 0.5 feet bgs around release extent to confirm the lateral extent of the release. The soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride Hach® chloride QuanTab® test strips. The release extent and soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was completed during the Site visit and a photographic log is included in Appendix B.

The assessment 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 constituents of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following Standard Method SM4500.

Laboratory analytical results for assessment samples SS01 through SS08, collected within the release extent, indicated TPH and/or chloride concentrations exceeded the Site Closure Criteria or reclamation requirements, where applicable. Laboratory analytical results for assessment soil samples SS09 through SS16, collected around the release extent, indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria and confirmed the lateral extent of the release. Based on the laboratory analytical results, additional assessment activities were warranted to delineate the vertical extent of impacted soil within the release extent.

BTA Oil Producers, LLC
Remediation Work Plan
Rojo 10H-13H, 34H-37H

DELINEATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On June 15, 2023 and June 16, 2023, Ensolum personnel returned to the Site to assess the vertical extent of impacted soil within the pasture release extent. Boreholes BH01 through BH06 were advanced via hand auger or backhoe at the location of assessment samples SS03 through SS08. Soil from the boreholes was field screened at 1-foot intervals for VOCs and chloride. Final depth of the boreholes was determined by field screening results indicating compliance with the most stringent Table I Closure Criteria. Field screening results and observations for the boreholes were logged on lithologic/soil sampling logs, which are included in Appendix C. The boreholes were advanced to depths ranging from 4 feet to 6 feet bgs. Discrete delineation samples were collected from the boreholes at depths ranging from 1-foot to 6 feet bgs. The soil samples were collected, handled and analyzed following the same procedures previously described. The delineation soil sample locations were mapped utilizing a handheld GPS unit and are depicted on Figure 3. Photographic documentation was completed during the Site visit and a photographic log is included in Appendix B.

Laboratory analytical results for the delineation soil samples collected from boreholes BH01, BH05, and BH06 indicated all COC concentrations were compliant with the Site Closure Criteria and reclamation requirements, where applicable. Laboratory analytical results and/or field screening results for the delineation soil samples collected from boreholes BH02, BH03, and BH04 indicated chloride concentrations exceeded the reclamation requirements in the top four feet of the pasture release. The final depth delineation samples, collected at depths ranging from 4 feet to 6 feet bgs, were compliant with the most stringent Table I Closure Criteria and defined the vertical extent of the pasture release. The laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included in Appendix D.

Based on visible staining in the release area, elevated field screening results, and laboratory analytical results for the assessment and delineation soil samples, additional remediation activities were warranted.

PROPOSED REMEDIATION WORK PLAN

Laboratory analytical results for assessment samples SS01 through SS08 and delineation samples from boreholes BH02 through BH04 indicate soil containing elevated chloride concentrations is present across the 23,300 square foot release area to depths ranging from 1-foot to 4 feet bgs. As such, BTA proposes to complete the following remediation activities:

- Vertical delineation to below the Site Closure Criteria will be completed at three locations within the on-pad release extent. Proposed delineation locations BH07 through BH09 are shown on Figure 3. The delineation soil samples will be submitted for laboratory analysis of BTEX, TPH, and chloride.
- Impacted soil will be excavated from the release area based on laboratory analytical results for the assessment and delineation soil samples.
 - Excavation will proceed laterally until sidewall samples are compliant with the Site Closure Criteria in the on-pad release area and the reclamation requirements in the top four feet of the pasture release area.
 - Excavation will proceed vertically until floor samples are compliant with the Site Closure Criteria in the on-pad release area and the reclamation requirements in the top four feet of the pasture release area. If the excavation depth exceeds four feet bgs in the pasture, the Site Closure Criteria will be applied.

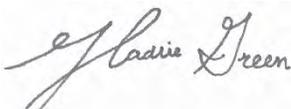
BTA Oil Producers, LLC
Remediation Work Plan
Rojo 10H-13H, 34H-37H

- Due to the estimated size of the excavation, BTA requests a variance for the frequency of excavation confirmation samples. BTA proposes to collect five-point composite samples at a sampling frequency of every 400 square feet from the floor of the excavation. The proposed sampling frequency would reduce the total number of floor samples from 117 samples to approximately 58 samples. Sidewall samples will be collected at a frequency of at least every 200 square feet.
 - The 5-point composite samples will be collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. The excavation samples will be submitted for laboratory analysis of BTEX, TPH, and chloride.
- The impacted soil will be transferred to a New Mexico approved landfill facility for disposal. The excavation will be backfilled and recontoured to match pre-existing conditions. The disturbed pasture area will be re-seeded with a landowner approved seed mixture.
- Following the delineation and excavation activities, BTA will provide NMOCD with a final report detailing the remediation activities and requesting closure.

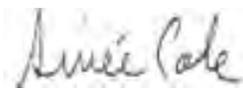
BTA will complete the delineation and excavation activities within 90 days of the date of approval of this *Work Plan* by the NMOCD. BTA believes the scope of work described above meets the requirements set forth in 19.15.29 NMAC and is protective of human health, the environment, and groundwater. As such, BTA respectfully requests approval of this *Work Plan* from NMOCD. NMOCD Notifications are included in Appendix E and the 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



Hadlie Green
Project Geologist



Aimee Cole
Senior Managing Scientist

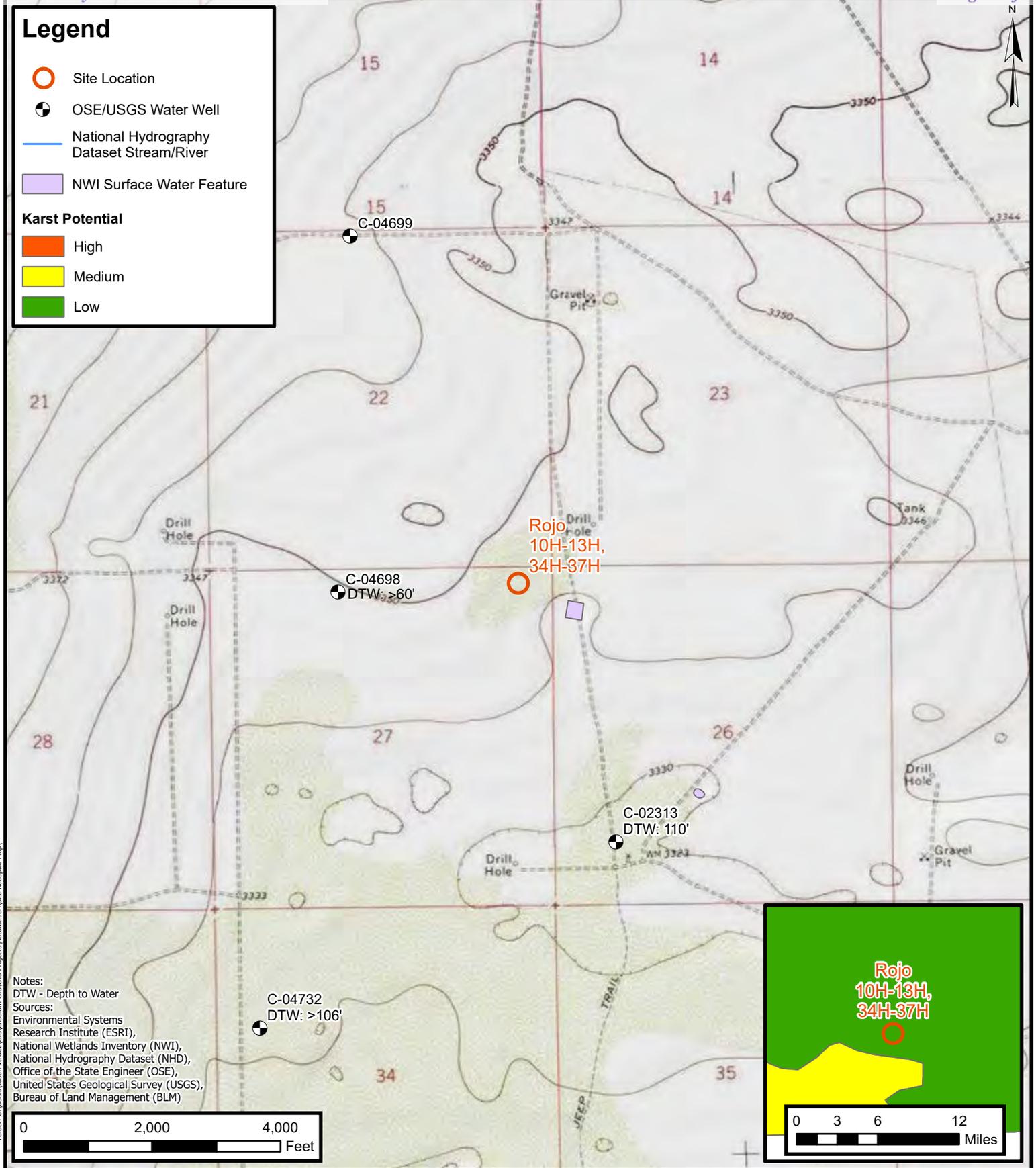
cc: Kelton Beaird, BTA
CAML, LTD

Appendices:

- Figure 1 Site Receptor Map
- Figure 2 Assessment Soil Sample Locations
- Figure 3 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 Final C-141



FIGURES



Folder: C:\Users\jvain\OneDrive\GIS\Automation\GIS\Projects\Automation\Site Receptor Map

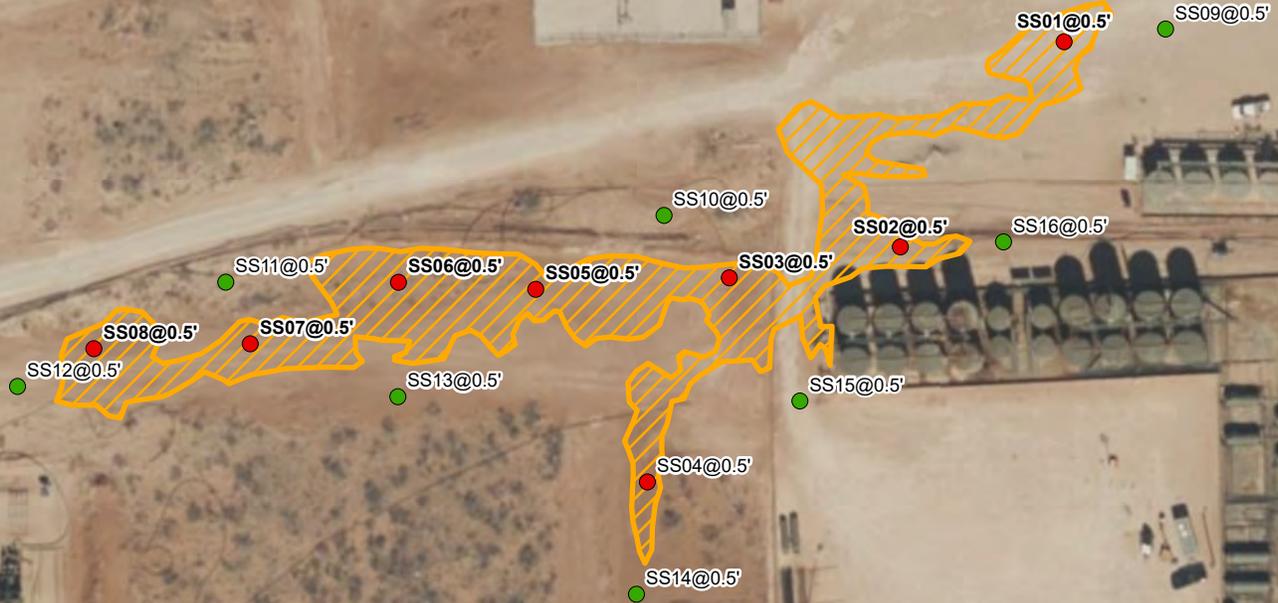


Site Receptor Map
 BTA Oil Producers, LLC
 Rojo 10H-13H, 34H-37H
 Incident Number: nAPP2313055442
 Unit A, Sec 27, T25S, R33E
 Lea County, New Mexico

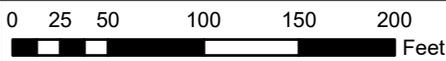
FIGURE
1

Legend

- Assessment Soil Sample Locations with Concentrations Exceeding Closure Criteria
- Assessment Soil Sample Locations in Compliance with Closure Criteria
- Release Extent



Notes:
 Sample ID @ Depth Below Ground/Surface.
 Samples in bold indicate sample exceeded applicable closure criteria



Sources: Environmental Systems Research Institute (ESRI)

Assessment Soil Sample Locations

BTA Oil Producers, LLC
 Rojo 10H-13H, 34H-37H
 Incident Number: nAPP2313055442
 Unit A, Sec 27, T25S, R33E
 Lea County, New Mexico

FIGURE

2



Legend

- Delineation Soil Sample in Compliance with Closure Criteria
- Delineation Soil Sample with initial Concentrations Exceeding Closure Criteria
- Proposed Delineation Sample
- Release Extent

Folder: C:\Users\Justin Velazquez\OneDrive - ENSOLUM, LLC\Ensolium GIS\0 - Projects\BTA Oil Producers, LLC\03220202038 - Rojo 10H-13H, 34H-37H - Map File\Delineation Soil Sample Locations Map



Notes:
 Sample ID @ Depth Below Ground Surface.
 Samples in bold indicate sample exceeded applicable closure criteria



Sources: Environmental Systems Research Institute (ESRI)



Delineation Soil Sample Locations

BTA Oil Producers, LLC
 Rojo 10H-13H, 34H-37H
 Incident Number: nAPP2313055442
 Unit A, Sec 27, T25S, R33E
 Lea County, New Mexico

FIGURE
3



TABLES

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
 Rojo 10H-13H, 34H-37H
 BTA Oil Producers, LLC
 Lea County, New Mexico

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	10,000
Assessment Soil Samples										
SS01	05/19/2023	0.5	<0.050	<0.300	<10.0	58.7	<10.0	59.0	59.0	24,000
SS02	05/19/2023	0.5	<0.050	<0.300	<10.0	834	243	834	1,077	10,800
SS03*	05/19/2023	0.5	<0.050	<0.300	<10.0	85.9	49.2	86.0	134	18,800
SS04*	05/19/2023	0.5	<0.050	<0.300	<10.0	49.4	26.6	49.0	76.0	14,000
SS05*	05/19/2023	0.5	<0.050	<0.300	<10.0	416	102	416	518	9,460
SS06*	05/19/2023	0.5	<0.050	<0.300	<10.0	21.5	20.2	22.0	42.0	22,000
SS07*	05/19/2023	0.5	<0.050	<0.300	<10.0	14.8	<10.0	15.0	15.0	20,400
SS08*	05/19/2023	0.5	<0.050	<0.300	<10.0	18.0	<10.0	18.0	18.0	15,200
SS09	05/19/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	240
SS10*	05/19/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS11*	05/19/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SS12*	05/19/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SS13*	05/19/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SS14*	05/19/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SS15	05/19/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	224
SS16	05/19/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
Delineation Soil Samples										
BH01*	06/16/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
BH01A	06/16/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	496
BH02*	06/15/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,940
BH02A	06/16/2023	5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
BH03*	06/15/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,320
BH03A	06/16/2023	6	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0

TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS Rojo 10H-13H, 34H-37H BTA Oil Producers, LLC Lea County, New Mexico										
Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	10,000
BH04*	06/15/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,360
BH04A	06/16/2023	6	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	160
BH05*	06/15/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	224
BH05A	06/15/2023	5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	336
BH06*	06/15/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	592
BH06A	06/16/2023	5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0

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
TPH: Total Petroleum Hydrocarbon

GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
 Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation standard where applicable.
 * indicates sample was collected in area to be reclaimed after remediation is complete;
 reclamation standard in the top 4 feet is 600 mg/kg for chloride and 100 mg/kg for TPH.



APPENDIX A

Referenced Well Records

								Sample Name: BH01 / C-04698		Date: 1/3/2023					
								Site Name: Rojo 26 Oil Dump Valve Failure				Incident Number: nAPP2224256412			
								Job Number: 03C2012006				Logged By: CS / MR		Method: Air Rotary	
								Coordinates: 32.107784, -103.562235				Hole Diameter: 6"		Total Depth: 60'	
LITHOLOGIC / SOIL SAMPLING LOG															
Comments: Soil boring was advanced to a total depth of 60' bgs. No water was observed within the soil boring after at least 72 hours. On 1/16/2023 the soil boring was plugged and abandoned using hydrated bentonite chips.															
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions							
						0	CCHE	(0-30'), CALICHE, coarse grain, well graded, white to tan, dry, no stain or odor.							
Dry	-	-	N	-	-	10									
Dry	-	-	N	-	-	20		@20' color change to pink/tan							
Dry	-	-	N	-	-	30	SP-SM	(30-78'), SAND, medium to fine grain, poorly graded with trace caliche nodules, red to orange, dry, no stain, no odor.							
Dry	-	-	N	-	-	40									
Dry	-	-	N	-	-	50		@50', slightly cohesive with trace clay							
Dry	-	-	N	-	-	60		NOTE: refusal @ 60' using air rotary drill rig due to abundant sand.							
Total Depth @ 60 feet bgs															



WELL PLUGGING PLAN OF OPERATIONS



NOTE: A Well Plugging Plan of Operations shall be filed with and accepted by the Office of the State Engineer prior to plugging. This form may be used to plug a single well, or if you are plugging multiple monitoring wells on the same site using the same plugging methodology.

Alert! Your well may be eligible to participate in the Aquifer Mapping Program (AMP)-NM Bureau of Geology geoinfo.nmt.edu/resources/water/cgmn/ if within an area of interest and meets the minimum construction requirements, such as there is still water in your well, and the well construction reflected in a well record and log is not compromised, contact AMP at 575-835-5038 or -6951, or by email nmbg-waterlevels@nmt.edu, prior to completing this prior form. Showing proof to the OSE that your well was accepted in this program, may delay the plugging of your well until a later date.

I. FILING FEE: There is no filing fee for this form.

II. GENERAL / WELL OWNERSHIP: Check here if proposing one plan for multiple monitoring wells on the same site and attaching WD-08m

Existing Office of the State Engineer POD Number (Well Number) for well to be plugged: BH01 C-4698-POD1
Name of well owner: BTA Oil Producers, LLC
Mailing address: 104 S. Pecos Street County: _____
City: Midland State: TX Zip code: 79701
Phone number: 432-682-3753 E-mail: bhall@btaoil.com

III. WELL DRILLER INFORMATION:

Well Driller contracted to provide plugging services: West Texas Drilling Services
New Mexico Well Driller License No.: WD #1184 Expiration Date: 10/31/2023

IV. WELL INFORMATION: Check here if this plan describes method for plugging multiple monitoring wells on the same site and attach supplemental form WD-08m and skip to #2 in this section.

Note: A copy of the existing Well Record for the well(s) to be plugged should be attached to this plan.

1) GPS Well Location: Latitude: 32 deg, 6 min, 28.0224 sec
Longitude: 103 deg, 33 min, 44.046 sec, NAD 83

2) Reason(s) for plugging well(s):

Soil boring

3) Was well used for any type of monitoring program? No If yes, please use section VII of this form to detail what hydrogeologic parameters were monitored. If the well was used to monitor contaminated or poor quality water, authorization from the New Mexico Environment Department may be required prior to plugging.

4) Does the well tap brackish, saline, or otherwise poor quality water? NA If yes, provide additional detail, including analytical results and/or laboratory report(s): _____

5) Static water level: >100 feet below land surface / feet above land surface (circle one)

6) Depth of the well: 110 feet

- 7) Inside diameter of innermost casing: 2 inches.
- 8) Casing material: Temporary PVC SCF 40
- 9) The well was constructed with:
 - an open-hole production interval, state the open interval: NA
 - a well screen or perforated pipe, state the screened interval(s): NA
- 10) What annular interval surrounding the artesian casing of this well is cement-grouted? NA
- 11) Was the well built with surface casing? No If yes, is the annulus surrounding the surface casing grouted or otherwise sealed? _____ If yes, please describe:
- 12) Has all pumping equipment and associated piping been removed from the well? _____ If not, describe remaining equipment and intentions to remove prior to plugging in Section VII of this form.

V. DESCRIPTION OF PLANNED WELL PLUGGING: If plugging method differs between multiple wells on same site, a separate form must be completed for each method.

Note: If this plan proposes to plug an artesian well in a way other than with cement grout, placed bottom to top with a tremie pipe, a detailed diagram of the well showing proposed final plugged configuration shall be attached, as well as any additional technical information, such as geophysical logs, that are necessary to adequately describe the proposal. Attach a copy of any signed OSE variance to this plugging plan.

Also, if this planned plugging plan requires a variance to 19.27.4 NMAC, attach a detailed variance request signed by the applicant.

- 1) Describe the method by which cement grout shall be placed in the well, or describe requested plugging methodology proposed for the well:

The temporary 2" we;; material will be removed. If no water is encountered, drill cuttings will be used to ten feet below ground surface (bgs) and plugged using hydrated bentonite. If groundwater is encountered the boring will be plugged, tremie from bottom to a slurry of Portland Type I/II Neat cement in lifts.
- 2) Will well head be cut-off below land surface after plugging? NA

VI. PLUGGING AND SEALING MATERIALS:

Note: The plugging of a well that taps poor quality water may require the use of a specialty cement or specialty sealant. Attach a copy of the batch mix recipe from the cement company and/or product description for specialty cement mixes or any sealant that deviates from the list of OSE approved sealants.

- 1) For plugging intervals that employ cement grout, complete and attach Table A.
- 2) For plugging intervals that will employ approved non-cement based sealant(s), complete and attach Table B.
- 3) Theoretical volume of grout required to plug the well to land surface: 287
- 4) Type of Cement proposed: Type I/II
- 5) Proposed cement grout mix: <6.0 gallons of water per 94 pound sack of Portland cement.
- 6) Will the grout be: _____ batch-mixed and delivered to the site
 mixed on site

OSE OIT JAN 17 2023 4:50

7) Grout additives requested, and percent by dry weight relative to cement:

NA

8) Additional notes and calculations:

NA

VII. ADDITIONAL INFORMATION: List additional information below, or on separate sheet(s):

NA

VIII. SIGNATURE:

I, BOB HALL, say that I have carefully read the foregoing Well Plugging Plan of Operations and any attachments, which are a part hereof; that I am familiar with the rules and regulations of the State Engineer pertaining to the plugging of wells and will comply with them, and that each and all of the statements in the Well Plugging Plan of Operations and attachments are true to the best of my knowledge and belief.

Bob Hall
Signature of Applicant

01/08/2023
Date

IX. ACTION OF THE STATE ENGINEER:

This Well Plugging Plan of Operations is:

- Approved subject to the attached conditions.
- Not approved for the reasons provided on the attached letter.

QSE DTI JAN 17 2023 PM 3:50

Witness my hand and official seal this 20th day of January, 2023



Mike A. Nampha, P.E., New Mexico State Engineer

By: K. Parekh
KASHYAP PAREKH
W. R. M. I.

TABLE A - For plugging intervals that employ cement grout. Start with deepest interval.

	Interval 1 – deepest	Interval 2	Interval 3 – most shallow
			Note: if the well is non-artesian and breaches only one aquifer, use only this column.
Top of proposed interval of grout placement (ft bgl)	NA	NA	0
Bottom of proposed interval of grout placement (ft bgl)	NA	NA	100
Theoretical volume of grout required per interval (gallons)	NA	NA	287
Proposed cement grout mix gallons of water per 94-lb. sack of Portland cement	NA	NA	<6.0
Mixed on-site or batch-mixed and delivered?	NA	NA	onsite
Grout additive 1 requested	NA	NA	NA
Additive 1 percent by dry weight relative to cement	NA	NA	NA
Grout additive 2 requested	NA	NA	NA
Additive 2 percent by dry weight relative to cement	NA	NA	NA

05E DIT JAN 17 2023 PM 3:50

TABLE B - For plugging intervals that will employ approved non-cement based sealant(s). Start with deepest interval.

	Interval 1 – deepest	Interval 2	Interval 3 – most shallow
			Note: if the well is non-artesian and breaches only one aquifer, use only this column.
Top of proposed interval of sealant placement (ft bgl)	NA	NA	0
Bottom of proposed sealant or grout placement (ft bgl)	NA	NA	10
Theoretical volume of sealant required per interval (gallons)	NA	NA	26
Proposed abandonment sealant (manufacturer and trade name)	NA	NA	Bariod Hole Plug

OSE DTI JAN 17 2023 PM3:51



STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER

ROSWELL

1900 West Second St.
 Roswell, New Mexico 88201
 Phone: (575) 622-6521
 Fax: (575) 623- 8559

Applicant has identified wells, listed below, to be plugged. West Texas Drilling Services (WD-1184) will perform the plugging.

Permittee: BTA Oil Producers, LLC
 NMOSE Permit Number: C-4698-POD1

NMOSE File	Casing diameter (inches)	Well depth (feet bgl)	Approximate static water level (feet bgl)	Latitude	Longitude
C-4698-POD1	2.0 (Soil Boring)	110	100	32° 6' 28.0224"	103° 33' 44.046"

Specific Plugging Conditions of Approval for Well located in Lea County, New Mexico.

1. Water well drilling and well drilling activities, including well plugging, are regulated under 19.27.4 NMAC, which requires any person engaged in the business of well drilling within New Mexico to obtain a Well Driller License issued by the New Mexico Office of the State Engineer (NMOSE). Therefore, the firm of a New Mexico licensed Well Driller shall perform the well plugging.

2. Ground Water encountered: The total Theoretical volume of sealant required for abandonment of soil boring well is approximately 17.94 gallons. Total minimum volume of necessary sealant shall be calculated upon sounding the actual pluggable depth of well, which is estimated at 110 feet.

3. Dry Hole: The total Theoretical volume of sealant required for abandonment of soil boring well is approximately 1.63 gallons. Total minimum volume of necessary sealant shall be calculated upon sounding the actual pluggable depth of well, which is estimated at 10 feet.

4. Ground Water encountered: Type I/II Portland cement mixed with 5.2 to 6.0 gallons of fresh water per 94-lb sack of cement is approved for the plugging the well.

5. Dry Hole: (a) Drill cuttings up to ten feet of land surface. (b) 10 feet to 0 feet – Hydrated bentonite. The bentonite shall be hydrated separately with its required increments of water prior to being mixed into the cement slurry.

6. Sealant shall be placed by pumping through a tremie pipe extended to near well bottom and kept below top of the slurry column as the well is plugged from bottom-upwards in a manner that displaces the standing water column upwards from below. Tremie pipe may be pulled as necessary to retain minimal submergence in the advancing column of sealant.

7. Should cement "shrinks-back" occur in the well, use of a tremie for topping off is required for cement placement deeper than 20 feet below land surface or if water is present in the casing. The approved sealant for topping off is identified in condition 3. and 4. of these Specific Conditions of Approval.

8. Any open annulus encountered surrounding the casing shall also be sealed by the placement of the approved sealant. When plugging shallow wells with no construction or environmental concerns, and if the well record on a well to be plugged shows a proper 20-foot annular seal, a plugging plan can propose the use of clean fill material to a nominal 30 feet bgs, then placing an OSE approved sealant to surface. Lacking that information, we would require an excavation of at least 2-feet which shall then be filled in its entirety with sealant to surface.

9. Should the NMED, or another regulatory agency sharing jurisdiction of the project authorize, or by regulation require a more stringent well plugging procedure than herein acknowledged, the more-stringent procedure should be followed. This, in part, includes provisions regarding pre-authorization to proceed, contaminant remediation, inspection, pulling/perforating of casing, or prohibition of free discharge of any fluid from the borehole during or related to the plugging process.

10. NMOSE witnessing of the plugging of the soil boring will not be required.

11. Any deviation from this plan must obtain an approved variance from this office prior to implementation.

12. A Well Plugging Record itemizing actual abandonment process and materials used shall be filed with the State Engineer within 30 days after completion of well plugging. For the plugging record, please resurvey coordinate location for well and note coordinate system for GPS unit. Please attach a copy of these plugging conditions.

The NMOSE Well Plugging Plan of Operations is hereby approved with the aforesaid conditions applied.

Witness my hand and seal this 20th day of January 2023

Mike A. Hamman, P.E. State Engineer



By: K. Parekh

Kashyap Parekh
Water Resources Manager I



STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER
ROSWELL

Mike A. Hamman, P.E.
State Engineer

DISTRICT II
1900 West Second St.
Roswell, New Mexico 88201
Phone: (575) 622-6521
Fax: (575) 623-8559

January 20, 2023

BTA Oil Producers, LLC
104 S. Pecos Street
Midland, TX 79701

RE: Well Plugging Plan of Operations for well no. C-4698-POD1

Greetings:

Enclosed is your copy of the Well Plugging Plan of Operations for the above referenced well subject to the attached Conditions of Approval. The proposed method of operation is found to be acceptable and in accordance with the Rules and Regulations Governing Well Driller Licensing; Construction, Repair and Plugging of Wells 19.27.4 NMAC adopted June 30, 2017 by the State Engineer. subject to the attached Conditions of Approval.

Well Plugging Plan of Operations form (WD-08) has been updated. Current form can be found on the OSE website at the following link <https://www.ose.state.nm.us/Statewide/wdForms.php>.

Within 30 days after the well is plugged, the well driller is required to file a complete plugging record with the OSE and the permit holder.

Sincerely,

A handwritten signature in black ink that reads "K. Parekh".

Kashyap Parekh
Water Resources Manager I



APPENDIX B

Photographic Log



Photographic Log
BTA Oil Producers, LLC
Rojo 10H-13H, 34H-37H
nAPP2313055442



Photograph: 1 Date: 5/17/2023
Description: Point of release
View: Northwest

Photograph: 2 Date: 5/17/2023
Description: Soil staining in release footprint
View: West



Photograph: 3 Date: 6/15/2023
Description: Delineation activities
View: East

Photograph: 4 Date: 6/16/2023
Description: Delineation activities
View: South



APPENDIX C

Lithologic Soil Sampling Logs

					Sample Name: BH01		Date: 6/16/2023	
					Site Name: Rojo 10H-13H, 34H-37H			
					Incident Number: nAPP2313055442			
					Job Number: 03C2012038			
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: Ronni Hayes		Method: Excavator	
Coordinates: 32.1083586, -103.5546914					Hole Diameter: 3'		Total Depth:	
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
						0		
M	<173.8	1.8	N	BH01	1	1	SP-SM	SAND, poorly sorted, low plasticity, low cohesiveness, reddish brown
M	212	1.2	N	BH01A	2	2	SAA	SAA
M	<173.8	1.3	N	BH01B	3	3	SP-GP	SAND, poorly sorted sand with abundant limestone low cohesiveness, light brown
M	212	0.4	N	BH01C	4	4	SAA	SAA Refusal at 4ft bgs TD at 4 ft bgs

								Sample Name: BH02		Date: 6/16/23					
								Site Name: Rojo 10H-13H, 34H-37H				Incident Number: nAPP2313055442			
								Job Number: 03C2012038				Logged By: Ronni Hayes		Method: Excavator	
								Coordinates: 32.1083590, -103.5545106				Hole Diameter: 3'		Total Depth:	
LITHOLOGIC / SOIL SAMPLING LOG															
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							
M	2783	11.2	N	BH02	1	1	SP-SM	SAND, poorly sorted, low plasticity, low cohesiveness, reddish brown							
M	2548	11.7	N	BH02A	2	2	SAA	SAA							
M	2604	6.2	N	BH02B	3	3	SP-GP	SAND, poorly sorted sand with abundant limestone low cohesiveness, light brown							
M	952	3.4	N	BH02C	4	4	SAA	SAA							
M	<173.8	1.4	N	BH02D	5	5	CCHE	CALICHE, abundant limestone gravel, low cohesiveness, low plasticity, pale tan Refusal at 5 ft bgs TD at 5 ft bgs							

								Sample Name: BH03	Date: 6/16/23
								Site Name: Rojo 10H-13H, 34H-37H	
								Incident Number: nAPP2313055442	
								Job Number: 03C2012038	
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: Ronni Hayes	Method: Excavator
Coordinates: 32.1084193, -103.5542732								Hole Diameter: 3'	Total Depth:
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	
						0			
M	1,215.2	2.8	N	BH03	1	1	SP-SM	SAND, poorly sorted, low plasticity, low cohesiveness, reddish brown	
M	3,432.8	6.4	N	BH03A	2	2	SAA	SAA	
M	1,741.60	2.4	N	BH03B	3	3	SP-GP	SAND, poorly sorted sand with abundant limestone low cohesiveness, light brown	
M	1,864.80	1.7	N	BH03C	4	4	SAA	SAA	
M	2,548	1.3	N	BH03D	5	5	SAA	SAA	
M	448	1	N	BH03E	6	6	CCHE	CALICHE, abundant limestone gravel, low cohesiveness, low plasticity, pale tan	
								Refusal at 6 ft bgs TD at 6 ft bgs	

					Sample Name: BH04		Date: 6/16/23	
					Site Name: Rojo 10H-13H, 34H-37H			
					Incident Number: nAPP2313055442			
					Job Number: 03C2012038			
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: Ronni Hayes		Method: Excavator	
Coordinates: 32.1084139, -103.5540414					Hole Diameter: 3'		Total Depth:	
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
						0		
M	1,864.0	8.2	N	BH04	1	1	SP-SM	SAND, poorly sorted, low plasticity, low cohesiveness, reddish brown
M	1,741.0	6.2	N	BH04A	2	2	SAA	SAA
M	3,432.00	2.9	N	BH04B	3	3	SP-GP	SAND, poorly sorted sand with abundant limestone low cohesiveness, light brown
M	1,310.40	1.8	N	BH04C	4	4	SAA	SAA
M	661	1.4	N	BH04D	5	5	SAA	SAA
M	319.2	1.1	N	BH04E	6	6	CCHE	CALICHE, abundant limestone gravel, low cohesiveness, low plasticity, pale tan
								Refusal at 6 ft bgs TD at 6 ft bgs
						8		
						9		
						10		
						11		
						12		

					Sample Name: BH05		Date: 6/16/23	
					Site Name: Rojo 10H-13H, 34H-37H			
					Incident Number: nAPP2313055442			
					Job Number: 03C2012038			
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: Ronni Hayes		Method: Excavator	
Coordinates: 32.1084317, -103.5537033					Hole Diameter: 3'		Total Depth:	
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
						0		
M	604.8	3.0	N	BH05	1	1	SP-SM	SAND, poorly sorted, low plasticity, low cohesiveness, reddish brown
M	<173.8	1.7	N	BH05A	2	2	SP-GP	SAND, poorly sorted sand with abundant limestone low cohesiveness, light brown
M	<173.8	3.1	N	BH05B	3	3	SAA	SAA
M	604.8	0.3	N	BH05C	4	4	SAA	SAA
M	498	2.4	N	BH05D	5	5	CCHE	CALICHE, abundant limestone gravel, low cohesiveness, low plasticity, pale tan
						7		Refusal at 5 ft bgs TD at 5 ft bgs
						8		
						9		
						10		
						11		
						12		

							Sample Name: BH06		Date: 6/16/23	
							Site Name: Rojo 10H-13H, 34H-37H			
							Incident Number: nAPP2313055442			
							Job Number: 03C2012038			
LITHOLOGIC / SOIL SAMPLING LOG							Logged By: Ronni Hayes		Method: Excavator	
Coordinates: 32.1081156, -103.5538520							Hole Diameter: 3'		Total Depth:	
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		
						0				
M	1,310.0	5.6	N	BH06	1	1	SP-SM	SAND, poorly sorted, low plasticity, low cohesiveness, reddish brown		
M	1,192.00	3.8	N	BH06A	2	2	SAA	SAA		
M	448	2.7	N	BH06B	3	3	SP-GP	SAND, poorly sorted sand with abundant limestone low cohesiveness, light brown		
M	<173.8	2.3	N	BH06C	4	4	SAA	SAA		
M	<173.8	1.3	N	BH06D	5	5	CCHE	CALICHE, abundant limestone gravel, low cohesiveness, low plasticity, pale tan		
								Refusal at 5 ft bgs TD at 5 ft bgs		



APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation



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

May 24, 2023

HADLIE GREEN

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: ROJO 10H - 13H, 34H - 37H

Enclosed are the results of analyses for samples received by the laboratory on 05/19/23 9:30.

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

Cardinal Laboratories is 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.

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:	05/19/2023	Sampling Date:	05/17/2023
Reported:	05/24/2023	Sampling Type:	Soil
Project Name:	ROJO 10H - 13H, 34H - 37H	Sampling Condition:	Cool & Intact
Project Number:	03C2012038	Sample Received By:	Tamara Oldaker
Project Location:	BTA - (32.108028-103.553151) LEA CO		

Sample ID: SS 01 0.5' (H232550-01)

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	05/21/2023	ND	2.06	103	2.00	5.34	
Toluene*	<0.050	0.050	05/21/2023	ND	2.10	105	2.00	6.29	
Ethylbenzene*	<0.050	0.050	05/21/2023	ND	2.03	101	2.00	6.49	
Total Xylenes*	<0.150	0.150	05/21/2023	ND	6.30	105	6.00	6.11	
Total BTEX	<0.300	0.300	05/21/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	24000	16.0	05/22/2023	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/19/2023	ND	208	104	200	25.2	
DRO >C10-C28*	58.7	10.0	05/19/2023	ND	212	106	200	21.4	
EXT DRO >C28-C36	<10.0	10.0	05/19/2023	ND					

Surrogate: 1-Chlorooctane 112 % 48.2-134

Surrogate: 1-Chlorooctadecane 112 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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:	05/19/2023	Sampling Date:	05/17/2023
Reported:	05/24/2023	Sampling Type:	Soil
Project Name:	ROJO 10H - 13H, 34H - 37H	Sampling Condition:	Cool & Intact
Project Number:	03C2012038	Sample Received By:	Tamara Oldaker
Project Location:	BTA - (32.108028-103.553151) LEA CO		

Sample ID: SS 02 0.5' (H232550-02)

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	05/21/2023	ND	2.06	103	2.00	5.34	
Toluene*	<0.050	0.050	05/21/2023	ND	2.10	105	2.00	6.29	
Ethylbenzene*	<0.050	0.050	05/21/2023	ND	2.03	101	2.00	6.49	
Total Xylenes*	<0.150	0.150	05/21/2023	ND	6.30	105	6.00	6.11	
Total BTEX	<0.300	0.300	05/21/2023	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	10800	16.0	05/22/2023	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/19/2023	ND	208	104	200	25.2	
DRO >C10-C28*	834	10.0	05/19/2023	ND	212	106	200	21.4	
EXT DRO >C28-C36	243	10.0	05/19/2023	ND					

Surrogate: 1-Chlorooctane 119 % 48.2-134

Surrogate: 1-Chlorooctadecane 147 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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:	05/19/2023	Sampling Date:	05/17/2023
Reported:	05/24/2023	Sampling Type:	Soil
Project Name:	ROJO 10H - 13H, 34H - 37H	Sampling Condition:	Cool & Intact
Project Number:	03C2012038	Sample Received By:	Tamara Oldaker
Project Location:	BTA - (32.108028-103.553151) LEA CO		

Sample ID: SS 03 0.5' (H232550-03)

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	05/21/2023	ND	2.06	103	2.00	5.34	
Toluene*	<0.050	0.050	05/21/2023	ND	2.10	105	2.00	6.29	
Ethylbenzene*	<0.050	0.050	05/21/2023	ND	2.03	101	2.00	6.49	
Total Xylenes*	<0.150	0.150	05/21/2023	ND	6.30	105	6.00	6.11	
Total BTEX	<0.300	0.300	05/21/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	18800	16.0	05/22/2023	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/19/2023	ND	208	104	200	25.2	
DRO >C10-C28*	85.9	10.0	05/19/2023	ND	212	106	200	21.4	
EXT DRO >C28-C36	49.2	10.0	05/19/2023	ND					

Surrogate: 1-Chlorooctane 122 % 48.2-134

Surrogate: 1-Chlorooctadecane 123 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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:	05/19/2023	Sampling Date:	05/17/2023
Reported:	05/24/2023	Sampling Type:	Soil
Project Name:	ROJO 10H - 13H, 34H - 37H	Sampling Condition:	Cool & Intact
Project Number:	03C2012038	Sample Received By:	Tamara Oldaker
Project Location:	BTA - (32.108028-103.553151) LEA CO		

Sample ID: SS 04 0.5' (H232550-04)

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	05/21/2023	ND	2.06	103	2.00	5.34	
Toluene*	<0.050	0.050	05/21/2023	ND	2.10	105	2.00	6.29	
Ethylbenzene*	<0.050	0.050	05/21/2023	ND	2.03	101	2.00	6.49	
Total Xylenes*	<0.150	0.150	05/21/2023	ND	6.30	105	6.00	6.11	
Total BTEX	<0.300	0.300	05/21/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	14000	16.0	05/22/2023	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/19/2023	ND	208	104	200	25.2	
DRO >C10-C28*	49.4	10.0	05/19/2023	ND	212	106	200	21.4	
EXT DRO >C28-C36	26.6	10.0	05/19/2023	ND					

Surrogate: 1-Chlorooctane 95.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.7 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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:	05/19/2023	Sampling Date:	05/17/2023
Reported:	05/24/2023	Sampling Type:	Soil
Project Name:	ROJO 10H - 13H, 34H - 37H	Sampling Condition:	Cool & Intact
Project Number:	03C2012038	Sample Received By:	Tamara Oldaker
Project Location:	BTA - (32.108028-103.553151) LEA CO		

Sample ID: SS 05 0.5' (H232550-05)

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	05/21/2023	ND	2.06	103	2.00	5.34	
Toluene*	<0.050	0.050	05/21/2023	ND	2.10	105	2.00	6.29	
Ethylbenzene*	<0.050	0.050	05/21/2023	ND	2.03	101	2.00	6.49	
Total Xylenes*	<0.150	0.150	05/21/2023	ND	6.30	105	6.00	6.11	
Total BTEX	<0.300	0.300	05/21/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9460	16.0	05/22/2023	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/19/2023	ND	208	104	200	25.2	
DRO >C10-C28*	416	10.0	05/19/2023	ND	212	106	200	21.4	
EXT DRO >C28-C36	102	10.0	05/19/2023	ND					

Surrogate: 1-Chlorooctane 118 % 48.2-134

Surrogate: 1-Chlorooctadecane 126 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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:	05/19/2023	Sampling Date:	05/17/2023
Reported:	05/24/2023	Sampling Type:	Soil
Project Name:	ROJO 10H - 13H, 34H - 37H	Sampling Condition:	Cool & Intact
Project Number:	03C2012038	Sample Received By:	Tamara Oldaker
Project Location:	BTA - (32.108028-103.553151) LEA CO		

Sample ID: SS 06 0.5' (H232550-06)

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	05/21/2023	ND	2.20	110	2.00	1.52	
Toluene*	<0.050	0.050	05/21/2023	ND	2.17	109	2.00	2.31	
Ethylbenzene*	<0.050	0.050	05/21/2023	ND	2.08	104	2.00	4.23	
Total Xylenes*	<0.150	0.150	05/21/2023	ND	6.31	105	6.00	5.32	
Total BTEX	<0.300	0.300	05/21/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	22000	16.0	05/22/2023	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/19/2023	ND	208	104	200	25.2	
DRO >C10-C28*	21.5	10.0	05/19/2023	ND	212	106	200	21.4	
EXT DRO >C28-C36	20.2	10.0	05/19/2023	ND					

Surrogate: 1-Chlorooctane 98.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.7 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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:	05/19/2023	Sampling Date:	05/17/2023
Reported:	05/24/2023	Sampling Type:	Soil
Project Name:	ROJO 10H - 13H, 34H - 37H	Sampling Condition:	Cool & Intact
Project Number:	03C2012038	Sample Received By:	Tamara Oldaker
Project Location:	BTA - (32.108028-103.553151) LEA CO		

Sample ID: SS 07 0.5' (H232550-07)

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	05/21/2023	ND	2.20	110	2.00	1.52	
Toluene*	<0.050	0.050	05/21/2023	ND	2.17	109	2.00	2.31	
Ethylbenzene*	<0.050	0.050	05/21/2023	ND	2.08	104	2.00	4.23	
Total Xylenes*	<0.150	0.150	05/21/2023	ND	6.31	105	6.00	5.32	
Total BTEX	<0.300	0.300	05/21/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	20400	16.0	05/22/2023	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/19/2023	ND	208	104	200	25.2	
DRO >C10-C28*	14.8	10.0	05/19/2023	ND	212	106	200	21.4	
EXT DRO >C28-C36	<10.0	10.0	05/19/2023	ND					

Surrogate: 1-Chlorooctane 126 % 48.2-134

Surrogate: 1-Chlorooctadecane 121 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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:	05/19/2023	Sampling Date:	05/17/2023
Reported:	05/24/2023	Sampling Type:	Soil
Project Name:	ROJO 10H - 13H, 34H - 37H	Sampling Condition:	Cool & Intact
Project Number:	03C2012038	Sample Received By:	Tamara Oldaker
Project Location:	BTA - (32.108028-103.553151) LEA CO		

Sample ID: SS 08 0.5' (H232550-08)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/21/2023	ND	2.20	110	2.00	1.52		
Toluene*	<0.050	0.050	05/21/2023	ND	2.17	109	2.00	2.31		
Ethylbenzene*	<0.050	0.050	05/21/2023	ND	2.08	104	2.00	4.23		
Total Xylenes*	<0.150	0.150	05/21/2023	ND	6.31	105	6.00	5.32		
Total BTEX	<0.300	0.300	05/21/2023	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	15200	16.0	05/22/2023	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	05/19/2023	ND	208	104	200	25.2		
DRO >C10-C28*	18.0	10.0	05/19/2023	ND	212	106	200	21.4		
EXT DRO >C28-C36	<10.0	10.0	05/19/2023	ND						

Surrogate: 1-Chlorooctane 121 % 48.2-134

Surrogate: 1-Chlorooctadecane 118 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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:	05/19/2023	Sampling Date:	05/17/2023
Reported:	05/24/2023	Sampling Type:	Soil
Project Name:	ROJO 10H - 13H, 34H - 37H	Sampling Condition:	Cool & Intact
Project Number:	03C2012038	Sample Received By:	Tamara Oldaker
Project Location:	BTA - (32.108028-103.553151) LEA CO		

Sample ID: SS 09 0.5' (H232550-09)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/21/2023	ND	2.20	110	2.00	1.52		
Toluene*	<0.050	0.050	05/21/2023	ND	2.17	109	2.00	2.31		
Ethylbenzene*	<0.050	0.050	05/21/2023	ND	2.08	104	2.00	4.23		
Total Xylenes*	<0.150	0.150	05/21/2023	ND	6.31	105	6.00	5.32		
Total BTEX	<0.300	0.300	05/21/2023	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	240	16.0	05/22/2023	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	05/19/2023	ND	208	104	200	25.2		
DRO >C10-C28*	<10.0	10.0	05/19/2023	ND	212	106	200	21.4		
EXT DRO >C28-C36	<10.0	10.0	05/19/2023	ND						

Surrogate: 1-Chlorooctane 83.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 77.0 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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:	05/19/2023	Sampling Date:	05/17/2023
Reported:	05/24/2023	Sampling Type:	Soil
Project Name:	ROJO 10H - 13H, 34H - 37H	Sampling Condition:	Cool & Intact
Project Number:	03C2012038	Sample Received By:	Tamara Oldaker
Project Location:	BTA - (32.108028-103.553151) LEA CO		

Sample ID: SS 10 0.5' (H232550-10)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/21/2023	ND	2.20	110	2.00	1.52		
Toluene*	<0.050	0.050	05/21/2023	ND	2.17	109	2.00	2.31		
Ethylbenzene*	<0.050	0.050	05/21/2023	ND	2.08	104	2.00	4.23		
Total Xylenes*	<0.150	0.150	05/21/2023	ND	6.31	105	6.00	5.32		
Total BTEX	<0.300	0.300	05/21/2023	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	05/22/2023	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	05/19/2023	ND	208	104	200	25.2		
DRO >C10-C28*	<10.0	10.0	05/19/2023	ND	212	106	200	21.4		
EXT DRO >C28-C36	<10.0	10.0	05/19/2023	ND						

Surrogate: 1-Chlorooctane 110 % 48.2-134

Surrogate: 1-Chlorooctadecane 103 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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:	05/19/2023	Sampling Date:	05/17/2023
Reported:	05/24/2023	Sampling Type:	Soil
Project Name:	ROJO 10H - 13H, 34H - 37H	Sampling Condition:	Cool & Intact
Project Number:	03C2012038	Sample Received By:	Tamara Oldaker
Project Location:	BTA - (32.108028-103.553151) LEA CO		

Sample ID: SS 11 0.5' (H232550-11)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/21/2023	ND	2.20	110	2.00	1.52		
Toluene*	<0.050	0.050	05/21/2023	ND	2.17	109	2.00	2.31		
Ethylbenzene*	<0.050	0.050	05/21/2023	ND	2.08	104	2.00	4.23		
Total Xylenes*	<0.150	0.150	05/21/2023	ND	6.31	105	6.00	5.32		
Total BTEX	<0.300	0.300	05/21/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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	05/22/2023	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	05/19/2023	ND	208	104	200	25.2		
DRO >C10-C28*	<10.0	10.0	05/19/2023	ND	212	106	200	21.4		
EXT DRO >C28-C36	<10.0	10.0	05/19/2023	ND						

Surrogate: 1-Chlorooctane 123 % 48.2-134

Surrogate: 1-Chlorooctadecane 119 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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:	05/19/2023	Sampling Date:	05/17/2023
Reported:	05/24/2023	Sampling Type:	Soil
Project Name:	ROJO 10H - 13H, 34H - 37H	Sampling Condition:	Cool & Intact
Project Number:	03C2012038	Sample Received By:	Tamara Oldaker
Project Location:	BTA - (32.108028-103.553151) LEA CO		

Sample ID: SS 12 0.5' (H232550-12)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/21/2023	ND	2.20	110	2.00	1.52		
Toluene*	<0.050	0.050	05/21/2023	ND	2.17	109	2.00	2.31		
Ethylbenzene*	<0.050	0.050	05/21/2023	ND	2.08	104	2.00	4.23		
Total Xylenes*	<0.150	0.150	05/21/2023	ND	6.31	105	6.00	5.32		
Total BTEX	<0.300	0.300	05/21/2023	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	05/22/2023	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	05/19/2023	ND	208	104	200	25.2		
DRO >C10-C28*	<10.0	10.0	05/19/2023	ND	212	106	200	21.4		
EXT DRO >C28-C36	<10.0	10.0	05/19/2023	ND						

Surrogate: 1-Chlorooctane 114 % 48.2-134

Surrogate: 1-Chlorooctadecane 107 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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:	05/19/2023	Sampling Date:	05/17/2023
Reported:	05/24/2023	Sampling Type:	Soil
Project Name:	ROJO 10H - 13H, 34H - 37H	Sampling Condition:	Cool & Intact
Project Number:	03C2012038	Sample Received By:	Tamara Oldaker
Project Location:	BTA - (32.108028-103.553151) LEA CO		

Sample ID: SS 13 0.5' (H232550-13)

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	05/21/2023	ND	2.20	110	2.00	1.52		
Toluene*	<0.050	0.050	05/21/2023	ND	2.17	109	2.00	2.31		
Ethylbenzene*	<0.050	0.050	05/21/2023	ND	2.08	104	2.00	4.23		
Total Xylenes*	<0.150	0.150	05/21/2023	ND	6.31	105	6.00	5.32		
Total BTEX	<0.300	0.300	05/21/2023	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	16.0	16.0	05/22/2023	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	05/19/2023	ND	208	104	200	25.2		
DRO >C10-C28*	<10.0	10.0	05/19/2023	ND	212	106	200	21.4		
EXT DRO >C28-C36	<10.0	10.0	05/19/2023	ND						

Surrogate: 1-Chlorooctane 95.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.8 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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:	05/19/2023	Sampling Date:	05/17/2023
Reported:	05/24/2023	Sampling Type:	Soil
Project Name:	ROJO 10H - 13H, 34H - 37H	Sampling Condition:	Cool & Intact
Project Number:	03C2012038	Sample Received By:	Tamara Oldaker
Project Location:	BTA - (32.108028-103.553151) LEA CO		

Sample ID: SS 14 0.5' (H232550-14)

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	05/21/2023	ND	2.20	110	2.00	1.52	
Toluene*	<0.050	0.050	05/21/2023	ND	2.17	109	2.00	2.31	
Ethylbenzene*	<0.050	0.050	05/21/2023	ND	2.08	104	2.00	4.23	
Total Xylenes*	<0.150	0.150	05/21/2023	ND	6.31	105	6.00	5.32	
Total BTEX	<0.300	0.300	05/21/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	05/22/2023	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/19/2023	ND	208	104	200	25.2	
DRO >C10-C28*	<10.0	10.0	05/19/2023	ND	212	106	200	21.4	
EXT DRO >C28-C36	<10.0	10.0	05/19/2023	ND					

Surrogate: 1-Chlorooctane 81.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 77.3 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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:	05/19/2023	Sampling Date:	05/17/2023
Reported:	05/24/2023	Sampling Type:	Soil
Project Name:	ROJO 10H - 13H, 34H - 37H	Sampling Condition:	Cool & Intact
Project Number:	03C2012038	Sample Received By:	Tamara Oldaker
Project Location:	BTA - (32.108028-103.553151) LEA CO		

Sample ID: SS 15 0.5' (H232550-15)

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	05/21/2023	ND	2.42	121	2.00	1.10	
Toluene*	<0.050	0.050	05/21/2023	ND	2.37	119	2.00	1.10	
Ethylbenzene*	<0.050	0.050	05/21/2023	ND	2.32	116	2.00	1.95	
Total Xylenes*	<0.150	0.150	05/21/2023	ND	7.09	118	6.00	1.54	
Total BTEX	<0.300	0.300	05/21/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	05/22/2023	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/19/2023	ND	208	104	200	25.2	
DRO >C10-C28*	<10.0	10.0	05/19/2023	ND	212	106	200	21.4	
EXT DRO >C28-C36	<10.0	10.0	05/19/2023	ND					

Surrogate: 1-Chlorooctane 104 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.8 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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:	05/19/2023	Sampling Date:	05/17/2023
Reported:	05/24/2023	Sampling Type:	Soil
Project Name:	ROJO 10H - 13H, 34H - 37H	Sampling Condition:	Cool & Intact
Project Number:	03C2012038	Sample Received By:	Tamara Oldaker
Project Location:	BTA - (32.108028-103.553151) LEA CO		

Sample ID: SS 16 0.5' (H232550-16)

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	05/21/2023	ND	2.42	121	2.00	1.10	
Toluene*	<0.050	0.050	05/21/2023	ND	2.37	119	2.00	1.10	
Ethylbenzene*	<0.050	0.050	05/21/2023	ND	2.32	116	2.00	1.95	
Total Xylenes*	<0.150	0.150	05/21/2023	ND	7.09	118	6.00	1.54	
Total BTEX	<0.300	0.300	05/21/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.5 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	05/22/2023	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/19/2023	ND	208	104	200	25.2	
DRO >C10-C28*	<10.0	10.0	05/19/2023	ND	212	106	200	21.4	
EXT DRO >C28-C36	<10.0	10.0	05/19/2023	ND					

Surrogate: 1-Chlorooctane 111 % 48.2-134

Surrogate: 1-Chlorooctadecane 103 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

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

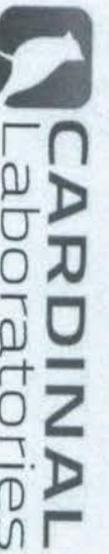
Cardinal Laboratories

*=Accredited Analyte

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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

PS 1052

BILL TO

ANALYSIS REQUEST

Company Name: Ensolum, LLC
 Project Manager: Hadlie Green
 Address: 601 N. Marland St. STE 400
 City: Midland State: TX Zip: 79701
 Phone #: 432-557-8895 Fax #: Project Owner:
 Project #: 03C2012038
 Project Name: Rojo 10H-13H, 34H-37H
 Project Location: 32-108028, -103.553151
 Sampler Name: Kase Parker
 P.O. #: Company: BTA Oil
 Attn: Kevin Jones
 Address: 104 S Pecos St
 City: Midland State: TX Zip: 79701
 Phone #: 432-312-2203
 Fax #:

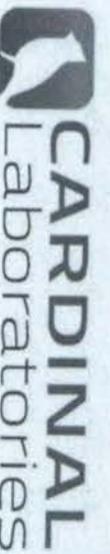
Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX							DATE	TIME	ANALYSIS	
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:				ICE / COOL
H233550	SS01	0.5'	G	1	X							5/17/23	9:00	X	BTEX
	SS02												9:05	X	TPH
	SS03												9:10	X	Chlorides
	SS04												9:15		
	SS05												9:20		
	SS06												9:25		
	SS07												9:30		
	SS08												9:35		
	SS09												9:40		
	SS10												9:45		

PLEASE NOTE: Labby and Damages: Cardinal's facility and clients exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analysis. 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 clients, its subcontractors, 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 remedies or otherwise.

Relinquished By: [Signature]
 Date: 5-19-23
 Time: 0930
 Received By: [Signature]
 Date: [Blank]
 Time: [Blank]

Delivered By: (Circle One) UPS Bus Other
 Observed Temp. °C: 5.9
 Corrected Temp. °C: 5.3
 Sample Condition: Intact Cool Yes No
 CHECKED BY: [Signature]
 Turnaround Time: Standard Rush
 Thermometer ID #113
 Correction Factor: -0.5°C
 Bacteria (only) Cool Intact Yes No
 Sample Condition: Observed Temp. °C
 Corrected Temp. °C

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



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

pg 2 of 2

BILL TO

ANALYSIS REQUEST

Company Name: Ensolum, LLC
 Project Manager: Hadlie Green
 Address: 601 N. Marientfield St. STE 400
 City: Midland State: TX Zip: 79701
 Phone #: 432-557-8895 Fax #: 432-312-2203
 Project #: 03C2012038 Project Owner:
 Project Name: Rojo 10H-13H, 34H-37H
 Project Location: 32.108028, -103.553151
 Sampler Name: Kase Parker
 P.O. #: Company: BTA Oil
 Attn: Kevin Jones
 Address: 104 S Pecos St
 City: Midland State: TX Zip: 79701
 Phone #: 432-312-2203
 Fax #:

Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	BT TPH Chlorides	
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:				ICE / COOL
AB33550	SS11	0.5'		1							5/17/23	9:50	X	X	X
	SS12			1								9:55	X	X	X
	SS13			1								10:00	X	X	X
	SS14			1								10:05	X	X	X
	SS15			1								10:10	X	X	X
	SS16			1								10:15	X	X	X

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

Relinquished By: [Signature]
 Date: 5-19-23
 Time: 0930
 Received By: [Signature]
 Date: [Signature]
 Time: [Signature]

Delivered By: (Circle One) Observed Temp. °C: 5.9
 Sampler - UPS - Bus - Other: Corrected Temp. °C: 5.3
 Sample Condition: Cool Intact
 Checked By: [Signature] (Initials)
 Turnaround Time: Standard RUSH
 Thermometer ID #113 Correction Factor: -0.5°C
 Bacteria (only) Sample Condition: Cool Intact 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

June 23, 2023

HADLIE GREEN

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: ROJO 10H - 13H, 34H - 37H

Enclosed are the results of analyses for samples received by the laboratory on 06/19/23 14:30.

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

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:	06/19/2023	Sampling Date:	06/16/2023
Reported:	06/23/2023	Sampling Type:	Soil
Project Name:	ROJO 10H - 13H, 34H - 37H	Sampling Condition:	Cool & Intact
Project Number:	03C2012038 (32.108028-103.553151)	Sample Received By:	Tamara Oldaker
Project Location:	BTA - LEA CO		

Sample ID: BH 01 1' (H233151-01)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/21/2023	ND	1.85	92.5	2.00	2.76	
Toluene*	<0.050	0.050	06/21/2023	ND	1.85	92.6	2.00	2.49	
Ethylbenzene*	<0.050	0.050	06/21/2023	ND	1.90	94.8	2.00	2.68	
Total Xylenes*	<0.150	0.150	06/21/2023	ND	5.79	96.5	6.00	1.73	
Total BTEX	<0.300	0.300	06/21/2023	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	64.0	16.0	06/21/2023	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/21/2023	ND	159	79.7	200	1.93	
DRO >C10-C28*	<10.0	10.0	06/21/2023	ND	158	79.1	200	2.15	
EXT DRO >C28-C36	<10.0	10.0	06/21/2023	ND					

Surrogate: 1-Chlorooctane 128 % 48.2-134

Surrogate: 1-Chlorooctadecane 134 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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:	06/19/2023	Sampling Date:	06/16/2023
Reported:	06/23/2023	Sampling Type:	Soil
Project Name:	ROJO 10H - 13H, 34H - 37H	Sampling Condition:	Cool & Intact
Project Number:	03C2012038 (32.108028-103.553151)	Sample Received By:	Tamara Oldaker
Project Location:	BTA - LEA CO		

Sample ID: BH 01 C 4' (H233151-02)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/21/2023	ND	2.38	119	2.00	5.79	QM-07
Toluene*	<0.050	0.050	06/21/2023	ND	2.16	108	2.00	4.22	
Ethylbenzene*	<0.050	0.050	06/21/2023	ND	2.16	108	2.00	4.70	
Total Xylenes*	<0.150	0.150	06/21/2023	ND	6.48	108	6.00	5.04	
Total BTEX	<0.300	0.300	06/21/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.7 % 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	496	16.0	06/21/2023	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/21/2023	ND	159	79.7	200	1.93	
DRO >C10-C28*	<10.0	10.0	06/21/2023	ND	158	79.1	200	2.15	
EXT DRO >C28-C36	<10.0	10.0	06/21/2023	ND					

Surrogate: 1-Chlorooctane 93.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.4 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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:	06/19/2023	Sampling Date:	06/15/2023
Reported:	06/23/2023	Sampling Type:	Soil
Project Name:	ROJO 10H - 13H, 34H - 37H	Sampling Condition:	Cool & Intact
Project Number:	03C2012038 (32.108028-103.553151)	Sample Received By:	Tamara Oldaker
Project Location:	BTA - LEA CO		

Sample ID: BH 02 1' (H233151-03)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/21/2023	ND	2.38	119	2.00	5.79		
Toluene*	<0.050	0.050	06/21/2023	ND	2.16	108	2.00	4.22		
Ethylbenzene*	<0.050	0.050	06/21/2023	ND	2.16	108	2.00	4.70		
Total Xylenes*	<0.150	0.150	06/21/2023	ND	6.48	108	6.00	5.04		
Total BTEX	<0.300	0.300	06/21/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.8 % 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	1940	16.0	06/21/2023	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	06/21/2023	ND	159	79.7	200	1.93		
DRO >C10-C28*	<10.0	10.0	06/21/2023	ND	158	79.1	200	2.15		
EXT DRO >C28-C36	<10.0	10.0	06/21/2023	ND						

Surrogate: 1-Chlorooctane 92.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 99.4 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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:	06/19/2023	Sampling Date:	06/16/2023
Reported:	06/23/2023	Sampling Type:	Soil
Project Name:	ROJO 10H - 13H, 34H - 37H	Sampling Condition:	Cool & Intact
Project Number:	03C2012038 (32.108028-103.553151)	Sample Received By:	Tamara Oldaker
Project Location:	BTA - LEA CO		

Sample ID: BH 02 D 5' (H233151-04)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/21/2023	ND	2.38	119	2.00	5.79	
Toluene*	<0.050	0.050	06/21/2023	ND	2.16	108	2.00	4.22	
Ethylbenzene*	<0.050	0.050	06/21/2023	ND	2.16	108	2.00	4.70	
Total Xylenes*	<0.150	0.150	06/21/2023	ND	6.48	108	6.00	5.04	
Total BTEX	<0.300	0.300	06/21/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.5 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/21/2023	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/21/2023	ND	159	79.7	200	1.93	
DRO >C10-C28*	<10.0	10.0	06/21/2023	ND	158	79.1	200	2.15	
EXT DRO >C28-C36	<10.0	10.0	06/21/2023	ND					

Surrogate: 1-Chlorooctane 110 % 48.2-134

Surrogate: 1-Chlorooctadecane 117 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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:	06/19/2023	Sampling Date:	06/15/2023
Reported:	06/23/2023	Sampling Type:	Soil
Project Name:	ROJO 10H - 13H, 34H - 37H	Sampling Condition:	Cool & Intact
Project Number:	03C2012038 (32.108028-103.553151)	Sample Received By:	Tamara Oldaker
Project Location:	BTA - LEA CO		

Sample ID: BH 03 1' (H233151-05)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/21/2023	ND	2.38	119	2.00	5.79	
Toluene*	<0.050	0.050	06/21/2023	ND	2.16	108	2.00	4.22	
Ethylbenzene*	<0.050	0.050	06/21/2023	ND	2.16	108	2.00	4.70	
Total Xylenes*	<0.150	0.150	06/21/2023	ND	6.48	108	6.00	5.04	
Total BTEX	<0.300	0.300	06/21/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3320	16.0	06/21/2023	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/21/2023	ND	226	113	200	7.71	
DRO >C10-C28*	<10.0	10.0	06/21/2023	ND	223	111	200	12.3	
EXT DRO >C28-C36	<10.0	10.0	06/21/2023	ND					

Surrogate: 1-Chlorooctane 110 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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:	06/19/2023	Sampling Date:	06/16/2023
Reported:	06/23/2023	Sampling Type:	Soil
Project Name:	ROJO 10H - 13H, 34H - 37H	Sampling Condition:	Cool & Intact
Project Number:	03C2012038 (32.108028-103.553151)	Sample Received By:	Tamara Oldaker
Project Location:	BTA - LEA CO		

Sample ID: BH 03 E 6' (H233151-06)

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	06/21/2023	ND	2.38	119	2.00	5.79	
Toluene*	<0.050	0.050	06/21/2023	ND	2.16	108	2.00	4.22	
Ethylbenzene*	<0.050	0.050	06/21/2023	ND	2.16	108	2.00	4.70	
Total Xylenes*	<0.150	0.150	06/21/2023	ND	6.48	108	6.00	5.04	
Total BTEX	<0.300	0.300	06/21/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.4 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/21/2023	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/21/2023	ND	226	113	200	7.71	
DRO >C10-C28*	<10.0	10.0	06/21/2023	ND	223	111	200	12.3	
EXT DRO >C28-C36	<10.0	10.0	06/21/2023	ND					

Surrogate: 1-Chlorooctane 66.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 64.5 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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:	06/19/2023	Sampling Date:	06/15/2023
Reported:	06/23/2023	Sampling Type:	Soil
Project Name:	ROJO 10H - 13H, 34H - 37H	Sampling Condition:	Cool & Intact
Project Number:	03C2012038 (32.108028-103.553151)	Sample Received By:	Tamara Oldaker
Project Location:	BTA - LEA CO		

Sample ID: BH 04 1' (H233151-07)

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	06/21/2023	ND	2.38	119	2.00	5.79	
Toluene*	<0.050	0.050	06/21/2023	ND	2.16	108	2.00	4.22	
Ethylbenzene*	<0.050	0.050	06/21/2023	ND	2.16	108	2.00	4.70	
Total Xylenes*	<0.150	0.150	06/21/2023	ND	6.48	108	6.00	5.04	
Total BTEX	<0.300	0.300	06/21/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1360	16.0	06/21/2023	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/21/2023	ND	226	113	200	7.71	
DRO >C10-C28*	<10.0	10.0	06/21/2023	ND	223	111	200	12.3	
EXT DRO >C28-C36	<10.0	10.0	06/21/2023	ND					

Surrogate: 1-Chlorooctane 99.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.1 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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:	06/19/2023	Sampling Date:	06/16/2023
Reported:	06/23/2023	Sampling Type:	Soil
Project Name:	ROJO 10H - 13H, 34H - 37H	Sampling Condition:	Cool & Intact
Project Number:	03C2012038 (32.108028-103.553151)	Sample Received By:	Tamara Oldaker
Project Location:	BTA - LEA CO		

Sample ID: BH 04 E 6' (H233151-08)

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	06/21/2023	ND	2.38	119	2.00	5.79	
Toluene*	<0.050	0.050	06/21/2023	ND	2.16	108	2.00	4.22	
Ethylbenzene*	<0.050	0.050	06/21/2023	ND	2.16	108	2.00	4.70	
Total Xylenes*	<0.150	0.150	06/21/2023	ND	6.48	108	6.00	5.04	
Total BTEX	<0.300	0.300	06/21/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.5 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	06/21/2023	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/21/2023	ND	226	113	200	7.71	
DRO >C10-C28*	<10.0	10.0	06/21/2023	ND	223	111	200	12.3	
EXT DRO >C28-C36	<10.0	10.0	06/21/2023	ND					

Surrogate: 1-Chlorooctane 90.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.2 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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:	06/19/2023	Sampling Date:	06/15/2023
Reported:	06/23/2023	Sampling Type:	Soil
Project Name:	ROJO 10H - 13H, 34H - 37H	Sampling Condition:	Cool & Intact
Project Number:	03C2012038 (32.108028-103.553151)	Sample Received By:	Tamara Oldaker
Project Location:	BTA - LEA CO		

Sample ID: BH 05 1' (H233151-09)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/21/2023	ND	2.38	119	2.00	5.79	
Toluene*	<0.050	0.050	06/21/2023	ND	2.16	108	2.00	4.22	
Ethylbenzene*	<0.050	0.050	06/21/2023	ND	2.16	108	2.00	4.70	
Total Xylenes*	<0.150	0.150	06/21/2023	ND	6.48	108	6.00	5.04	
Total BTEX	<0.300	0.300	06/21/2023	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	224	16.0	06/21/2023	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/21/2023	ND	226	113	200	7.71	
DRO >C10-C28*	<10.0	10.0	06/21/2023	ND	223	111	200	12.3	
EXT DRO >C28-C36	<10.0	10.0	06/21/2023	ND					

Surrogate: 1-Chlorooctane 97.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 93.6 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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:	06/19/2023	Sampling Date:	06/15/2023
Reported:	06/23/2023	Sampling Type:	Soil
Project Name:	ROJO 10H - 13H, 34H - 37H	Sampling Condition:	Cool & Intact
Project Number:	03C2012038 (32.108028-103.553151)	Sample Received By:	Tamara Oldaker
Project Location:	BTA - LEA CO		

Sample ID: BH 05 D 5' (H233151-10)

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	06/21/2023	ND	2.38	119	2.00	5.79	
Toluene*	<0.050	0.050	06/21/2023	ND	2.16	108	2.00	4.22	
Ethylbenzene*	<0.050	0.050	06/21/2023	ND	2.16	108	2.00	4.70	
Total Xylenes*	<0.150	0.150	06/21/2023	ND	6.48	108	6.00	5.04	
Total BTEX	<0.300	0.300	06/21/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.2 % 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	336	16.0	06/21/2023	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/21/2023	ND	226	113	200	7.71	
DRO >C10-C28*	<10.0	10.0	06/21/2023	ND	223	111	200	12.3	
EXT DRO >C28-C36	<10.0	10.0	06/21/2023	ND					

Surrogate: 1-Chlorooctane 58.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 52.7 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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:	06/19/2023	Sampling Date:	06/15/2023
Reported:	06/23/2023	Sampling Type:	Soil
Project Name:	ROJO 10H - 13H, 34H - 37H	Sampling Condition:	Cool & Intact
Project Number:	03C2012038 (32.108028-103.553151)	Sample Received By:	Tamara Oldaker
Project Location:	BTA - LEA CO		

Sample ID: BH 06 1' (H233151-11)

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	06/21/2023	ND	2.38	119	2.00	5.79	
Toluene*	<0.050	0.050	06/21/2023	ND	2.16	108	2.00	4.22	
Ethylbenzene*	<0.050	0.050	06/21/2023	ND	2.16	108	2.00	4.70	
Total Xylenes*	<0.150	0.150	06/21/2023	ND	6.48	108	6.00	5.04	
Total BTEX	<0.300	0.300	06/21/2023	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	592	16.0	06/21/2023	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/21/2023	ND	226	113	200	7.71	
DRO >C10-C28*	<10.0	10.0	06/21/2023	ND	223	111	200	12.3	
EXT DRO >C28-C36	<10.0	10.0	06/21/2023	ND					

Surrogate: 1-Chlorooctane 115 % 48.2-134

Surrogate: 1-Chlorooctadecane 110 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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:	06/19/2023	Sampling Date:	06/16/2023
Reported:	06/23/2023	Sampling Type:	Soil
Project Name:	ROJO 10H - 13H, 34H - 37H	Sampling Condition:	Cool & Intact
Project Number:	03C2012038 (32.108028-103.553151)	Sample Received By:	Tamara Oldaker
Project Location:	BTA - LEA CO		

Sample ID: BH 06 D 5' (H233151-12)

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	06/21/2023	ND	2.38	119	2.00	5.79	
Toluene*	<0.050	0.050	06/21/2023	ND	2.16	108	2.00	4.22	
Ethylbenzene*	<0.050	0.050	06/21/2023	ND	2.16	108	2.00	4.70	
Total Xylenes*	<0.150	0.150	06/21/2023	ND	6.48	108	6.00	5.04	
Total BTEX	<0.300	0.300	06/21/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.7 % 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	48.0	16.0	06/21/2023	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/22/2023	ND	226	113	200	7.71	
DRO >C10-C28*	<10.0	10.0	06/22/2023	ND	223	111	200	12.3	
EXT DRO >C28-C36	<10.0	10.0	06/22/2023	ND					

Surrogate: 1-Chlorooctane 78.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 85.0 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

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

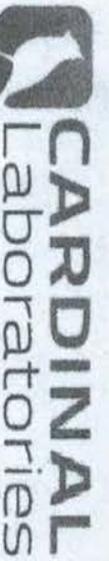
Cardinal Laboratories

*=Accredited Analyte

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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: Heddie Green
 Address: 3122 National Park Hwy City: Carlsbad State: NM Zip: 88220
 Phone #: 532-557-8895 Fax #:
 Project #: 03C2012038 Project Owner: BTA 0:1
 Project Name: Rq'd 10H-13H, 34H-37H City: Midland
 Project Location: S2.108028,-103.553151 State: TX Zip: 79701
 Sampler Name: Ronni Hayes Phone #: Fax #:

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	BTX	TPH	Cl-
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :					
<u>H233151</u>	<u>BH01</u>	<u>1</u>	<u>G</u>	<u>1</u>											
	<u>BH01C</u>	<u>4</u>													
	<u>BH02</u>	<u>1</u>													
	<u>BH02D</u>	<u>5</u>													
	<u>BH03</u>	<u>1</u>													
	<u>BH03E</u>	<u>4</u>													
	<u>BH04</u>	<u>1</u>													
	<u>BH04E</u>	<u>6</u>													
	<u>BH05</u>	<u>1</u>													
	<u>BH05D</u>	<u>5</u>													

PLEASE NOTE: Unlabeled and untagged containers, including but not limited to, shall be limited to the amount paid for the client for the analysis. 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 analysis. In no event shall Cardinal be liable for incidental damages, including without limitation, business interruptions, loss of use, or loss of profit 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: JMM
 Date: 6-19-23
 Time: 1430
 Received By: [Signature]
 Date:
 Time:

Delivered By: (Circle One) Observed Temp. °C 22
 Sampler - UPS - Bus - Other: Corrected Temp. °C 1.6
 Sample Condition: Intact
 Checked By: [Signature]
 Turnaround Time: Standard
 Bacteria (only) Sample Condition: Intact
 Corrected Temp. °C:

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



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: **Ensolium, LLC**
 Project Manager: **Heddie Green**
 Address: **3122 National Parks Hwy**
 City: **Carlsbad** State: **NM** Zip: **88226**
 Phone #: **432-557-8845** Fax #:
 Project #: **03C2612038** Project Owner:
 Project Name: **Rejo: 10H-13H, 34H-37H**
 Project Location: **32.108026, -103.553151**
 Sampler Name: **Roni, Hayes**

P.O. #:
 Company: **BTA Oil**
 Attn: **Kelvin Beard**
 Address: **1045 Peas St**
 City: **Mjland**
 State: **Tx** Zip: **79701**
 Phone #:
 Fax #:

Lab I.D.	Sample I.D.	Depth (feet)	FOR LAB USE ONLY		DATE	TIME	ANALYSIS REQUEST		
			(G)GRAB OR (C)OMP.	# CONTAINERS			BTEX	TPH	CI-
H233151	BH06	1	G	1	6/14/23	1450	X	X	X
	BH06D	5	↓	↓	6/14/23	1220	X	X	X

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 analysis. 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 interruption, 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. Limitations of liability herein shall apply to the extent permitted by law.

Relinquished By: **JM** Date: **6-19-23** Received By: **Maura Chastney**
 Relinquished By: **JM** Date: **6-19-23** Received By: **Maura Chastney**

Delivered By: (Circle One) **Observed Temp. °C** **22** **Sample Condition** **Checked** **Yes** **Checked BY:** **YO**
 Sampler - UPS - Bus - Other: **Corrected Temp. °C** **7.6** **Cool Intact** **Yes** **Turnaround Time:** **Standard** **Yes** **Bacteria (only)** **Cool Intact** **Yes** **Sample Condition** **Observed Temp. °C** **Corrected Temp. °C**

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



APPENDIX E
NMOCD Notifications

From: [Velez, Nelson, EMNRD](#)
To: [Hadlie Green](#)
Cc: [Tacoma Morrissey](#); KBeaird@btaoil.com
Subject: Extension Request - Rojo 10H-13H, 34H-37H (Incident Number nAPP2313055442)
Date: Monday, July 24, 2023 6:19:38 AM
Attachments: [Outlook-hutosucq.png](#)

[**EXTERNAL EMAIL**]

Good morning Hadlie,

Your time extension request is approved. Remediation Due date is updated to October 24, 2023.

Regards,

Nelson Velez • Environmental Specialist - Adv
Environmental Bureau | EMNRD - Oil Conservation Division
1000 Rio Brazos Road | Aztec, NM 87410
(505) 469-6146 | nelson.velez@emnrd.nm.gov
<http://www.emnrd.state.nm.us/OCD/>



From: [Enviro, OCD, EMNRD](#)
To: [Hadlie Green](#)
Cc: [Bratcher, Michael, EMNRD](#); [Velez, Nelson, EMNRD](#)
Subject: RE: [EXTERNAL] BTA - Sampling Notification - Week of 06/12/2023
Date: Friday, June 9, 2023 7:21:41 AM
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 ensure 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](http://www.emnrd.nm.gov)



From: Hadlie Green <hgreen@ensolum.com>
Sent: Thursday, June 8, 2023 9:14 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Tacoma Morrissey <tmorrissey@ensolum.com>; Kelton Beard <KBeard@btaoil.com>; Nathan Sirgo <nsirgo@btaoil.com>; Peter Van Patten <pvanpatten@ensolum.com>
Subject: [EXTERNAL] BTA - Sampling Notification - Week of 06/12/2023

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 June 12, 2023.

- Chiso 14 State Jet Pump Excavation / nAPP2205837214
 - Sampling Date: 6/12-13/2023 @ 9:00 AM MST
- Chiso 14 State 8711 #003H Wellhead / nAB1917652490
 - Sampling Date: 6/14-15/2023 @ 9:00 AM MST
- Chiso 14 State 8711 Flowline / nRM2034960665
 - Sampling Date: 6/14-15/2023 @ 9:00 AM MST
- Mesa 30 31 Tank Battery / nAPP2106930621
 - Sampling Date: 6/14/2023 @ 9:00 AM MST
- Rojo 10-13/34-37 / nAPP2313055442
 - Sampling Date: 6/15-16/2023 @ 9:00 AM MST

Thank you,



Hadlie Green

Project Geologist

432-557-8895

hgreen@ensolum.com

Ensolum, LLC



From: [Velez, Nelson, EMNRD](#)
To: [Tacoma Morrissey](#)
Cc: [Kelton Beard](#); [Hadlie Green](#); [Aimee Cole](#)
Subject: Re: [EXTERNAL] BTA-Variance Request-Rojo 10H-13H, 34H-37H- Incident Number nAPP2313055442
Date: Tuesday, October 31, 2023 1:15:41 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[Outlook-m1ds4o3p.png](#)

[**EXTERNAL EMAIL**]

Good afternoon Tacoma,

Your variance request of a five (5) point composite not to exceed 400 square feet for the floor/excavation bottom and 200 square feet for the sidewall samples are approved.

Please keep a copy of this communication for inclusion within the appropriate report submittal.

The OCD requires a copy of all correspondence relative to remedial activities be included in all proposals and/or final closure reports. Correspondence required to be included in reports may include, but not limited to, notifications for liner inspections, sample events, spill/release/fire, and request for time extensions or variances.

Regards,

Nelson Velez • Environmental Specialist - Adv
Environmental Bureau | EMNRD - Oil Conservation Division
1000 Rio Brazos Road | Aztec, NM 87410
(505) 469-6146 | nelson.velez@emnrd.nm.gov
<http://www.emnrd.state.nm.us/OCD/>



From: Tacoma Morrissey <tmorrissey@ensolum.com>
Sent: Tuesday, October 31, 2023 11:38 AM
To: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Cc: Kelton Beard <KBeaird@btaoil.com>; Hadlie Green <hgreen@ensolum.com>; Aimee Cole <acole@ensolum.com>
Subject: [EXTERNAL] BTA-Variance Request-Rojo 10H-13H, 34H-37H- Incident Number

nAPP2313055442

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

Good Morning Mr. Velez,

I appreciate you taking the time to discuss this Site on the phone with me yesterday. Please see the variance request below.

Due to the estimated size of the excavation, lack of sensitive receptors at the Site, and depth to groundwater estimated to be between 51 and 100 feet bgs, BTA requests a variance for the frequency of excavation confirmation samples. BTA proposes to collect five-point composite samples at a sampling frequency of every 400 square feet from the floor of the excavation. The proposed sampling frequency would reduce the total number of floor samples from 117 samples to approximately 58 samples. Sidewall samples will be collected at a frequency of at least every 200 square feet. The 5-point composite samples will be collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. The excavation samples will be submitted for laboratory analysis of BTEX, TPH, and chloride.

Thank you,



Tacoma Morrissey

Senior Geologist

337-257-8307

Ensolum, LLC

in f 



APPENDIX F
Form 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	nAPP2313055442
District RP	
Facility ID	fAPP2130133926
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

Latitude 32.108028 Longitude -103.553151
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Rojo 10H-13H, 34H-37H	Site Type: Tank Battery
Date Release Discovered: 4/27/2023	API# (if applicable) 30-025-44458

Unit Letter	Section	Township	Range	County
A	27	25S	33E	Lea

Surface Owner: State Federal Tribal Private (Name: CAML, LTD)

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) 650	Volume Recovered (bbls) 130
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input 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)

Release was caused by failure of a fused seam on a 6 inch poly line going to the owl. The release occurred on and off pad. The source of the release has been stopped and the impacted area has been secured. Initial response and removal of saturated soil from the release area has been completed.

State of New Mexico
Oil Conservation Division

Page 2

Incident ID	nAPP231305442
District RP	
Facility ID	fAPP2130133926
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? Release greater than 25 bbls
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes, by Nathan Sirgo contacted NMOCD via email on 4/28/2023.	

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> 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: <u>Nathan J. Sirgo</u>	Title: <u>Operations Manager</u>
Signature: <u></u>	Date: <u>5/16/2023</u>
email: <u>nsirgo@btaoil.com</u>	Telephone: <u>432-682-3753</u>
<u>OCD Only</u> Received by: _____ Date: _____	

Location Rojo 7811 27 Fed com 10,11,12,13/34,35,36,37
 API # 30-025-44458
 Spill Date 4/27/2023
 Spill Description 6in poly going to owl blew apart the fused seam

ONX APP SQ FT 18440

Spill Dimensions - Inside Containment

ENTER - Length of Spill
 ENTER - Width of Spill
 ENTER - Saturation Depth of Spill
 Calculated Volume - In Containment Only

SAND	60% CALICHE	40%
0 BBL	0 BBL	

SAND CAL	CALICHE CaI
2950.4	2581.6

Spill Dimensions - Outside Containment

ENTER - Length of Spill
 ENTER - Width of Spill
 ENTER - Saturation Depth of Spill
 ENTER - Porosity Factor (see chart below)

2950 feet	2582 feet
10 feet	10 feet
1 inches	1 inches
0.2 decimal	0.003 decimal

Oil Cut - Well Test / Vessel Throughput or Contents

Oil
 Water (if leak on water sytem enter 1)
 Calculated Oil Cut

0	0
1	1
0	0

Volume Recovered in Truck /100% Recoverable in Containment

ENTER - Recovered Oil Outside Containment
 ENTER - Recovered Water Outside Containment

0 BBL	0 BBL
130 BBL	130 BBL

Calculated Values

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

calculated	calculated
0.000 BBL	0.000 BBL
87.563 BBL	1.150 BBL
87.563 BBL	1.150 BBL

Calculated Values

Total Release of Oil
 Total Release of Water
 Total Release

calculated	calculated
0 BBL	0 BBL
395 BBL	254 BBL
395 BBL	254 BBL

TOTAL RELEASE 650 BBL

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

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

x Oil Cut
 (or Water
 Cut)

Incident ID	nAPP2313055442
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>51-100</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 type="checkbox"/> Yes <input checked="" 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 checked="" type="checkbox"/> Yes <input 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 1/2-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	nAPP2313055442
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 Beard Title: Environmental Manager

Signature:  Date: 10/31/2023

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

OCD Only

Received by: Shelly Wells Date: 10/31/2023

Incident ID	nAPP2313055442
District RP	
Facility ID	
Application ID	

Remediation Plan

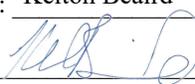
Remediation Plan Checklist: *Each of the following items must be included in the plan.*

- 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 Beard Title: Environmental Manager
 Signature:  Date: 10/31/2023
 email: KBeard@btaoil.com Telephone: 432-312-2203

OCD Only

Received by: Shelly Wells Date: 10/31/2023

- Approved Approved with Attached Conditions of Approval Denied Deferral Approved

Signature: _____ Date: _____

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 281536

CONDITIONS

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID: 260297
	Action Number: 281536
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
scwells	Remediation Plan Approved. Variance request to collect five-point composite samples at a sampling frequency of every 400 square feet from the floor of the excavation is approved. Submit remediation closure report to OCD by May 16, 2024.	2/16/2024