ENSOLUM

November 22, 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: Revised Remediation Work Plan
RGA #1 Well Site
Incident Number nAPP2228347919
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum) on behalf of BTA Oil Producers, LLC (BTA), has prepared the following *Revised Remediation Work Plan* (*Revised Work Plan*) for the RGA #1 Well Site (Site) as a follow-up to the *Remediation Work Plan and Deferral Request* submitted to the New Mexico Oil Conservation Division (NMOCD) on April 5, 2023. The NMOCD denied the *Remediation Work Plan and Deferral Request* on August 24, 2023, for the following reasons:

- *Due to the shallow groundwater and presence of light end hydrocarbons, the liner is denied. This release will need to be remediated to the strictest closure criteria from Table 1 of the OCD Spill Rule.*
- *Please safely remove contaminants within the deferral area with alternative methods around oil/gas equipment. Please collect confirmation samples, representing no more than 200 ft2. Sidewall/Edge samples should be delineated/excavated to 600 mg/kg for chlorides and 100 mg/kg for TPH to define the edge of the release. All sidewall samples should be taken from the sidewall of the excavation. All samples must be analyzed for all constituents listed in Table I of 19.15.29.12 NMAC. All off pad areas must meet reclamation standards set forth in the OCD Spill Rule*.

The following *Revised Work Plan* documents the assessment and excavation activities completed to date and proposes delineation of impacted soil associated with a historical pit encountered beneath the release area at the Site.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit K, Section 14, Township 23 South, Range 28 East, in Eddy County, New Mexico (32.30386°, -104.05949°; Figure 1) and is associated with oil and gas exploration and production operations on private land owned by Uffie Land Company.

On October 7, 2022, a stuffing box failure on the well head resulted in the release approximately 7 barrels (bbls) of crude oil and 5 bbls of produced water onto the surface of the well pad and adjacent pasture. A vacuum truck was immediately dispatched to the Site to recover the free-standing fluids;

approximately 5 bbls of crude oil and 3 bbls produced water were recovered. BTA reported the release to the NMOCD on a Release Notification Form C-141 (Form C-141) on October 10, 2022. The release was assigned Incident Number nAPP2228347919.

SITE CHARATERIZATION AND CLOSURE CRITERIA

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

Depth to groundwater at the Site is less than 50 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is United States Geological Survey (USGS) well 321818104032101, located approximately 0.19 miles northeast of the Site. The groundwater well has a reported depth to groundwater of 35 feet bgs. Ground surface elevation at the groundwater well location is 2,981 feet above mean sea level (amsl), which is approximately 26 feet lower in elevation than the Site. All wells used for depth to groundwater determination are presented on Figure 1. The referenced well records are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is the Pecos River, located approximately 2,095 feet northeast 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 not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (medium potential karst designation area). The Site is less than 1,000 feet to a freshwater well. Site receptors are identified on Figure 1.

Based on the results of the Site Characterization, the following NMOCD Table 1 Closure Criteria (Closure Criteria) apply:

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

SITE ASSESSMENT ACTIVITIES

On October 21, 2022, Ensolum personnel completed a Site visit to evaluate the release extent based on information provided on the Form C-141 and visual observations. The released fluids flowed from the well head to the southeast into surrounding pasture. Assessment soil samples SS01 through SS09 were collected within and around the release extent from a depth of approximately 0.5 feet bgs, to assess the extent of the release. The soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The release extent and assessment 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 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 at or below 4 degrees Celsius (°C) under strict chain-of-custody procedures to Cardinal Laboratories (Cardinal) in Carlsbad, New Mexico, for analysis of the following contaminants of concern (COC): BTEX

following United States Environmental Protection Agency (EPA) Method 8021B; TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following Standard Method SM 4500.

Laboratory analytical results for soil samples SS01 through SS05, collected within the release extent, indicated TPH and/or chloride concentrations exceeded the Site Closure Criteria. Laboratory analytical results for soil samples SS06 through SS09, collected around the release extent, indicated all COC concentrations were compliant with the Site Closure Criteria and successfully defined the lateral extent of the surface release. Laboratory analytical results are summarized in Table 1.

Based on visible staining in the release area and laboratory analytical results for assessment soil samples SS01 through SS05, delineation and excavation activities were warranted.

EXCAVATION ACTIVITIES

Between February 28, 2023, and October 17, 2023, Ensolum personnel were at the Site to oversee excavation activities based on visible staining in the release area and laboratory analytical results for the assessment soil samples SS01 through SS05. Excavation activities were performed using a backhoe, hydrovac, and transport vehicles. To direct excavation activities, soil was field screened for VOCs and chloride. Excavation was completed in the northern portion of the release extent near the well head; however, visible indications of a historical pit were encountered in the central portion of the release extent at an approximate depth of 2 feet to 3 feet bgs. Upon encountering the historical pit, vertical excavation was halted in this area.

Following excavation of impacted soil, 5-point composite soil samples were collected every 200 square feet from the floor and sidewalls of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples FS01 through FS11, FS01A through FS06A, and FS01B, FS04B, and FS05B were collected from the floor of the excavation at depths ranging from 1-foot to 3.5 feet bgs. Composite soil samples SW01 through SW05 were collected from the sidewalls of the excavation at depths ranging from the ground surface to 3 feet bgs. The excavation extent and excavation soil sample locations were mapped utilizing a handheld GPS and are presented on Figure 3. Photographic documentation was completed during the excavation activities. A photographic log is included in Appendix B. The soil samples were collected, handled, and analyzed as described above.

Laboratory analytical results for excavation floor samples FS01B, FS02A, FS03A, FS04B, FS05B and excavation sidewall samples SW02 through SW05, collected from the final northern excavation extent, indicated all COC concentrations were compliant with the Site Closure Criteria. Laboratory analytical results for excavation floor samples FS01/FS01A, FS02, FS03, FS04/FS04A, FS05/FS05A and excavation sidewall sample SW01 initially exceeded the Site Closure Criteria for TPH or chloride; additional soil was removed from these areas and subsequent excavation samples FS01B, FS02A, FS03A, FS04B, FS05B, and SW05 were compliant.

Laboratory analytical results for excavation floor samples FS06A, and FS07 through FS11, indicated that chloride concentrations exceeded the Site Closure Criteria. Due to a historical pit in the area beneath these floor samples, no further excavation was completed. Delineation activities were scheduled to determine the vertical extent of impacted soil associated with the historical pit. Laboratory analytical results for the excavation soil samples are summarized on Table 1.

The excavation measured approximately 2,200 square feet in areal extent. A total of approximately 300 cubic yards of impacted soil was excavated, transported, and properly disposed at R360 Environmental Solutions in Hobbs, New Mexico.

DELINEATION ACTIVITIES

On October 24, 2023, Ensolum personnel returned to the Site to complete vertical delineation of the historical pit encountered in the floor of the open excavation. Potholes PH01 through PH03 were advanced to a depth of 13 feet bgs within the open excavation near floor samples FS06A, and FS07 through FS10. Refusal with the excavator was encountered at a depth of 13 feet bgs. Pothole PH04 was advanced to a depth of 2 feet bgs within the open excavation near floor sample FS11. Soil from the potholes was field screened at 1-foot intervals for VOCs and chloride. Delineation samples were submitted for laboratory analysis from each pothole from depths ranging from 2 feet to 13 feet bgs. Field screening results and observations from the potholes were documented on lithologic/soil sampling logs, which are included in Appendix C. The pothole locations are presented on Figure 4.

Laboratory analytical results for pothole delineation samples PH01D and PH03D, collected at a depth of 13 feet bgs, and pothole delineation sample PH04, collected at a depth of 2 feet bgs, indicated all COC concentrations were compliant with the Site Closure Criteria and provided vertical delineation of the impacted soil. Laboratory analytical results for pothole delineation sample PH02D, collected at a depth of 13 feet bgs, indicated that chloride concentrations continued to exceed the Site Closure Criteria within the historical pit. The laboratory analytical results are summarized on the attached Table 1 and the complete laboratory analytical reports are included in Appendix D. Based on the excavation and delineation soil sample analytical results and the presence of a historical pit beneath the release extent, additional remediation activities are warranted.

PROPOSED REMEDIATION WORK PLAN – Option 2 (delineation only)

BTA excavated approximately 300 cubic yards of impacted soil associated with the October 7, 2022, crude oil and produced water release. However, impacted soil associated with a historical buried pit was encountered in the floor of the central portion of the excavation. Analytical results from the delineation soil sampling indicated soil containing elevated chloride concentrations extends to a depth of 13 feet bgs in the areas around potholes PH01 and PH03 and to a depth greater than 13 feet bgs in the area around pothole PH02. The impacted soil below 3 feet bgs is associated with a historical pit containing pieces of liner and concrete and has a discernable visible difference between the recent release and historical impacts.

BTA proposes to complete the following remediation activities:

- Impacted soil has been successfully removed in the northern portion of the release area represented by sidewall samples SW02 through SW05 and floor samples FS01B, FS02A, FS03A, FS04B, and FS05B. BTA proposes to backfill this area. All light end hydrocarbons have been excavated, as requested in the NMOCD denial.
- Impacted soil in the vicinity of floor soil sample FS11/pothole PH02 will be excavated to a depth of 2 feet bgs. Confirmation sampling of the excavation will be completed as previously described.
- Vertical delineation of impacted soil to below the Site Closure Criteria will be completed via drilling rig at the location of pothole PH04. Lateral delineation of impacted soil to below the Site Closure Criteria will be completed via drilling rig to define the lateral extent of the historical pit.
    - Soil from the boreholes will be field screened at 1-foot intervals for VOCs and chloride using Hach®. Field screening results and observations will be logged on lithologic/soil

sampling logs. Two delineation samples from each borehole will be submitted for laboratory analysis; the sample with the highest field screening result and the sample from the final borehole depth. The delineation samples will be analyzed for BTEX, TPH, and chloride.

- Upon completion of delineation activities, the boreholes will be properly abandoned with hydrated bentonite chips.

- The proposed excavation and backfill areas, and lateral delineation points are depicted on Figure 5.

BTA will complete the delineation activities within 90 days of the date of approval of this *Revised Work Plan* by the NMOCD. Based on the delineation data, a follow-up *Remediation Work Plan* will be submitted to the NMOCD proposing additional remedial activities. 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
Uffie Land Company

Appendices:

Figure 1	Site Receptor Map
Figure 2	Assessment Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Figure 4	Delineation Soil Sample Locations
Figure 5	Proposed Excavation and Delineation Locations
Table 1	Soil Sample Analytical Results
Appendix A	Referenced Well Records
Appendix B	Photographic Log
Appendix C	Lithologic Soil Sampling Logs
Appendix D	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix E	NMOCD Notifications
Appendix F	Form C-141

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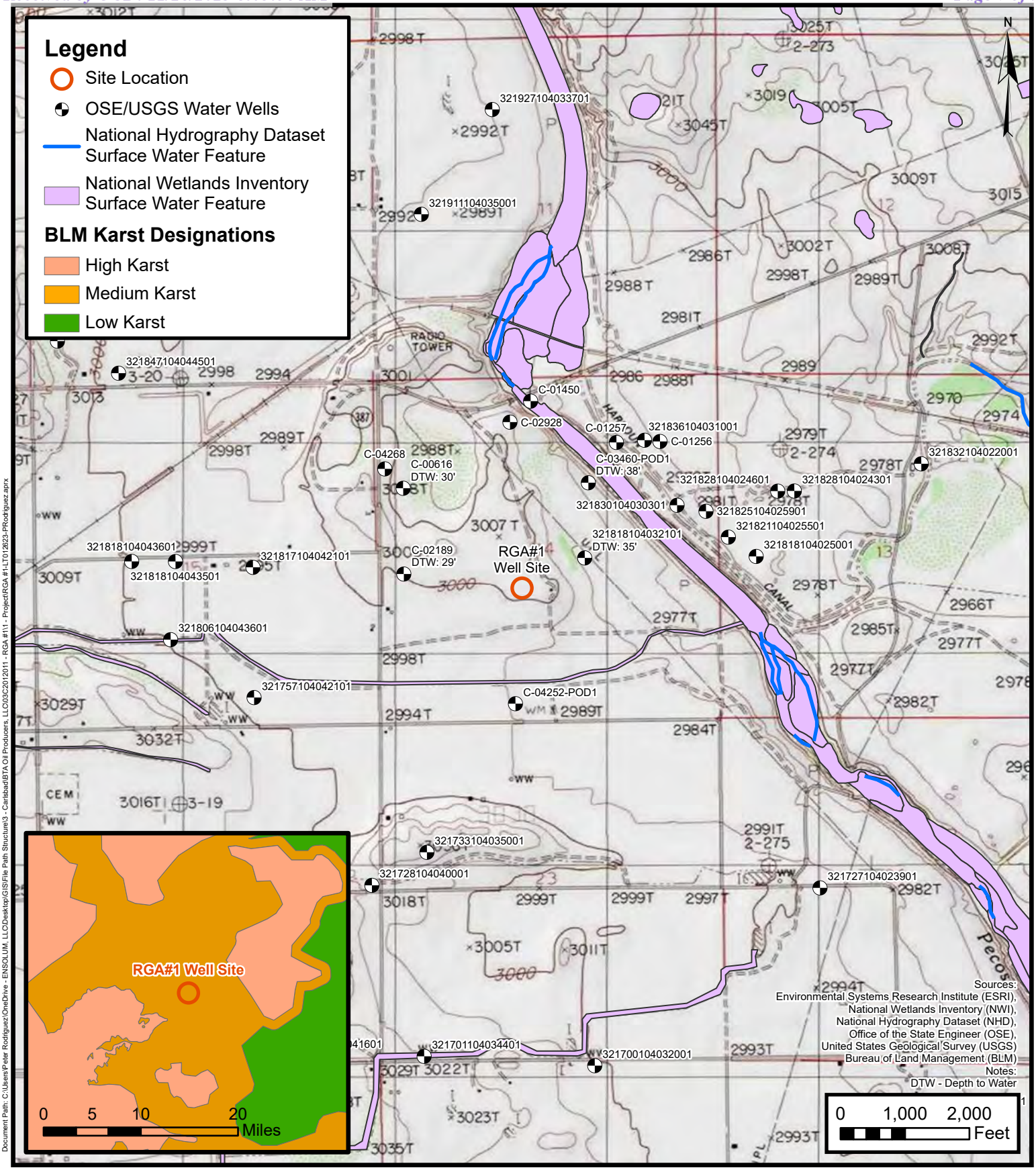
FIGURES



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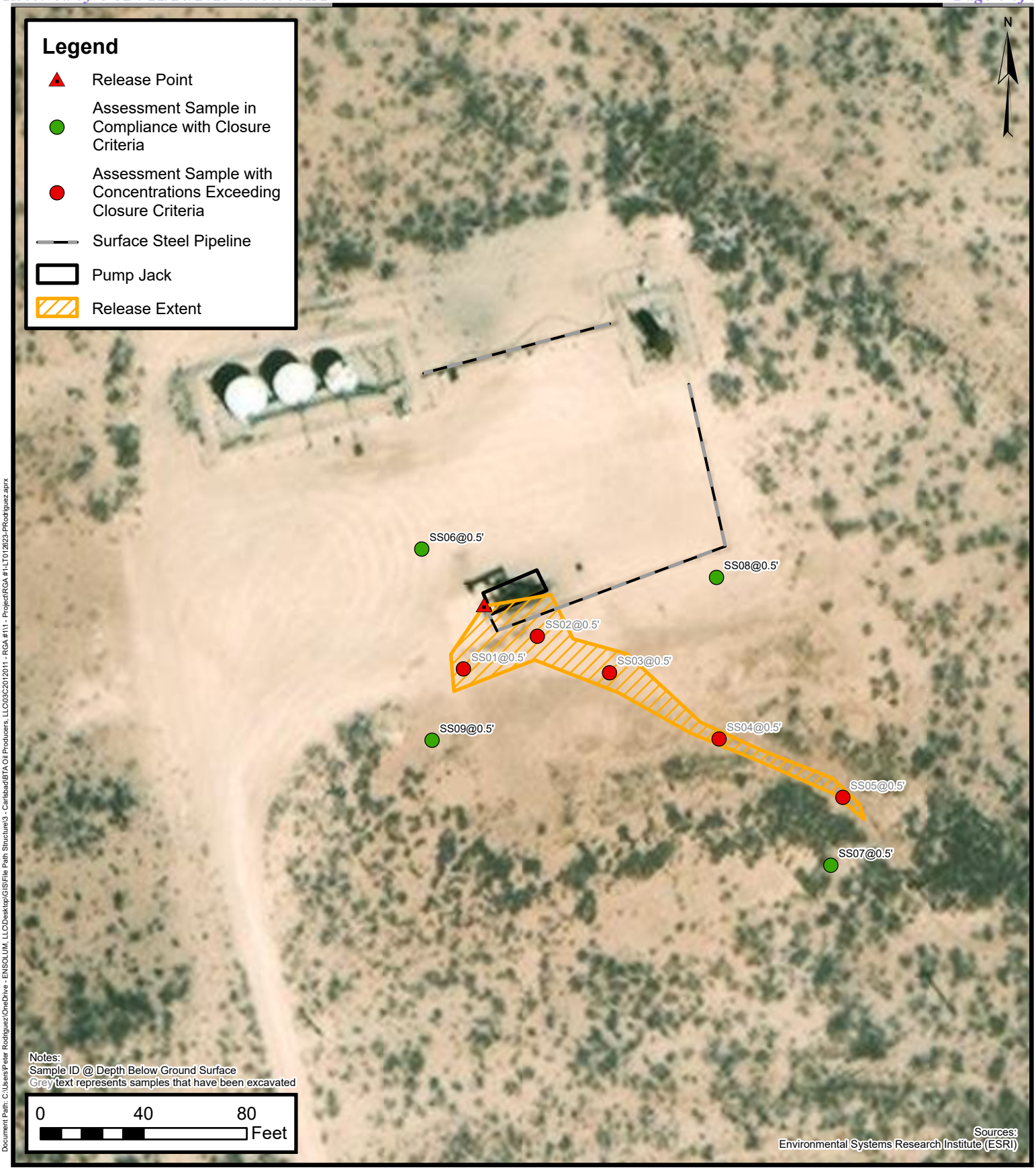
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

BTA Oil Producers, LLC
RGA #1 Well Site
Incident Number: NAPP2228347919
Unit K, Sec 14, T23S, R28E
Eddy County, New Mexico

FIGURE

1



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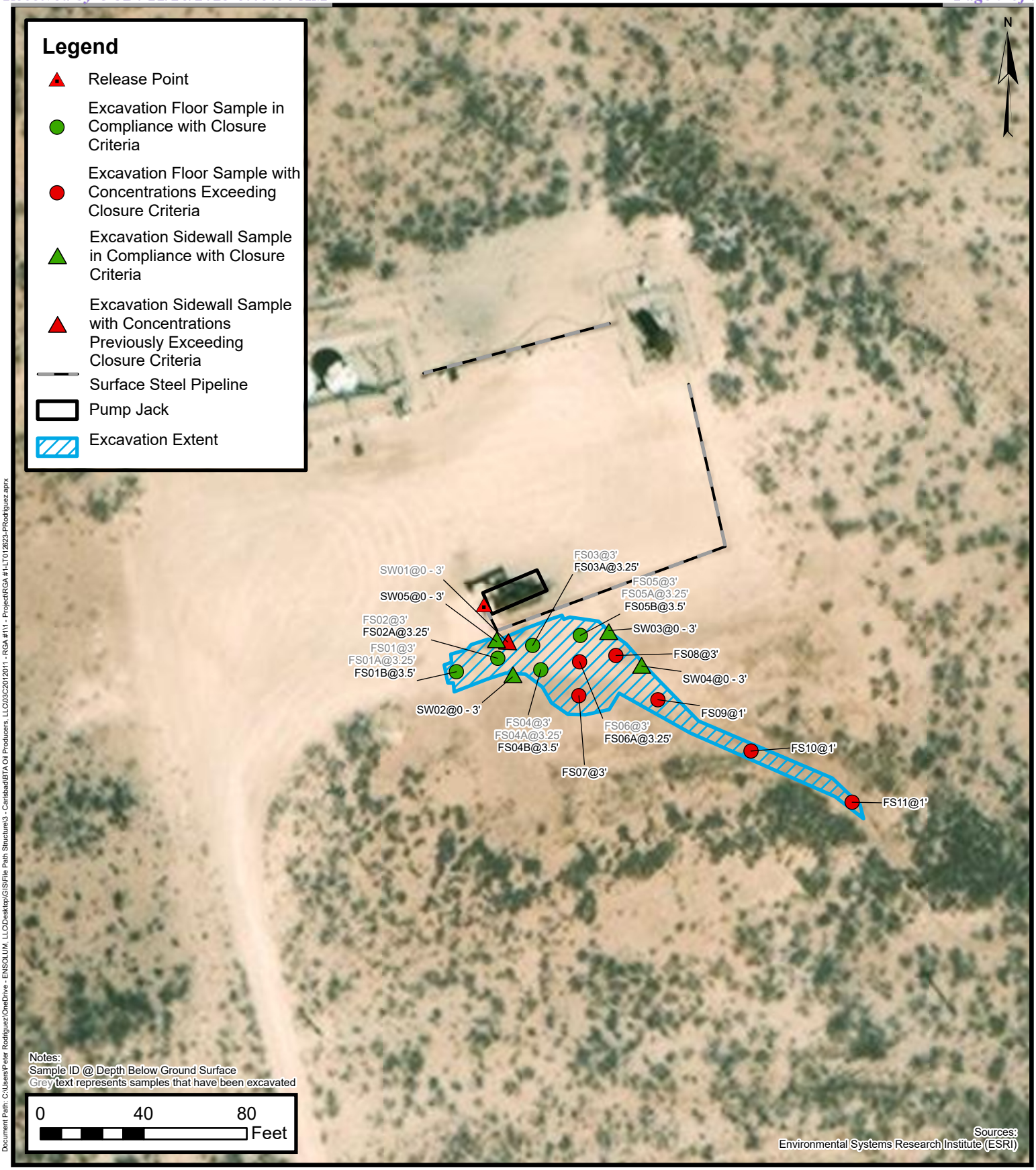
Assessment Soil Sample Locations

BTA Oil Producers, LLC
RGA #1 Well Site
Incident Number: NAPP2228347919
Unit K, Sec 14, T23S, R28E
Eddy County, New Mexico

FIGURE
2



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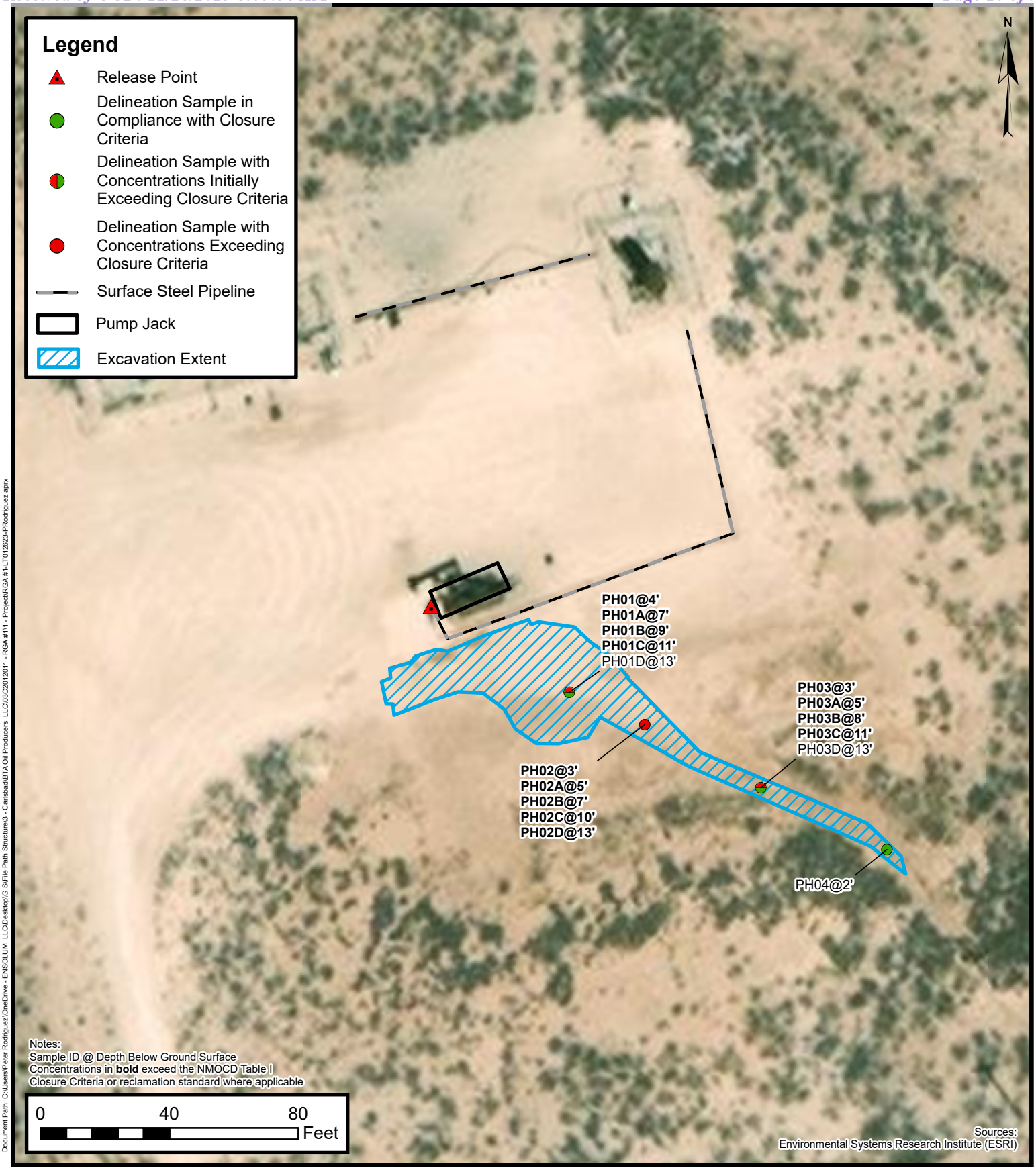
Excavation Soil Sample Locations

BTA Oil Producers, LLC
RGA #1 Well Site
Incident Number: NAPP2228347919
Unit K, Sec 14, T23S, R28E
Eddy County, New Mexico

FIGURE
3



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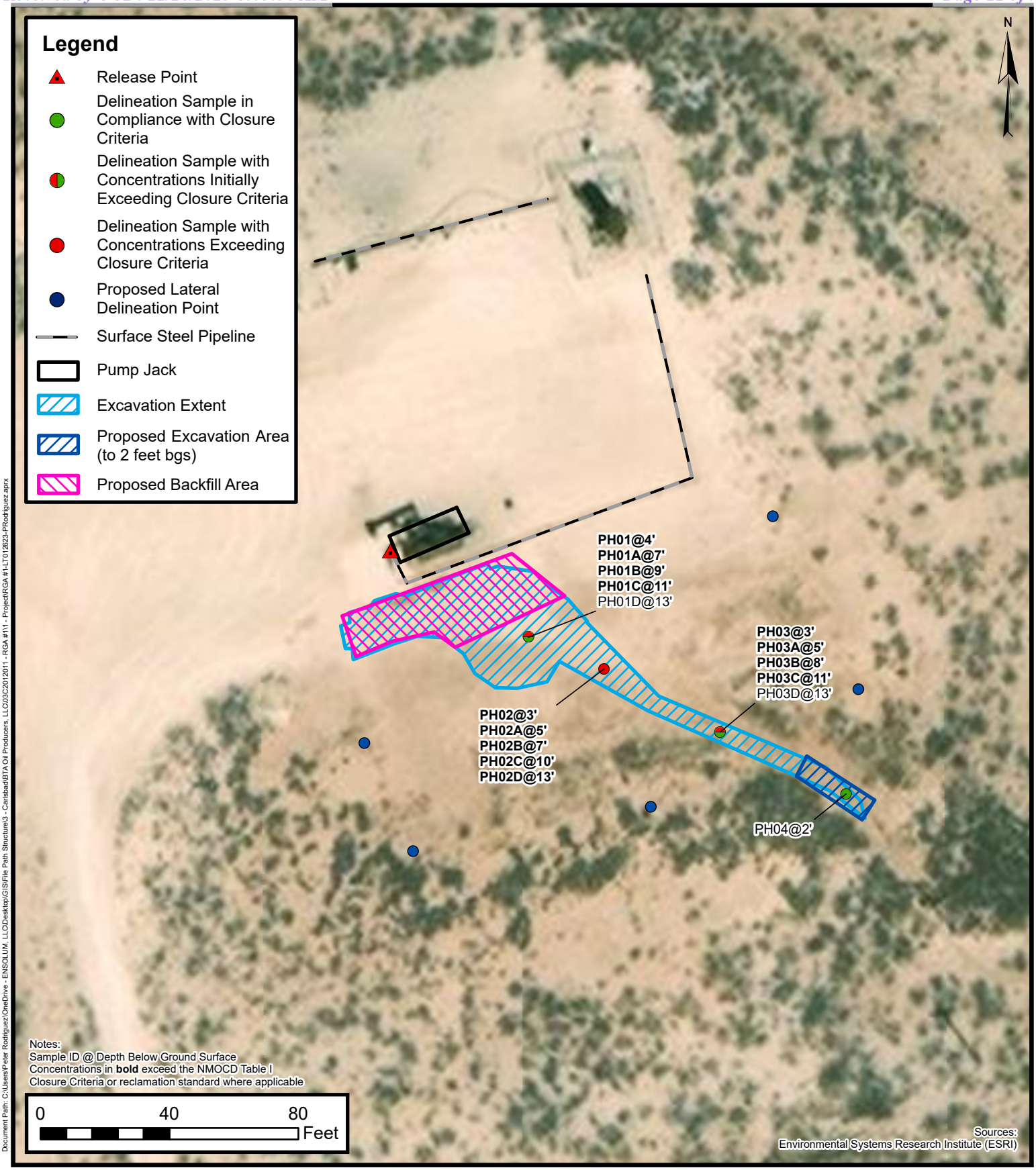
Delineation Soil Sample Locations

BTA Oil Producers, LLC
RGA #1 Well Site
Incident Number: NAPP2228347919
Unit K, Sec 14, T23S, R28E
Eddy County, New Mexico

FIGURE
4



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Proposed Delineation and Excavation

BTA Oil Producers, LLC
RGA #1 Well Site
Incident Number: NAPP2228347919
Unit K, Sec 14, T23S, R28E
Eddy County, New Mexico

FIGURE
5

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TABLES

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TABLE I
SOIL SAMPLE ANALYTICAL RESULTS
RGA #1 Well Site
BTA Oil Producers, LLC
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
Assessment Soil Samples										
SS01	10/21/2022	0.5	<0.050	13.3	280	2,290	378	2,290	**2,290**	128
SS02	10/21/2022	0.5	<0.050	22.4	452	7,110	1,490	7,110	**7,110**	**1,740**
SS03	10/21/2022	0.5	<0.050	<0.300	13.7	1,200	253	1,200	**1,200**	320
SS04	10/21/2022	0.5	<0.100	68.5	985	12,400	2,640	12,400	**12,400**	240
SS05	10/21/2022	0.5	<0.050	2.79	231	9,780	2,230	9,780	**9,780**	48.0
SS06	10/21/2022	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS07	10/21/2022	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS08	10/21/2022	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SS09	10/21/2022	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
Excavation Floor Soil Samples										
FS01	02/28/2023	3	<0.050	<0.300	<10.0	735	287	735	**1,022**	352
FS01A	03/30/2023	3.25	<0.050	<0.300	<10.0	674	142	674	**816**	96.0
FS01B	10/17/2023	3.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
FS02	02/28/2023	3	<0.050	<0.300	<10.0	564	208	564	**772**	**688**
FS02A	03/302023	3.25	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	288
FS03	02/28/2023	3	<0.050	<0.300	<10.0	92.0	28.5	92.0	**121**	**1,420**
FS03A	03/30/2023	3.25	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
FS04	02/28/2023	3	<0.050	<0.300	<10.0	126	51.1	126	**177**	**1,180**
FS04A	03/30/2023	3.25	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	**1,420**
FS04B	10/17/2023	3.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS05	02/28/2023	3	<0.050	<0.300	<10.0	76.6	25.8	76.6	**102**	**3,920**
FS05A	03/30/2023	3.25	<0.050	<0.300	<10.0	205	26.0	205	**231**	**880**
FS05B	10/17/2023	3.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
FS06	02/28/2023	3	<0.050	<0.300	<10.0	113	48.3	113	**161**	**1,100**
FS06A	03/30/2023	3.25	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	**3,040**
FS07	02/28/2023	3	<0.050	<0.300	<10.0	20.7	<10.0	20.7	20.7	**5,680**
FS08	02/28/2023	3	<0.050	<0.300	<10.0	41.7	21.9	41.7	63.6	**11,400**
FS09	02/28/2023	1	<0.050	<0.300	<10.0	76.2	20.8	76.2	97.0	**3,730**
FS10	02/28/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	**1,800**
FS11	02/28/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	**1,840**

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TABLE I
SOIL SAMPLE ANALYTICAL RESULTS
RGA #1 Well Site
BTA Oil Producers, LLC
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
Excavation Sidewall Soil Samples										
SW01	02/28/2023	0 - 3	<0.050	<0.300	<10.0	222	25.9	222	**248**	176
SW02	02/28/2023	0 - 3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	352
SW03	02/28/2023	0 - 3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	240
SW04	02/28/2023	0 - 3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192
SW05	10/17/2023	0 - 3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48
Delineation Soil Samples										
PH01	10/24/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	**736**
PH01A	10/24/2023	7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	**1,640**
PH01B	10/24/2023	9	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	**2,600**
PH01C	10/24/2023	11	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	**1,460**
PH01D	10/24/2023	13	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	560
PH02	10/24/2023	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	**3,840**
PH02A	10/24/2023	5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	**4,960**
PH02B	10/24/2023	7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	**11,000**
PH02C	10/24/2023	10	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	**2,600**
PH02D	10/24/2023	13	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	**4,560**
PH03	10/24/2023	3	<0.050	<0.300	<10.0	12.4	<10.0	12.4	12.4	**4,240**
PH03A	10/24/2023	5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	**1,660**
PH03B	10/24/2023	8	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	**3,400**
PH03C	10/24/2023	11	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	**2,800**
PH03D	10/24/2023	13	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	256
PH04	10/24/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	256

Notes:

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

GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
TPH: Total Petroleum Hydrocarbon
Gray text represents samples that have been excavated

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APPENDIX A

Referenced Well Records

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater | Geographic Area: United States | GO

Click to hideNews Bulletins

- Explore the *NEW* USGS National Water Dashboard interactive map to access real-time water data from over 13,500 stations nationwide.
- Full News

Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

site_no list =

- 321818104032101

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

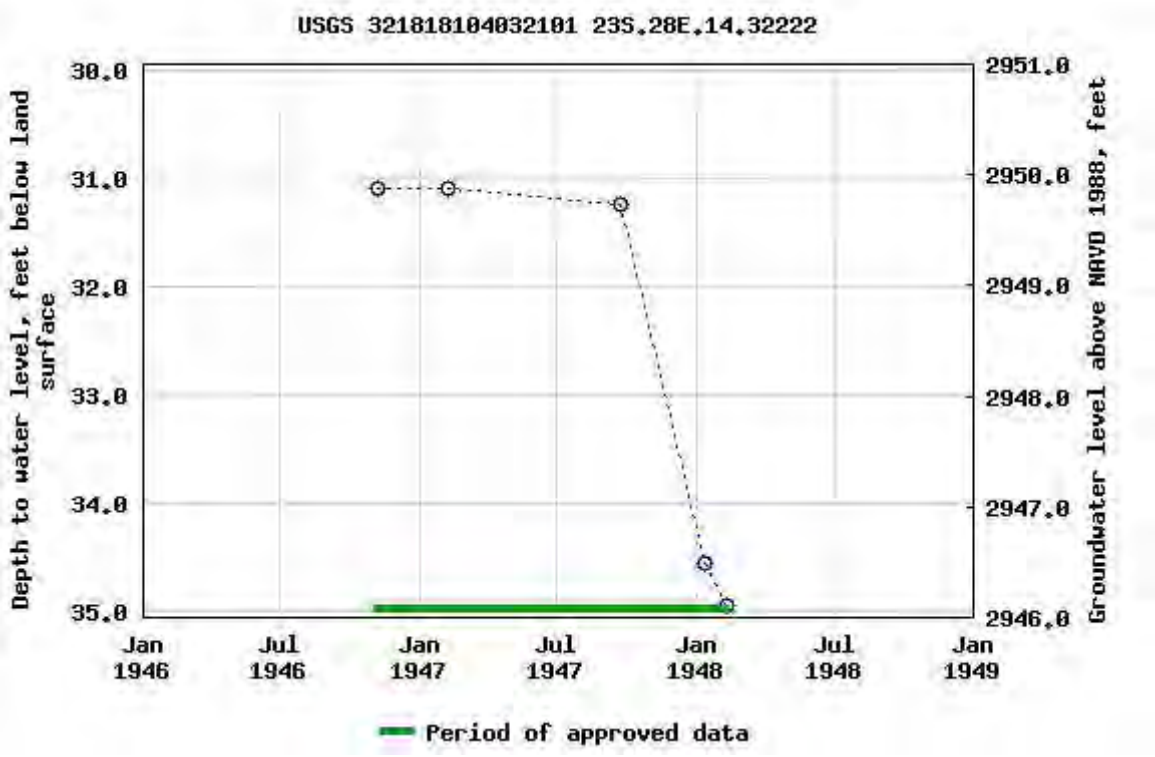
USGS 321818104032101 23S.28E.14.32222

Available data for this site | Groundwater: Field measurements | GO

Eddy County, New Mexico
Hydrologic Unit Code 13060011
Latitude 32°18'18", Longitude 104°03'21" NAD27
Land-surface elevation 2,981 feet above NAVD88
The depth of the well is 100 feet below land surface.
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

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



Breaks in the plot represent a gap of at least one year between field measurements.
Download a presentation-quality graph

Questions about sites/data?
Feedback on this web site
Automated retrievals
Help
Data Tips
Explanation of terms
Subscribe for system changes
News

Title: Groundwater for USA: Water Levels
URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2023-04-05 10:09:58 EDT
0.65 0.59 nadww01

New Mexico Office of the State Engineer
Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Twn	Rng	X	Y
	C 02189	1	1	3	14	23S	28E	587985	3574572*

Driller License:	803	**Driller Company:**	SPRUILL BROTHERS DRILLING		
Driller Name:	NORMAN SPRUILL				
Drill Start Date:	03/12/1990	**Drill Finish Date:**	03/12/1990	**Plug Date:**	03/13/1990
Log File Date:	04/20/1990	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	2 GPM
Casing Size:	8.63	**Depth Well:**	48 feet	**Depth Water:**	29 feet

Water Bearing Stratifications:	Top	Bottom	Description
	37	41	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	21	48

***UTM location was derived from PLSS - see Help**

ENSOLUM

APPENDIX B

Photographic Log

ENSOLUM

Photographic Log
BTA Oil Producers, LLC
RGA #1 Well Site
Incident Number nAPP2228347919

Photograph: 1 Date: 10/21/2022
Description: Soil staining in release footprint
View: Northwest

Photograph: 2 Date: 2/28/2023
Description: Excavation Activities
View: Northwest

Photograph: 3 Date: 2/28/2023
Description: Excavation Activities
View: East

Photograph: 4 Date: 10/24/2023
Description: Delineation activities
View: East

ENSOLUM

APPENDIX C

Lithologic Soil Sampling Logs

ENSOLUM

Sample Name: PH01	Date: 10/24/2023
Site Name: RGA #1	
Incident Number: nAPP2228347919	
Job Number: 03C2012011	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: M. O'Dell / Method: Excavator
Coordinates: 32.303931, -104.059456	Hole Diameter: N/A / Total Depth: 13'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
					2	2		OLD LINER @ 2'
					3			
D	2,374.4	0	N	PH01	4	4	CCHE	CCHE. Pad material
D	2,374.4	0	N		5			
D	2,072.0	0	N		6	6	SW	Sand. Tannish brown, very fine to fine grained, well graded, dry.
D	1,573.6	0	N	PH01A	7			
D	2,721.6	0	N		8	8		
D	4,093.6	0	N	PH01B	9			
D	2,374.4	0	N		10	10		
D	2,620.8	0	N	PH01C	11			
D	1,719.2	0	N		12	12		
D	2,374.4	0	N	PH01D	13			Excavator Refusal at 13'.
						14		
						16		
						18		
						20		
						22		
						24		

ENSOLUM

Sample Name: PH02	Date: 10/24/2023
Site Name: RGA #1	
Incident Number: nAPP2228347919	
Job Number: 03C2012011	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: M. O'Dell / Method: Excavator
Coordinates: 32.303883, -104.059404	Hole Diameter: N/A / Total Depth: 13'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
D	3,757.6	0	N		2	2	SW	Sand. Brown, very fine to fine grained well graded, dry. OLD LINER @ 2'
D	3,124.8	0	N	PH02	3			
D	5,684.0	0	N		4	4		
D	6,669.6	0	N	PH02A	5		CCHE	CCHE. Pad material
D	9,996.0	0	N		6	6		
D	12,896.8	0	N	PH02B	7			
D	7,828.8	0	N		8	8		
D	8,489.6	0	N		9			
D	3,152.8	0	N	PH02C	10	10	SW	Sand. Tannish brown, very fine to fine grained, well graded, dry
D	5,684.0	0	N		11			
D	5,684.0	0	N		12	12		
D	4,832.8	0	N	PH02D	13			Excavator Refusal at 13'.
						14		
						16		
						18		
						20		
						22		
						24		

ENSOLUM

Sample Name: PH03	Date: 10/24/2023
Site Name: RGA #1	
Incident Number: nAPP2228347919	
Job Number: 03C2012011	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: M. O'Dell / Method: Excavator
Coordinates: 32.303827, -104.059288	Hole Diameter: N/A / Total Depth: 13'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
D	6,669.6	0	N		2	2	SW	Sand. Brown, very fine to fine grained well graded, dry. OLD LINER @ 2'
D	3,757.6	0	N	PH03	3			
D	10,869.9	0	N		4	4	SW/CCHE	Sand. Brown, very fine to fine grained well graded, dry, caliche in sample.
D	11,827.2	0	N	PH03A	5		CCHE	CCHE. Pad material
D	8,489.6	0	N		6	6		
D	7,828.8	0	N		7			
D	6,669.6	0	N	PH03B	8	8		
D	5,241.6	0	N		9			
D	3,757.6	0	N		10	10		
D	2,878.4	0	N	PH03C	11			
D	3,757.6	0	N		12	12		
D	2,620.8	0	N	PH03D	13			Excavator Refusal at 13'.
						14		
						16		
						18		
						20		
						22		
						24		

ENSOLUM

Sample Name: PH04	Date: 10/24/2023
Site Name: RGA #1	
Incident Number: nAPP2228347919	
Job Number: 03C2012011	

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: M. O'Dell	Method: Excavator
Coordinates: 32.303772, -104.059161	Hole Diameter: N/A
	Total Depth: 2'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
D	263.2	0	N	PH04	2	0 2 4 6 8 10 12 14 16 18 20 22 24	SW	Sand. Brown, very fine to fine grained, well graded, dry.

ENSOLUM

APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

CARDINAL Laboratories

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

November 01, 2022

HADLIE GREEN

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: RGA #1

Enclosed are the results of analyses for samples received by the laboratory on 10/24/22 14:22.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM, LLC
HADLIE GREEN
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	10/24/2022	Sampling Date:	10/21/2022
Reported:	11/01/2022	Sampling Type:	Soil
Project Name:	RGA #1	Sampling Condition:	Cool & Intact
Project Number:	03C2012011	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA		

Sample ID: SS 01 .5' (H224994-01)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/31/2022	ND	1.95	97.7	2.00	11.3	
Toluene*	**0.255**	0.050	10/31/2022	ND	2.12	106	2.00	11.9	
Ethylbenzene*	**1.99**	0.050	10/31/2022	ND	2.10	105	2.00	12.5	GC-NC1
Total Xylenes*	**11.1**	0.150	10/31/2022	ND	6.28	105	6.00	12.4	GC-NC1
Total BTEX	**13.3**	0.300	10/31/2022	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID *348 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**128**	16.0	10/27/2022	ND	400	100	400	11.3	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**280**	50.0	10/28/2022	ND	191	95.5	200	1.86	
DRO >C10-C28*	**2290**	50.0	10/28/2022	ND	192	96.1	200	2.07	
EXT DRO >C28-C36	**378**	50.0	10/28/2022	ND					

Surrogate: 1-Chlorooctane *118 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *160 %* *46.3-178*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM, LLC
HADLIE GREEN
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	10/24/2022	Sampling Date:	10/21/2022
Reported:	11/01/2022	Sampling Type:	Soil
Project Name:	RGA #1	Sampling Condition:	Cool & Intact
Project Number:	03C2012011	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA		

Sample ID: SS 02 .5' (H224994-02)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/31/2022	ND	1.95	97.7	2.00	11.3	
Toluene*	**1.33**	0.050	10/31/2022	ND	2.12	106	2.00	11.9	
Ethylbenzene*	**2.37**	0.050	10/31/2022	ND	2.10	105	2.00	12.5	GC-NC1
Total Xylenes*	**18.7**	0.150	10/31/2022	ND	6.28	105	6.00	12.4	GC-NC1
Total BTEX	**22.4**	0.300	10/31/2022	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID *315 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1740**	16.0	10/27/2022	ND	400	100	400	11.3	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**452**	50.0	10/28/2022	ND	191	95.5	200	1.86	
DRO >C10-C28*	**7110**	50.0	10/28/2022	ND	192	96.1	200	2.07	
EXT DRO >C28-C36	**1490**	50.0	10/28/2022	ND					

Surrogate: 1-Chlorooctane *135 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *182 %* *46.3-178*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM, LLC
HADLIE GREEN
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	10/24/2022	Sampling Date:	10/21/2022
Reported:	11/01/2022	Sampling Type:	Soil
Project Name:	RGA #1	Sampling Condition:	Cool & Intact
Project Number:	03C2012011	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA		

Sample ID: SS 03 .5' (H224994-03)

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	10/31/2022	ND	1.95	97.7	2.00	11.3	
Toluene*	<0.050	0.050	10/31/2022	ND	2.12	106	2.00	11.9	
Ethylbenzene*	<0.050	0.050	10/31/2022	ND	2.10	105	2.00	12.5	
Total Xylenes*	**0.249**	0.150	10/31/2022	ND	6.28	105	6.00	12.4	GC-NC1
Total BTEX	<0.300	0.300	10/31/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *114 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**320**	16.0	10/27/2022	ND	400	100	400	11.3	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**13.7**	10.0	10/28/2022	ND	191	95.5	200	1.86	
DRO >C10-C28*	**1200**	10.0	10/28/2022	ND	192	96.1	200	2.07	
EXT DRO >C28-C36	**253**	10.0	10/28/2022	ND					

Surrogate: 1-Chlorooctane *97.2 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *149 %* *46.3-178*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM, LLC
HADLIE GREEN
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	10/24/2022	Sampling Date:	10/21/2022
Reported:	11/01/2022	Sampling Type:	Soil
Project Name:	RGA #1	Sampling Condition:	Cool & Intact
Project Number:	03C2012011	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA		

Sample ID: SS 04 .5' (H224994-04)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	10/31/2022	ND	1.97	98.5	2.00	11.1	
Toluene*	**1.96**	0.100	10/31/2022	ND	2.21	111	2.00	11.2	
Ethylbenzene*	**10.3**	0.100	10/31/2022	ND	2.12	106	2.00	11.8	GC-NC1, QM-07
Total Xylenes*	**56.3**	0.300	10/31/2022	ND	6.39	107	6.00	12.4	GC-NC1, QM-07
Total BTEX	**68.5**	0.600	10/31/2022	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID *338 %* *69.9-140*

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	10/27/2022	ND	400	100	400	11.3	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**985**	50.0	10/28/2022	ND	191	95.5	200	1.86	
DRO >C10-C28*	**12400**	50.0	10/28/2022	ND	192	96.1	200	2.07	
EXT DRO >C28-C36	**2640**	50.0	10/28/2022	ND					

Surrogate: 1-Chlorooctane *191 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *276 %* *46.3-178*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM, LLC
HADLIE GREEN
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	10/24/2022	Sampling Date:	10/21/2022
Reported:	11/01/2022	Sampling Type:	Soil
Project Name:	RGA #1	Sampling Condition:	Cool & Intact
Project Number:	03C2012011	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA		

Sample ID: SS 05 .5' (H224994-05)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/31/2022	ND	1.97	98.5	2.00	11.1	
Toluene*	**0.081**	0.050	10/31/2022	ND	2.21	111	2.00	11.2	
Ethylbenzene*	**0.297**	0.050	10/31/2022	ND	2.12	106	2.00	11.8	GC-NC1
Total Xylenes*	**2.41**	0.150	10/31/2022	ND	6.39	107	6.00	12.4	GC-NC1
Total BTEX	**2.79**	0.300	10/31/2022	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID *181 %* *69.9-140*

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	10/27/2022	ND	400	100	400	11.3	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**231**	50.0	10/28/2022	ND	191	95.5	200	1.86	
DRO >C10-C28*	**9780**	50.0	10/28/2022	ND	192	96.1	200	2.07	
EXT DRO >C28-C36	**2230**	50.0	10/28/2022	ND					

Surrogate: 1-Chlorooctane *121 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *226 %* *46.3-178*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
GC-NC1	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are biased high with interfering compounds.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	Ensolum, LLC
Project Manager:	Hadlie Green
Address:	601 N. Marienfeld St. STE 400
City:	Midland State: TX Zip: 79701
Phone #:	432-557-8895 805 798 2605 Fax #:
Project #:	03C2012011 Project Owner: BTA
Project Name:	RGA #1
Project Location:	
Sampler Name:	Connor Whitman

BILL TO

P.O. #:	
Company:	BTA Oil
Attn:	Bob Hall
Address:	104 S. Pecos St.
City:	Midland
State:	TX Zip: 79701
Phone #:	431-312-2203
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	BTEX	TPH	Chloride
H224994 1	SS01	.5'	G	1			✓					✓		10/21/22	905	✓	✓	✓
2	SS02	↓	↓	1			✓					✓			910	✓	✓	✓
3	SS03			1			✓					✓			935	✓	✓	✓
4	SS04			1			✓					✓			940	✓	✓	✓
5	SS05			1			✓					✓			1030	✓	✓	✓

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

Relinquished By:	Date: 10-24-22 Time: 1422	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	All Results are emailed. Please provide Email address: BJennings@ensolum.com
			REMARKS: hgreen@ensolum.com

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 1.2 Corrected Temp. °C 0.4	Sample Condition Cool / Intact ☐ Yes ☑ Yes ☐ No ☐ No	CHECKED BY: (Initials) SR	Turnaround Time: Standard ☑ Rush ☐ Thermometer ID #113 Correction Factor -0.5°C

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

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

CARDINAL Laboratories

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

October 31, 2022

HADLIE GREEN

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: RGA #1

Enclosed are the results of analyses for samples received by the laboratory on 10/24/22 14:22.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM, LLC
HADLIE GREEN
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	10/24/2022	Sampling Date:	10/21/2022
Reported:	10/31/2022	Sampling Type:	Soil
Project Name:	RGA #1	Sampling Condition:	Cool & Intact
Project Number:	03C2012011	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA		

Sample ID: SS 06 .5' (H224995-01)

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	10/31/2022	ND	1.97	98.5	2.00	11.1	
Toluene*	<0.050	0.050	10/31/2022	ND	2.21	111	2.00	11.2	
Ethylbenzene*	<0.050	0.050	10/31/2022	ND	2.12	106	2.00	11.8	
Total Xylenes*	<0.150	0.150	10/31/2022	ND	6.39	107	6.00	12.4	
Total BTEX	<0.300	0.300	10/31/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.4 %* *69.9-140*

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	10/27/2022	ND	400	100	400	11.3	

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	10/28/2022	ND	191	95.5	200	1.86	
DRO >C10-C28*	<10.0	10.0	10/28/2022	ND	192	96.1	200	2.07	
EXT DRO >C28-C36	<10.0	10.0	10/28/2022	ND					

Surrogate: 1-Chlorooctane *89.8 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *89.1 %* *46.3-178*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM, LLC
HADLIE GREEN
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	10/24/2022	Sampling Date:	10/21/2022
Reported:	10/31/2022	Sampling Type:	Soil
Project Name:	RGA #1	Sampling Condition:	Cool & Intact
Project Number:	03C2012011	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA		

Sample ID: SS 07 .5' (H224995-02)

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	10/31/2022	ND	1.97	98.5	2.00	11.1	
Toluene*	<0.050	0.050	10/31/2022	ND	2.21	111	2.00	11.2	
Ethylbenzene*	<0.050	0.050	10/31/2022	ND	2.12	106	2.00	11.8	
Total Xylenes*	<0.150	0.150	10/31/2022	ND	6.39	107	6.00	12.4	
Total BTEX	<0.300	0.300	10/31/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.6 %* *69.9-140*

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	10/27/2022	ND	400	100	400	11.3	

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	10/28/2022	ND	191	95.5	200	1.86	
DRO >C10-C28*	<10.0	10.0	10/28/2022	ND	192	96.1	200	2.07	
EXT DRO >C28-C36	<10.0	10.0	10/28/2022	ND					

Surrogate: 1-Chlorooctane *87.3 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *86.8 %* *46.3-178*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM, LLC
HADLIE GREEN
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	10/24/2022	Sampling Date:	10/21/2022
Reported:	10/31/2022	Sampling Type:	Soil
Project Name:	RGA #1	Sampling Condition:	Cool & Intact
Project Number:	03C2012011	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA		

Sample ID: SS 08 .5' (H224995-03)

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	10/31/2022	ND	1.97	98.5	2.00	11.1	
Toluene*	<0.050	0.050	10/31/2022	ND	2.21	111	2.00	11.2	
Ethylbenzene*	<0.050	0.050	10/31/2022	ND	2.12	106	2.00	11.8	
Total Xylenes*	<0.150	0.150	10/31/2022	ND	6.39	107	6.00	12.4	
Total BTEX	<0.300	0.300	10/31/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.9 %* *69.9-140*

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	10/27/2022	ND	400	100	400	11.3	

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	10/28/2022	ND	191	95.5	200	1.86	
DRO >C10-C28*	<10.0	10.0	10/28/2022	ND	192	96.1	200	2.07	
EXT DRO >C28-C36	<10.0	10.0	10/28/2022	ND					

Surrogate: 1-Chlorooctane *88.0 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *90.6 %* *46.3-178*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM, LLC
HADLIE GREEN
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	10/24/2022	Sampling Date:	10/21/2022
Reported:	10/31/2022	Sampling Type:	Soil
Project Name:	RGA #1	Sampling Condition:	Cool & Intact
Project Number:	03C2012011	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA		

Sample ID: SS 09 .5' (H224995-04)

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	10/31/2022	ND	1.97	98.5	2.00	11.1	
Toluene*	<0.050	0.050	10/31/2022	ND	2.21	111	2.00	11.2	
Ethylbenzene*	<0.050	0.050	10/31/2022	ND	2.12	106	2.00	11.8	
Total Xylenes*	<0.150	0.150	10/31/2022	ND	6.39	107	6.00	12.4	
Total BTEX	<0.300	0.300	10/31/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.9 %* *69.9-140*

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	10/27/2022	ND	400	100	400	11.3	

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	10/28/2022	ND	191	95.5	200	1.86	
DRO >C10-C28*	<10.0	10.0	10/28/2022	ND	192	96.1	200	2.07	
EXT DRO >C28-C36	<10.0	10.0	10/28/2022	ND					

Surrogate: 1-Chlorooctane *85.5 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *84.8 %* *46.3-178*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	Ensolum, LLC
Project Manager:	Hadlie Green
Address:	601 N. Marienfeld St. STE 400
City:	Midland State: TX Zip: 79701
Phone #:	432-557-8895 805-798-2608 Fax #:
Project #:	03C2012011 Project Owner: BTA
Project Name:	RGA #1
Project Location:	
Sampler Name:	Connor Whitman

BILL TO

P.O. #:	
Company:	BTA Oil
Attn:	Bob Hall
Address:	104 S Pecos St.
City:	Midland
State:	TX Zip: 79701
Phone #:	431-312-2203
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	BTEX	TPH	Chloride
H224995																		
1	SS06	.5	G	1			✓					✓		10/21/22	1035	✓	✓	✓
2	SS07	"	"	1			✓					✓		"	1040	✓	✓	✓
3	SS08	"	"	1			✓					✓		"	1045	✓	✓	✓
4	SS09	"	"	1			✓					✓		"	1050	✓	✓	✓

Relinquished By:	Date: 10.21.22 Time: 1422	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
			All Results are emailed. Please provide Email address: BJennings@ensolum.com
Relinquished By:	Date: Time:	Received By:	REMARKS: hgreen@ensolum.com

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 1.2 Corrected Temp. °C 0.6	Sample Condition: Cool ☑ Yes ☐ No Intact ☑ Yes ☐ No	CHECKED BY: (Initials)	Turnaround Time: Standard ☑ Rush ☐ Thermometer ID #113 Correction Factor -0.5°C

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

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

CARDINAL Laboratories

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

March 06, 2023

HADLIE GREEN

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: RGA #1

Enclosed are the results of analyses for samples received by the laboratory on 03/01/23 13:35.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	03/01/2023	Sampling Date:	02/28/2023
Reported:	03/06/2023	Sampling Type:	Soil
Project Name:	RGA #1	Sampling Condition:	Cool & Intact
Project Number:	03C2012011	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - EDDY CO NM		

Sample ID: FS 01 3' (H230956-01)

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	03/03/2023	ND	2.10	105	2.00	0.101	
Toluene*	<0.050	0.050	03/03/2023	ND	2.08	104	2.00	0.128	
Ethylbenzene*	<0.050	0.050	03/03/2023	ND	2.03	101	2.00	0.133	
Total Xylenes*	<0.150	0.150	03/03/2023	ND	6.20	103	6.00	0.989	
Total BTEX	<0.300	0.300	03/03/2023	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**352**	16.0	03/02/2023	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/02/2023	ND	217	109	200	3.19	
DRO >C10-C28*	**735**	10.0	03/02/2023	ND	215	107	200	5.35	
EXT DRO >C28-C36	**287**	10.0	03/02/2023	ND					

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

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

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	03/01/2023	Sampling Date:	02/28/2023
Reported:	03/06/2023	Sampling Type:	Soil
Project Name:	RGA #1	Sampling Condition:	Cool & Intact
Project Number:	03C2012011	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - EDDY CO NM		

Sample ID: FS 02 3' (H230956-02)

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	03/03/2023	ND	2.10	105	2.00	0.101	
Toluene*	<0.050	0.050	03/03/2023	ND	2.08	104	2.00	0.128	
Ethylbenzene*	<0.050	0.050	03/03/2023	ND	2.03	101	2.00	0.133	
Total Xylenes*	<0.150	0.150	03/03/2023	ND	6.20	103	6.00	0.989	
Total BTEX	<0.300	0.300	03/03/2023	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	**688**	16.0	03/02/2023	ND	416	104	400	3.77	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/02/2023	ND	217	109	200	3.19	
DRO >C10-C28*	**564**	10.0	03/02/2023	ND	215	107	200	5.35	
EXT DRO >C28-C36	**208**	10.0	03/02/2023	ND					

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

Surrogate: 1-Chlorooctadecane *150 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	03/01/2023	Sampling Date:	02/28/2023
Reported:	03/06/2023	Sampling Type:	Soil
Project Name:	RGA #1	Sampling Condition:	Cool & Intact
Project Number:	03C2012011	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - EDDY CO NM		

Sample ID: FS 03 3' (H230956-03)

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	03/03/2023	ND	2.10	105	2.00	0.101	
Toluene*	<0.050	0.050	03/03/2023	ND	2.08	104	2.00	0.128	
Ethylbenzene*	<0.050	0.050	03/03/2023	ND	2.03	101	2.00	0.133	
Total Xylenes*	<0.150	0.150	03/03/2023	ND	6.20	103	6.00	0.989	
Total BTEX	<0.300	0.300	03/03/2023	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	**1420**	16.0	03/02/2023	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/02/2023	ND	217	109	200	3.19	
DRO >C10-C28*	**92.0**	10.0	03/02/2023	ND	215	107	200	5.35	
EXT DRO >C28-C36	**28.5**	10.0	03/02/2023	ND					

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

Surrogate: 1-Chlorooctadecane *112 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	03/01/2023	Sampling Date:	02/28/2023
Reported:	03/06/2023	Sampling Type:	Soil
Project Name:	RGA #1	Sampling Condition:	Cool & Intact
Project Number:	03C2012011	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - EDDY CO NM		

Sample ID: FS 04 3' (H230956-04)

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	03/02/2023	ND	2.10	105	2.00	0.912	
Toluene*	<0.050	0.050	03/02/2023	ND	2.06	103	2.00	3.81	
Ethylbenzene*	<0.050	0.050	03/02/2023	ND	2.19	110	2.00	4.67	QM-07
Total Xylenes*	<0.150	0.150	03/02/2023	ND	6.73	112	6.00	5.20	QM-07
Total BTEX	<0.300	0.300	03/02/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *124 %* *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	**1180**	16.0	03/02/2023	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/02/2023	ND	217	109	200	3.19	
DRO >C10-C28*	**126**	10.0	03/02/2023	ND	215	107	200	5.35	
EXT DRO >C28-C36	**51.1**	10.0	03/02/2023	ND					

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

Surrogate: 1-Chlorooctadecane *125 %* *49.1-148*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	03/01/2023	Sampling Date:	02/28/2023
Reported:	03/06/2023	Sampling Type:	Soil
Project Name:	RGA #1	Sampling Condition:	Cool & Intact
Project Number:	03C2012011	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - EDDY CO NM		

Sample ID: FS 05 3' (H230956-05)

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	03/02/2023	ND	2.10	105	2.00	0.912	
Toluene*	<0.050	0.050	03/02/2023	ND	2.06	103	2.00	3.81	
Ethylbenzene*	<0.050	0.050	03/02/2023	ND	2.19	110	2.00	4.67	
Total Xylenes*	<0.150	0.150	03/02/2023	ND	6.73	112	6.00	5.20	
Total BTEX	<0.300	0.300	03/02/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *119 %* *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	**3920**	16.0	03/02/2023	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/02/2023	ND	217	109	200	3.19	
DRO >C10-C28*	**76.6**	10.0	03/02/2023	ND	215	107	200	5.35	
EXT DRO >C28-C36	**25.8**	10.0	03/02/2023	ND					

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

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

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CARDINAL Laboratories

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

Analytical Results For:

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

Received:	03/01/2023	Sampling Date:	02/28/2023
Reported:	03/06/2023	Sampling Type:	Soil
Project Name:	RGA #1	Sampling Condition:	Cool & Intact
Project Number:	03C2012011	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - EDDY CO NM		

Sample ID: FS 06 3' (H230956-06)

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	03/02/2023	ND	2.10	105	2.00	0.912	
Toluene*	<0.050	0.050	03/02/2023	ND	2.06	103	2.00	3.81	
Ethylbenzene*	<0.050	0.050	03/02/2023	ND	2.19	110	2.00	4.67	
Total Xylenes*	<0.150	0.150	03/02/2023	ND	6.73	112	6.00	5.20	
Total BTEX	<0.300	0.300	03/02/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *119 %* *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	**1100**	16.0	03/02/2023	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/02/2023	ND	217	109	200	3.19	
DRO >C10-C28*	**113**	10.0	03/02/2023	ND	215	107	200	5.35	
EXT DRO >C28-C36	**48.3**	10.0	03/02/2023	ND					

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

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

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Analytical Results For:

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

Received:	03/01/2023	Sampling Date:	02/28/2023
Reported:	03/06/2023	Sampling Type:	Soil
Project Name:	RGA #1	Sampling Condition:	Cool & Intact
Project Number:	03C2012011	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - EDDY CO NM		

Sample ID: FS 07 3' (H230956-07)

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	03/02/2023	ND	2.10	105	2.00	0.912	
Toluene*	<0.050	0.050	03/02/2023	ND	2.06	103	2.00	3.81	
Ethylbenzene*	<0.050	0.050	03/02/2023	ND	2.19	110	2.00	4.67	
Total Xylenes*	<0.150	0.150	03/02/2023	ND	6.73	112	6.00	5.20	
Total BTEX	<0.300	0.300	03/02/2023	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**5680**	16.0	03/02/2023	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/02/2023	ND	217	109	200	3.19	
DRO >C10-C28*	**20.7**	10.0	03/02/2023	ND	215	107	200	5.35	
EXT DRO >C28-C36	<10.0	10.0	03/02/2023	ND					

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

Surrogate: 1-Chlorooctadecane *112 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

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

Received:	03/01/2023	Sampling Date:	02/28/2023
Reported:	03/06/2023	Sampling Type:	Soil
Project Name:	RGA #1	Sampling Condition:	Cool & Intact
Project Number:	03C2012011	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - EDDY CO NM		

Sample ID: FS 08 3' (H230956-08)

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	03/02/2023	ND	2.10	105	2.00	0.912	
Toluene*	<0.050	0.050	03/02/2023	ND	2.06	103	2.00	3.81	
Ethylbenzene*	<0.050	0.050	03/02/2023	ND	2.19	110	2.00	4.67	
Total Xylenes*	<0.150	0.150	03/02/2023	ND	6.73	112	6.00	5.20	
Total BTEX	<0.300	0.300	03/02/2023	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**11400**	16.0	03/02/2023	ND	432	108	400	3.77	QM-07

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	03/02/2023	ND	217	109	200	3.19	
DRO >C10-C28*	**41.7**	10.0	03/02/2023	ND	215	107	200	5.35	
EXT DRO >C28-C36	**21.9**	10.0	03/02/2023	ND					

Surrogate: 1-Chlorooctane *97.9 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *108 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

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

Received:	03/01/2023	Sampling Date:	02/28/2023
Reported:	03/06/2023	Sampling Type:	Soil
Project Name:	RGA #1	Sampling Condition:	Cool & Intact
Project Number:	03C2012011	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - EDDY CO NM		

Sample ID: FS 09 1' (H230956-09)

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	03/02/2023	ND	2.10	105	2.00	0.912	
Toluene*	<0.050	0.050	03/02/2023	ND	2.06	103	2.00	3.81	
Ethylbenzene*	<0.050	0.050	03/02/2023	ND	2.19	110	2.00	4.67	
Total Xylenes*	<0.150	0.150	03/02/2023	ND	6.73	112	6.00	5.20	
Total BTEX	<0.300	0.300	03/02/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *117 %* *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	**3730**	16.0	03/02/2023	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	03/02/2023	ND	217	109	200	3.19	
DRO >C10-C28*	**76.2**	10.0	03/02/2023	ND	215	107	200	5.35	
EXT DRO >C28-C36	**20.8**	10.0	03/02/2023	ND					

Surrogate: 1-Chlorooctane *94.8 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *104 %* *49.1-148*

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Analytical Results For:

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

Received:	03/01/2023	Sampling Date:	02/28/2023
Reported:	03/06/2023	Sampling Type:	Soil
Project Name:	RGA #1	Sampling Condition:	Cool & Intact
Project Number:	03C2012011	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - EDDY CO NM		

Sample ID: FS 10 1' (H230956-10)

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	03/02/2023	ND	2.10	105	2.00	0.912	
Toluene*	<0.050	0.050	03/02/2023	ND	2.06	103	2.00	3.81	
Ethylbenzene*	<0.050	0.050	03/02/2023	ND	2.19	110	2.00	4.67	
Total Xylenes*	<0.150	0.150	03/02/2023	ND	6.73	112	6.00	5.20	
Total BTEX	<0.300	0.300	03/02/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *120 %* *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	**1800**	16.0	03/02/2023	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	03/02/2023	ND	217	109	200	3.19	
DRO >C10-C28*	<10.0	10.0	03/02/2023	ND	215	107	200	5.35	
EXT DRO >C28-C36	<10.0	10.0	03/02/2023	ND					

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

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

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CARDINAL Laboratories

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

Analytical Results For:

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

Received:	03/01/2023	Sampling Date:	02/28/2023
Reported:	03/06/2023	Sampling Type:	Soil
Project Name:	RGA #1	Sampling Condition:	Cool & Intact
Project Number:	03C2012011	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - EDDY CO NM		

Sample ID: FS 11 1' (H230956-11)

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	03/02/2023	ND	2.10	105	2.00	0.912	
Toluene*	<0.050	0.050	03/02/2023	ND	2.06	103	2.00	3.81	
Ethylbenzene*	<0.050	0.050	03/02/2023	ND	2.19	110	2.00	4.67	
Total Xylenes*	<0.150	0.150	03/02/2023	ND	6.73	112	6.00	5.20	
Total BTEX	<0.300	0.300	03/02/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *124 %* *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	**1840**	16.0	03/02/2023	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	03/02/2023	ND	217	109	200	3.19	
DRO >C10-C28*	<10.0	10.0	03/02/2023	ND	215	107	200	5.35	
EXT DRO >C28-C36	<10.0	10.0	03/02/2023	ND					

Surrogate: 1-Chlorooctane *115 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *124 %* *49.1-148*

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CARDINAL Laboratories

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

Analytical Results For:

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

Received:	03/01/2023	Sampling Date:	02/28/2023
Reported:	03/06/2023	Sampling Type:	Soil
Project Name:	RGA #1	Sampling Condition:	Cool & Intact
Project Number:	03C2012011	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - EDDY CO NM		

Sample ID: SW 01 0-3' (H230956-12)

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	03/02/2023	ND	2.10	105	2.00	0.912	
Toluene*	<0.050	0.050	03/02/2023	ND	2.06	103	2.00	3.81	
Ethylbenzene*	<0.050	0.050	03/02/2023	ND	2.19	110	2.00	4.67	
Total Xylenes*	<0.150	0.150	03/02/2023	ND	6.73	112	6.00	5.20	
Total BTEX	<0.300	0.300	03/02/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *119 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**176**	16.0	03/02/2023	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	03/02/2023	ND	223	112	200	7.63	
DRO >C10-C28*	**222**	10.0	03/02/2023	ND	213	107	200	9.33	
EXT DRO >C28-C36	**25.9**	10.0	03/02/2023	ND					

Surrogate: 1-Chlorooctane *110 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *111 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	03/01/2023	Sampling Date:	02/28/2023
Reported:	03/06/2023	Sampling Type:	Soil
Project Name:	RGA #1	Sampling Condition:	Cool & Intact
Project Number:	03C2012011	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - EDDY CO NM		

Sample ID: SW 02 0-3' (H230956-13)

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	03/02/2023	ND	2.10	105	2.00	0.912	
Toluene*	<0.050	0.050	03/02/2023	ND	2.06	103	2.00	3.81	
Ethylbenzene*	<0.050	0.050	03/02/2023	ND	2.19	110	2.00	4.67	
Total Xylenes*	<0.150	0.150	03/02/2023	ND	6.73	112	6.00	5.20	
Total BTEX	<0.300	0.300	03/02/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *119 %* *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	**352**	16.0	03/02/2023	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	03/02/2023	ND	223	112	200	7.63	
DRO >C10-C28*	<10.0	10.0	03/02/2023	ND	213	107	200	9.33	
EXT DRO >C28-C36	<10.0	10.0	03/02/2023	ND					

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

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

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CARDINAL Laboratories

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

Analytical Results For:

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

Received:	03/01/2023	Sampling Date:	02/28/2023
Reported:	03/06/2023	Sampling Type:	Soil
Project Name:	RGA #1	Sampling Condition:	Cool & Intact
Project Number:	03C2012011	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - EDDY CO NM		

Sample ID: SW 03 0-3' (H230956-14)

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	03/02/2023	ND	2.10	105	2.00	0.912	
Toluene*	<0.050	0.050	03/02/2023	ND	2.06	103	2.00	3.81	
Ethylbenzene*	<0.050	0.050	03/02/2023	ND	2.19	110	2.00	4.67	
Total Xylenes*	<0.150	0.150	03/02/2023	ND	6.73	112	6.00	5.20	
Total BTEX	<0.300	0.300	03/02/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *122 %* *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	03/02/2023	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	03/02/2023	ND	223	112	200	7.63	
DRO >C10-C28*	<10.0	10.0	03/02/2023	ND	213	107	200	9.33	
EXT DRO >C28-C36	<10.0	10.0	03/02/2023	ND					

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

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

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	03/01/2023	Sampling Date:	02/28/2023
Reported:	03/06/2023	Sampling Type:	Soil
Project Name:	RGA #1	Sampling Condition:	Cool & Intact
Project Number:	03C2012011	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - EDDY CO NM		

Sample ID: SW 04 0-3' (H230956-15)

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	03/02/2023	ND	2.10	105	2.00	0.912	
Toluene*	<0.050	0.050	03/02/2023	ND	2.06	103	2.00	3.81	
Ethylbenzene*	<0.050	0.050	03/02/2023	ND	2.19	110	2.00	4.67	
Total Xylenes*	<0.150	0.150	03/02/2023	ND	6.73	112	6.00	5.20	
Total BTEX	<0.300	0.300	03/02/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *122 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**192**	16.0	03/02/2023	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	03/02/2023	ND	223	112	200	7.63	
DRO >C10-C28*	<10.0	10.0	03/02/2023	ND	213	107	200	9.33	
EXT DRO >C28-C36	<10.0	10.0	03/02/2023	ND					

Surrogate: 1-Chlorooctane *110 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *108 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Notes and Definitions

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

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 1 of 2

Company Name: Ensolum, LLC	**BILL TO**
Project Manager: Hadlie Green	P.O. #:
Address: 3122 Nat'l Parks Hwy	Company: BTA Oil
City: Carlsbad State: NM Zip: 88220	Attn: Bob Hall
Phone #: 432.557.8895 Fax #:	Address: 104 S. Pecos St.
Project #: RGA #1 Project Owner:	City: Midland
Project Name: 03C2012011	State: TX Zip: 79701
Project Location: 32.30386, -104.05949	Phone #: 432.312.2203
Sampler Name: Meredith Roberts	Fax #:

FOR LAB USE ONLY Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	ANALYSIS REQUEST: BTEX	Chlorides	TPH
H230956																		
1	FS01	3'	C	1			X					X		2/28/23	1255	X	X	X
2	FS02														1300			
3	FS03														1305			
4	FS04														1310			
5	FS05														1315			
6	FS06														1320			
7	FS07														1325			
8	FS08														1330			
9	FS09	1'													1410			
10	FS10														1415			

Relinquished By:	Date: 5.1.23	Received By:	Verbal Result: ☐ Yes ☑ No Add'l Phone #:
	Time: 1335		All Results are emailed. Please provide Email address: hgreen@ensolum.com mroberts@ensolum.com tmorrissey@ensolum.com
Relinquished By:	Date:	Received By:	REMARKS: Incident #: NAPP2228347919
	Time:		
Delivered By: (Circle One)	Observed Temp. °C 3.5	Sample Condition Cool Intact	CHECKED BY: (Initials)
Sampler - UPS - Bus - Other:	Corrected Temp. °C 2.9	☑ Yes ☑ Yes ☐ No ☐ No	
Turnaround Time: Standard ☑ Rush ☐	Bacteria (only) Sample Condition Cool Intact ☐ Yes ☐ Yes ☐ No ☐ No	Observed Temp. °C	Corrected Temp. °C
Thermometer ID #113 Correction Factor -0.5°C			

FORM-006 R 3.2 10/07/21

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

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 2 of 2

Company Name: Ensolum, LLC	**BILL TO**
Project Manager: Hadlie Green	P.O. #:
Address: 3122 Nat'l Parks Hwy	Company: BTA Oil
City: Carlsbad State: NM Zip: 88220	Attn: Bob Hall
Phone #: 432.557.8895 Fax #:	Address: 104 S. Pecos St.
Project #: 03C2012011 Project Owner:	City: Midland
Project Name: RGA #1	State: TX Zip: 79701
Project Location: 32.30386, -104.05949	Phone #: 432.312.2203
Sampler Name: Meredith Roberts	Fax #:

FOR LAB USE ONLY

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	ANALYSIS REQUEST: BTEX	Chlorides	TPH
H230986																		
11	FS11	1'	C	1			X					X		2/28/23	1225	X	X	X
12	SW01	0-3'													0825			
13	SW02														1345			
14	SW03														1350			
15	SW04														1355			

MR

Relinquished By: Meredith	Date: 3.1.23	Received By: S Rodriguez	Verbal Result: ☐ Yes ☑ No Add'l Phone #:
	Time: 1335		All Results are emailed. Please provide Email address: hgreen@ensolum.com mroberts@ensolum.com tmonssey@ensolum.com
Relinquished By:	Date:	Received By:	REMARKS: Incident #: NAPP2228347919
	Time:		
Delivered By: (Circle One)	Observed Temp. °C 3.5	Sample Condition: Cool ☐ Yes ☐ No; Intact ☐ Yes ☐ No	CHECKED BY: (Initials)
Sampler - UPS - Bus - Other:	Corrected Temp. °C 2.9		

Turnaround Time: Standard ☑ Rush ☐
Thermometer ID #113
Correction Factor -0.5°C
Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No; Intact ☐ Yes ☐ No; Observed Temp. °C; Corrected Temp. °C

FORM-006 R 3.2 10/07/21

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

CARDINAL Laboratories

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

April 04, 2023

HADLIE GREEN

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: RGA #1

Enclosed are the results of analyses for samples received by the laboratory on 03/30/23 14:00.

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

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

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

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

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

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

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705	Project: RGA #1 Project Number: 03C2012011 Project Manager: HADLIE GREEN Fax To:	Reported: 04-Apr-23 13:50

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FS 01 A 3.25'	H231477-01	Soil	30-Mar-23 10:30	30-Mar-23 14:00
FS 02 A 3.25'	H231477-02	Soil	30-Mar-23 10:35	30-Mar-23 14:00
FS 03 A 3.25'	H231477-03	Soil	30-Mar-23 10:40	30-Mar-23 14:00
FS 04 A 3.25'	H231477-04	Soil	30-Mar-23 10:45	30-Mar-23 14:00
FS 05 A 3.25'	H231477-05	Soil	30-Mar-23 10:50	30-Mar-23 14:00
FS 06 A 3.25'	H231477-06	Soil	30-Mar-23 10:55	30-Mar-23 14:00

*** There was insufficient time for the samples to reach the temperature of 6C or below.

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Analytical Results For:

ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705	Project: RGA #1 Project Number: 03C2012011 Project Manager: HADLIE GREEN Fax To:	Reported: 04-Apr-23 13:50

FS 01 A 3.25'

H231477-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**96.0**		16.0	mg/kg	4	3033115	AC	31-Mar-23	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	3033029	JH	30-Mar-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3033029	JH	30-Mar-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3033029	JH	30-Mar-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3033029	JH	30-Mar-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3033029	JH	30-Mar-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*105 %*	*71.5-134*		*3033029*	JH	*30-Mar-23*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	3033027	MS	31-Mar-23	8015B	
DRO >C10-C28*	**674**		10.0	mg/kg	1	3033027	MS	31-Mar-23	8015B	
EXT DRO >C28-C36	**142**		10.0	mg/kg	1	3033027	MS	31-Mar-23	8015B	
Surrogate: 1-Chlorooctane			*98.6 %*	*48.2-134*		*3033027*	MS	*31-Mar-23*	*8015B*	
Surrogate: 1-Chlorooctadecane			*130 %*	*49.1-148*		*3033027*	MS	*31-Mar-23*	*8015B*	

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705	Project: RGA #1 Project Number: 03C2012011 Project Manager: HADLIE GREEN Fax To:	Reported: 04-Apr-23 13:50

FS 02 A 3.25'

H231477-02 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**288**		16.0	mg/kg	4	3033115	AC	31-Mar-23	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	3033029	JH	30-Mar-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3033029	JH	30-Mar-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3033029	JH	30-Mar-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3033029	JH	30-Mar-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3033029	JH	30-Mar-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*105 %*	*71.5-134*		*3033029*	JH	*30-Mar-23*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	3033027	MS	31-Mar-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3033027	MS	31-Mar-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3033027	MS	31-Mar-23	8015B	
Surrogate: 1-Chlorooctane			*93.1 %*	*48.2-134*		*3033027*	MS	*31-Mar-23*	*8015B*	
Surrogate: 1-Chlorooctadecane			*107 %*	*49.1-148*		*3033027*	MS	*31-Mar-23*	*8015B*	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705	Project: RGA #1 Project Number: 03C2012011 Project Manager: HADLIE GREEN Fax To:	Reported: 04-Apr-23 13:50

FS 03 A 3.25'

H231477-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**96.0**		16.0	mg/kg	4	3033115	AC	31-Mar-23	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	3033029	JH	30-Mar-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3033029	JH	30-Mar-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3033029	JH	30-Mar-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3033029	JH	30-Mar-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3033029	JH	30-Mar-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*105 %*	*71.5-134*		*3033029*	JH	*30-Mar-23*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	3033027	MS	31-Mar-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3033027	MS	31-Mar-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3033027	MS	31-Mar-23	8015B	
Surrogate: 1-Chlorooctane			*91.7 %*	*48.2-134*		*3033027*	MS	*31-Mar-23*	*8015B*	
Surrogate: 1-Chlorooctadecane			*107 %*	*49.1-148*		*3033027*	MS	*31-Mar-23*	*8015B*	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705	Project: RGA #1 Project Number: 03C2012011 Project Manager: HADLIE GREEN Fax To:	Reported: 04-Apr-23 13:50

FS 04 A 3.25'

H231477-04 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**1420**		16.0	mg/kg	4	3033115	AC	31-Mar-23	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	3033029	JH	31-Mar-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3033029	JH	31-Mar-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3033029	JH	31-Mar-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3033029	JH	31-Mar-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3033029	JH	31-Mar-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*106 %*	*71.5-134*		*3033029*	JH	*31-Mar-23*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	3033027	MS	31-Mar-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3033027	MS	31-Mar-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3033027	MS	31-Mar-23	8015B	
Surrogate: 1-Chlorooctane			*98.1 %*	*48.2-134*		*3033027*	MS	*31-Mar-23*	*8015B*	
Surrogate: 1-Chlorooctadecane			*116 %*	*49.1-148*		*3033027*	MS	*31-Mar-23*	*8015B*	

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705	Project: RGA #1 Project Number: 03C2012011 Project Manager: HADLIE GREEN Fax To:	Reported: 04-Apr-23 13:50

FS 05 A 3.25'

H231477-05 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**880**		16.0	mg/kg	4	3033115	AC	31-Mar-23	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	3033029	JH	31-Mar-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3033029	JH	31-Mar-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3033029	JH	31-Mar-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3033029	JH	31-Mar-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3033029	JH	31-Mar-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*106 %*	*71.5-134*		*3033029*	JH	*31-Mar-23*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	3033027	MS	31-Mar-23	8015B	
DRO >C10-C28*	**205**		10.0	mg/kg	1	3033027	MS	31-Mar-23	8015B	
EXT DRO >C28-C36	**26.0**		10.0	mg/kg	1	3033027	MS	31-Mar-23	8015B	
Surrogate: 1-Chlorooctane			*91.2 %*	*48.2-134*		*3033027*	MS	*31-Mar-23*	*8015B*	
Surrogate: 1-Chlorooctadecane			*115 %*	*49.1-148*		*3033027*	MS	*31-Mar-23*	*8015B*	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705	Project: RGA #1 Project Number: 03C2012011 Project Manager: HADLIE GREEN Fax To:	Reported: 04-Apr-23 13:50

FS 06 A 3.25'

H231477-06 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**3040**		16.0	mg/kg	4	3033115	AC	31-Mar-23	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	3033029	JH	31-Mar-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3033029	JH	31-Mar-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3033029	JH	31-Mar-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3033029	JH	31-Mar-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3033029	JH	31-Mar-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*107 %*	*71.5-134*		*3033029*	JH	*31-Mar-23*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	3033027	MS	31-Mar-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3033027	MS	31-Mar-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3033027	MS	31-Mar-23	8015B	
Surrogate: 1-Chlorooctane			*97.3 %*	*48.2-134*		*3033027*	MS	*31-Mar-23*	*8015B*	
Surrogate: 1-Chlorooctadecane			*115 %*	*49.1-148*		*3033027*	MS	*31-Mar-23*	*8015B*	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705	Project: RGA #1 Project Number: 03C2012011 Project Manager: HADLIE GREEN Fax To:	Reported: 04-Apr-23 13:50

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3033115 - 1:4 DI Water										
Blank (3033115-BLK1)				Prepared & Analyzed: 31-Mar-23						
Chloride	ND	16.0	mg/kg							
LCS (3033115-BS1)				Prepared & Analyzed: 31-Mar-23						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (3033115-BSD1)				Prepared & Analyzed: 31-Mar-23						
Chloride	416	16.0	mg/kg	400		104	80-120	0.00	20	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705	Project: RGA #1 Project Number: 03C2012011 Project Manager: HADLIE GREEN Fax To:	Reported: 04-Apr-23 13:50

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3033029 - Volatiles										
Blank (3033029-BLK1)				Prepared & Analyzed: 30-Mar-23						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0539*		mg/kg	*0.0500*		*108*	*71.5-134*			
LCS (3033029-BS1)				Prepared & Analyzed: 30-Mar-23						
Benzene	2.04	0.050	mg/kg	2.00		102	81.4-118			
Toluene	2.07	0.050	mg/kg	2.00		103	88.7-121			
Ethylbenzene	2.12	0.050	mg/kg	2.00		106	86.1-120			
m,p-Xylene	4.36	0.100	mg/kg	4.00		109	88.2-124			
o-Xylene	2.08	0.050	mg/kg	2.00		104	84.9-118			
Total Xylenes	6.44	0.150	mg/kg	6.00		107	87.3-122			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0511*		mg/kg	*0.0500*		*102*	*71.5-134*			
LCS Dup (3033029-BSD1)				Prepared & Analyzed: 30-Mar-23						
Benzene	1.93	0.050	mg/kg	2.00		96.5	81.4-118	5.49	15.8	
Toluene	1.94	0.050	mg/kg	2.00		97.1	88.7-121	6.33	15.9	
Ethylbenzene	2.00	0.050	mg/kg	2.00		100	86.1-120	5.64	16	
m,p-Xylene	4.14	0.100	mg/kg	4.00		103	88.2-124	5.21	16.2	
o-Xylene	1.98	0.050	mg/kg	2.00		99.2	84.9-118	4.87	16.7	
Total Xylenes	6.12	0.150	mg/kg	6.00		102	87.3-122	5.10	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0507*		mg/kg	*0.0500*		*101*	*71.5-134*			

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705	Project: RGA #1 Project Number: 03C2012011 Project Manager: HADLIE GREEN Fax To:	Reported: 04-Apr-23 13:50

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3033027 - General Prep - Organics										
Blank (3033027-BLK1)				Prepared & Analyzed: 30-Mar-23						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*54.6*		mg/kg	*50.0*		*109*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*64.5*		mg/kg	*50.0*		*129*	*49.1-148*			
LCS (3033027-BS1)				Prepared & Analyzed: 30-Mar-23						
GRO C6-C10	210	10.0	mg/kg	200		105	78.5-124			
DRO >C10-C28	235	10.0	mg/kg	200		117	72.5-126			
Total TPH C6-C28	445	10.0	mg/kg	400		111	77.6-123			
Surrogate: 1-Chlorooctane	*59.0*		mg/kg	*50.0*		*118*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*67.0*		mg/kg	*50.0*		*134*	*49.1-148*			
LCS Dup (3033027-BSD1)				Prepared & Analyzed: 30-Mar-23						
GRO C6-C10	206	10.0	mg/kg	200		103	78.5-124	2.20	17.7	
DRO >C10-C28	217	10.0	mg/kg	200		109	72.5-126	7.72	21	
Total TPH C6-C28	423	10.0	mg/kg	400		106	77.6-123	5.07	18.5	
Surrogate: 1-Chlorooctane	*56.7*		mg/kg	*50.0*		*113*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*68.1*		mg/kg	*50.0*		*136*	*49.1-148*			

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC	**BILL TO**
Project Manager: Hadlie Green	P.O. #:
Address: 601 N Marienfeld Street, Suite 400	Company: BTA Oil
City: Midland State: TX Zip: 79701	Attn: Bob Hall
Phone #: 432-557-8895 Fax #:	Address:
Project #: 03C2012011 Project Owner:	City:
Project Name: RGA #1	State: Zip:
Project Location: 32.3039,-104.0595 Eddy	Phone #:
Sampler Name: Peter Van Patten	Fax #:

FOR LAB USE ONLY Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	TPH	BTEX	Chloride
H231477												✓						
1	FS01A	3.25'	C	1			✓					✓		3-30-23	1030	✓	✓	✓
2	FS02A	3.25'	C	1			✓					✓		3-30-23	1035	✓	✓	✓
3	FS03A	3.25'	C	1			✓					✓		3-30-23	1040	✓	✓	✓
4	FS04A	3.25'	C	1			✓					✓		3-30-23	1045	✓	✓	✓
5	FS05A	3.25'	C	1			✓					✓		3-30-23	1050	✓	✓	✓
6	FS06A	3.25'	C	1			✓					✓		3-30-23	1055	✓	✓	✓

Relinquished By: Peter Van Patten	Date: 3-30-23 Time: 1400	Received By: S Rodriguez	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
			All Results are emailed. Please provide Email address: hgreen@ensolum.com
Relinquished By:	Date: Time:	Received By:	REMARKS: TEMP BLANK: 5.4c
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 11.3c Corrected Temp. °C 10.7c	Sample Condition Cool Intact ☐ Yes ☐ Yes ☐ No ☐ No	CHECKED BY: (Initials) SR
			Turnaround Time: 24h Standard ☐ Rush ☑ Bacteria (only) Sample Condition Cool Intact ☐ Yes ☐ Yes ☐ No ☐ No
			Thermometer ID #113 Correction Factor -0.5°C Observed Temp. °C Corrected Temp. °C

FORM-006 R 3.2 10/07/21

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

ENSOLUM

APPENDIX E

NMOCD Notifications

From: Enviro, OCD, EMNRD
To: Hadlie Green; Bratcher, Michael, EMNRD; Nobui, Jennifer, EMNRD
Subject: Re: [EXTERNAL] BTA - Sampling Notification - Week of November 14th - November 18th
Date: Monday, November 14, 2022 5:00:37 PM
Attachments: image001.png
image002.png
image003.png
image004.png

[**EXTERNAL EMAIL**]
Please be aware that notification requirements are **two business days**, per rule. Please proceed on your schedule. Also, please include this, and all correspondence, in the closure report to insure inclusion in the project file.

From: Hadlie Green <hgreen@ensolum.com>
Sent: Monday, November 14, 2022 3:53 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Tacoma Morrissey <tmorrissey@ensolum.com>; Bob Hall <bhall@btaoil.com>
Subject: [EXTERNAL] BTA - Sampling Notification - Week of November 14th - November 18th

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 this week, November 14th through the 18th.

- Mesa B #2 Poly Line Coupling Failure (nAPP2229734031)
  - GPS: 32.05169, -103.6057
- RGA #1 Stuffing Box Failure (nAPP2228347919)
  - GPS: 32.30386, -104.05949

Thank you,

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

From: Hamlet, Robert, EMNRD
To: Hadlie Green
Cc: Bob Hall; Tacoma Morrissey; Bratcher, Michael, EMNRD; Nobui, Jennifer, EMNRD; Harimon, Jocelyn, EMNRD
Subject: (Extension Approval) BTA - RGA #1 (Incident Number NAPP2228347919)
Date: Thursday, December 29, 2022 2:29:03 PM
Attachments: image006.png
image007.png
image008.png
image009.png

[**EXTERNAL EMAIL**]

RE: Incident #**NAPP2228347919**

Hadlie,

Your request for an extension to **April 5th, 2023** is approved. Please include this e-mail correspondence in the remediation and/or closure report.

Robert Hamlet ● Environmental Specialist - Advanced
Environmental Bureau
EMNRD - Oil Conservation Division
506 W. Texas Ave.| Artesia, NM 88210
575.909.0302 | robert.hamlet@state.nm.us
http://www.emnrd.state.nm.us/OCD/

From: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Sent: Wednesday, December 28, 2022 3:00 PM
To: Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>
Subject: FW: [EXTERNAL] BTA-Extension Request - RGA #1 (Incident Number nAPP2228347919)

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

From: Hadlie Green <hgreen@ensolum.com>
Sent: Wednesday, December 28, 2022 2:46 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Bob Hall <bhall@btaoil.com>; Tacoma Morrissey <tmorrissey@ensolum.com>
Subject: [EXTERNAL] BTA-Extension Request - RGA #1 (Incident Number nAPP2228347919)

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

All,

BTA is requesting an extension for the current deadline of January 5, 2023, for submitting a remediation work plan or closure report required in 19.15.29.12.B.(1) NMAC for RGA #1 (Incident Number nAPP2228347919). The release was discovered on October 7, 2022. Initial site assessment activities have been completed and excavation activities are ongoing. In order to complete additional remediation activities and submit a remediation work plan or closure report, BTA requests a 90-day extension of this deadline until April 5, 2023.

Thank you,

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

From: Enviro, OCD, EMNRD
To: Hadlie Green
Cc: Bratcher, Michael, EMNRD; Hamlet, Robert, EMNRD
Subject: RE: [EXTERNAL] BTA - Sampling Notification - February 17th-20th
Date: Thursday, February 16, 2023 10:35:48 AM
Attachments: image006.png
image007.png
image008.png
image009.png

[**EXTERNAL EMAIL**]

Hadlie,

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

JH

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

From: Hadlie Green <hgreen@ensolum.com>
Sent: Tuesday, February 14, 2023 10:11 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Tacoma Morrissey <tmorrissey@ensolum.com>; Bob Hall <bhall@btaoil.com>
Subject: [EXTERNAL] BTA - Sampling Notification - February 17th-20th

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

All,

BTA anticipates collecting confirmation samples at the following location on February 17th and 20th.

- RGA #1 / Incident Number NAPP2228347919
  - GPS: 32.30386, -104.05949

Thank you,

From: Enviro, OCD, EMNRD
To: Hadlie Green
Subject: RE: [EXTERNAL] BTA - Sampling Notification - Week of 02/27/2023
Date: Friday, February 24, 2023 2:45:46 PM
Attachments: image006.png
image007.png
image008.png
image009.png

[**EXTERNAL EMAIL**]

Hadie,

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

JH

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

From: Hadlie Green <hgreen@ensolum.com>
Sent: Friday, February 24, 2023 11:41 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Tacoma Morrissey <tmorrissey@ensolum.com>; Bob Hall <bhall@btaoil.com>
Subject: [EXTERNAL] BTA - Sampling Notification - Week of 02/27/2023

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 February 27, 2023.

- RGA #1 / Incident Number NAPP2228347919
  - GPS: 32.30386, -104.05949
- Mesa B East Poly Line Weld Failure / Incident Number nAPP2232980823

  - GPS: 32.06018, -103.60497
- Vaca Draw West TB / nAPP2300347524
  - GPS: 32.14046, -103.56478

Thank you,

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

From: Enviro, OCD, EMNRD
To: Hadlie Green
Cc: Bratcher, Michael, EMNRD; Hamlet, Robert, EMNRD
Subject: RE: [EXTERNAL] BTA - Sampling Notification - Week of 03/27/2023
Date: Monday, March 27, 2023 9:12:35 AM
Attachments: image005.jpg
image006.png
image007.png
image008.png
image009.png

[**EXTERNAL EMAIL**]

Hadlie,

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

JH

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

From: Hadlie Green <hgreen@ensolum.com>
Sent: Friday, March 24, 2023 1:01 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Tacoma Morrissey <tmorrissey@ensolum.com>; Bob Hall <bhall@btaoil.com>
Subject: [EXTERNAL] BTA - Sampling Notification - Week of 03/27/2023

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 location the week of March 27, 2023.

- RGA #1 / nAPP2228347919
  - Sampling Date: 3/30/2023 @ 10:00 AM MST

From: Wells, Shelly, EMNRD
To: Hadlie Green; Hamlet, Robert, EMNRD; Velez, Nelson, EMNRD; Maxwell, Ashley, EMNRD; Bratcher, Michael, EMNRD
Cc: Kelton Beaird; Aimee Cole; Tacoma Morrissey
Subject: RE: [EXTERNAL] BTA - Sampling Notification - Week of 10/23/2023
Date: Thursday, October 19, 2023 9:11:07 AM
Attachments: image001.png
image002.png
image003.png
image004.png

[**EXTERNAL EMAIL**]

Good morning Hadlie,

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

Thank you,

Shelly

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

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

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

All,

BTA anticipates collecting confirmation samples at the following locations the week of October 23, 2023.

- RGA #1 / nAPP2228347919

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

- Mesa 8105 JV-P #4H Battery / NRM2004549559
  - Sampling Date: 10/24-27/2023 @ 9:00 AM MST
- Mesa 8105-JV-P 004H / NOY1831160155
  - Sampling Date: 10/25-26/2023 @ 9:00 AM MST
- Vaca West Tank Battery / nAPP2202849030
  - Sampling Date: 10/25-27/2023 @ 9:00 AM MST
- Ogden 20509 1-3H Tank Battery / NAB1905943420
  - Sampling Date: 10/27/2023 @ 9:00 AM MST

Thank you,

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

ENSOLUM

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	nAPP2228347919
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: BTA Oil Producers, LLC	OGRID: 260297
Contact Name: Bob Hall	Contact Telephone: 432-682-3753
Contact email: bhall@btaoil.com	Incident # *(assigned by OCD)* nAPP2228347919
Contact mailing address: 104 S. Pecos St., Midland, TX 79701	

Location of Release Source

Latitude: 32.30386 Longitude: -104.05949
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: RGA #1	Site Type: Well Site
Date Release Discovered: 10/07/2022	API# *(if applicable)* Nearest well: RGA #1 API #30-015-26151

Unit Letter	Section	Township	Range	County
K	14	23S	28E	Eddy

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (*Name: Uffie Land Company*)

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 7 BBL	Volume Recovered (bbls) 5 BBL
☒ Produced Water	Volume Released (bbls) 5 BBL	Volume Recovered (bbls) 3 BBL
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
Stuffing Box Failure.
Spill onto pad immediately around the wellhead and on caliche well pad.

(See attached spill calculation spreadsheet.)

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2228347919
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

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

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

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

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

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

Printed Name: Bob Hall Title: Environmental Manager

Signature: Bob Hall Date: 10/10/2022

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

OCD Only

Received by: Jocelyn Harimon Date: 10/10/2022

Location RGA #1 Stuffing Box Leak
API #
Spill Date 10/7/2022

Spill Dimensions

ENTER - Length of Spill	43.5	**feet**
ENTER - Width of Spill	43.5	**feet**
ENTER - Saturation Depth of Spill	5	**inches**
ENTER - Porosity Factor	0.03	**decimal**

Oil Cut - Well Test / Vessel Throughput or Contents

Oil	7
Water	5
Calculated Oil Cut	0.583333

Volume Recovered in Truck / Containment

ENTER - Recovered Oil	5	**BBL**
ENTER - Recovered Water	3	**BBL**

Calculated Values	*calculated*	
Release of Oil in Soil - Unrecovered	2	***BBL***
Release of Water in Soil - Unrecovered	2	***BBL***
Unrecovered Total Release	4	***BBL***

Calculated Values	*calculated*	
Total Release of Oil	7	***BBL***
Total Release of Water	5	***BBL***
Total Release	12	***BBL***

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

(Length X Width X Depth X 1 ft/12 in) X Porosity
5.615 ft^3 / BBL

X

Oil Cut
(or Water Cut)

RGA #1 – Stuffing Box Leak
10/7/2022

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

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

CONDITIONS

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID: 260297
	Action Number: 149943
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	None	10/12/2022

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2228347919
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?	<50 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☒ Yes ☐ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☒ Yes ☐ No

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

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

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

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

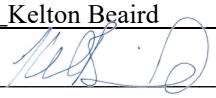
Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2228347919
District RP	
Facility ID	
Application ID	

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

Printed Name: Kelton Beaird Title: Environmental Manager

Signature:  Date: 11-21-2023

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

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2228347919
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 Beaird Title: Environmental Manager

Signature: Date: 11-21-2023

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

OCD Only

Received by: Shelly Wells Date: 11/28/2023

☐ 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 288737

CONDITIONS

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID: 260297
	Action Number: 288737
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	Work plan approved.	3/18/2024
amaxwell	To address reclamation activities in combination with remediation activities, the reclamation report must include:	3/18/2024
amaxwell	Executive Summary of the reclamation activities; Scaled Site Map including sampling locations; Analytical results including, but not limited to, results showing that any remaining impacts meet the reclamation standards and results to prove the backfill is non-waste containing; At least one (1) representative 5-point composite sample will need to be collected from the backfill material that will be used for the reclamation of the top four feet of the excavation. OCD reserves the right to request additional sampling if needed; pictures of the backfilled areas showing that the area is back, as nearly as practical, to the original condition or the final land use and maintain those areas to control dust and minimize erosion to the extent practical; pictures of the top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater; and a revegetation plan.	3/18/2024
amaxwell	All revegetation activities will need to be documented and included in the revegetation report. The revegetation report will need to include: An executive summary of the revegetation activities including: Seed mix, Method of seeding, dates of when the release area was reseeded, information pertinent to inspections, information about any amendments added to the soil, information on how the vegetative cover established meets the life-form ratio of plus or minus fifty percent of pre-disturbance levels and a total percent plant cover of at least seventy percent of pre-disturbance levels, excluding noxious weeds per 19.15.29.13 D.(3) NMAC, and any additional information; a scaled Site Map including area that was revegetated in square feet; and pictures of the revegetated areas during reseeding activities, inspections, and final pictures when revegetation is achieved.	3/18/2024
amaxwell	OR Per 19.15.29.13 E. NMAC, if a reclamation and revegetation report has been submitted to the surface owner, it may be used if the requirements of the surface owner provide equal or better protection of freshwater, human health, and the environment. A copy of the approval of the reclamation and revegetation report from the surface owner and a copy of the approved reclamation and revegetation report will need to be submitted to the OCD via the Permitting website.	3/18/2024
amaxwell	Submit a report via the OCD permitting portal by July 19, 2024.	3/18/2024