



July 24, 2024

**New Mexico Oil Conservation Division**

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

**Re: Closure Request  
Carrasco 14-1  
Incident Numbers nRM2024742676 and nAPP2313656375  
Eddy County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of BTA Oil Producers, LLC (BTA), has prepared this *Closure Request* to document excavation and soil sampling activities performed at the Carrasco 14-1 (Site), in response to the denial of the original *Deferral Request*, dated August 1, 2023.

On January 12, 2024, the New Mexico Oil Conservation Division (NMOCD) denied the original *Deferral Request* for the following reasons:

*The Deferral Request is Denied. Contamination must not pose an imminent risk to human health, the environment, or groundwater. Please remove as much of the contaminated soil with alternative methods. The only remediation that should remain are the sample points that are being requested for deferral. Only sample points that could cause a major facility deconstruction will be deferred. Collect confirmation samples representing no more than 200 ft<sup>2</sup>. Specify exactly which sample points you are asking for a deferral on and the reason the contaminants can't be removed. All samples must be analyzed for all constituents listed in Table I of 19.15.29.12 NMAC. All sidewall samples should be taken from the sidewall of the excavation. The "step-out" samples on pad to verify the edge of the release should only be a maximum of 1-2 feet from the observed edge of the release. Stepping out away from the release area to conduct horizontal delineation samples may tell us whether or not the release left the active well pad, but it does not tell us where the actual edge of the release is located. Please make sure that the edge of the release extent is accurately defined. Additionally, when equipment is located in and around the release area, samples must come from the sidewalls of the release area excavation. The OCD needs to know if the release went in, around, or under equipment/tanks/pipelines. Not having sidewall samples from the actual excavation won't give us those sampling data points that we need. "Step-out" samples should never be conducted if equipment is in the vicinity of the release area.*

Based on soil sample laboratory analytical results, BTA is submitting this *Closure Request*, describing excavation activities that have occurred and requesting closure for Incident Numbers nRM2024742676 and nAPP2313656375.

## BACKGROUND

The Site is located in Unit F, Section 14, Township 23 South, Range 28 East, in Eddy County, New Mexico (32.3076687°, -104.0606657°) and is associated with oil and gas exploration and production operations on private land owned by Mr. Lionel Onsurez.

### Incident Number nRM2024742676

On August 28, 2020, a hole in an oil tank developed while a load of crude oil was being removed from the tank by a hot oiler, resulting in the release of approximately 67 barrels (bbls) of crude oil into the earthen containment. No free-standing fluids were recovered. BTA reported the release immediately to the NMOCD via email and submitted a Release Notification Form C-141 (Form C-141) on September 1, 2020. The release was assigned Incident Number nRM2024742676.

### Incident Number nAPP2313656375

On May 5, 2023, internal corrosion of a 2-inch metal recirculating line resulted in the release of approximately 35 bbls of crude oil into the earthen containment. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; approximately 25 bbls of crude oil were recovered. BTA reported the release to the NMOCD immediately via email and submitted a Form C-141 on May 5, 2023. The release was assigned Incident Number nAPP2313656375.

The Site was characterized for applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC). Based on the results of the Site Characterization, as described in the August 1, 2023, *Deferral Request*, the following NMOCD Table I Closure Criteria (Closure Criteria) apply:

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

## EXCAVATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

Between February 9 and July 9, 2024, Ensolum personnel were at the Site to oversee excavation activities based on laboratory analytical results for delineation borehole BH01. The release extent and delineation soil sample locations are presented on Figure 2. Excavation activities were performed utilizing hydrovac, hand shovels, and transport vehicles. To direct excavation activities, soil was screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The excavation was completed to depths ranging from 1-foot to 2 feet below ground surface (bgs). Photographic documentation of the excavation activities is included in Appendix A.

Following removal of impacted soil, 5-point composite soil samples were collected every 200 square feet from the floor and sidewall of the excavation extent. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Confirmation soil samples FS01 and FS02 were collected from the floor of the excavation at depths ranging from 1-foot to 2 feet bgs. Confirmation soil samples SW01 through SW04 were collected from the sidewalls of the excavation at depths ranging from the ground surface to 2 feet bgs.

BTA Oil Producers, LLC  
Closure Request  
Carrasco 14-1



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

Laboratory analytical results for excavation soil samples FS01, FS02, SW01, and SW02 indicated TPH and/or chloride concentrations exceeded the Site Closure Criteria. Additional soil was removed in the vicinity of floor samples FS01 and FS02 and subsequent soil samples FS01A and FS02A were collected from the floor of the excavation at an approximate depth of 2 feet bgs. Additional soil was removed in the vicinity of sidewall samples SW01 and SW02 and subsequent soil samples SW03 and SW04 were collected from the sidewalls of the excavation at depths ranging from the ground surface to 2 feet bgs. Laboratory analytical results for excavation soil sample FS01A, FS02A, SW03, and SW04 indicated all concentrations were compliant with the Site Closure Criteria. The excavation extent and excavation soil sample locations are presented on Figure 3. Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included as Appendix B.

The excavation area measured approximately 331 square feet. A total of approximately 25 cubic yards of impacted soil were removed during the excavation activities and transported and properly disposed of at the Lea Land, LLC in New Mexico.

## CLOSURE REQUEST

Excavation activities were conducted at the Site to address the January 2024 denial of the original *Deferral Request*, (Appendix C). Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated all COCs were compliant with the Site Closure Criteria. Based on soil sample analytical results, no further remediation was required.

Excavation of impacted soil has mitigated impacts at this Site. BTA believes these remedial actions are protective of human health, the environment, and groundwater. As such, BTA respectfully requests closure for Incident Numbers nRM2024742676 and nAPP2313656375.

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

Sincerely,

**Ensolum, LLC**

A handwritten signature in black ink that reads "Hadlie Green".

Hadlie Green  
Project Geologist

A handwritten signature in black ink that reads "Daniel R. Moir".

Daniel R. Moir, PG (Licensed in TX & WY)  
Senior Managing Geologist

cc: Ray Ramos, BTA  
Mr. Lionel Onsurez

BTA Oil Producers, LLC  
Closure Request  
Carrasco 14-1



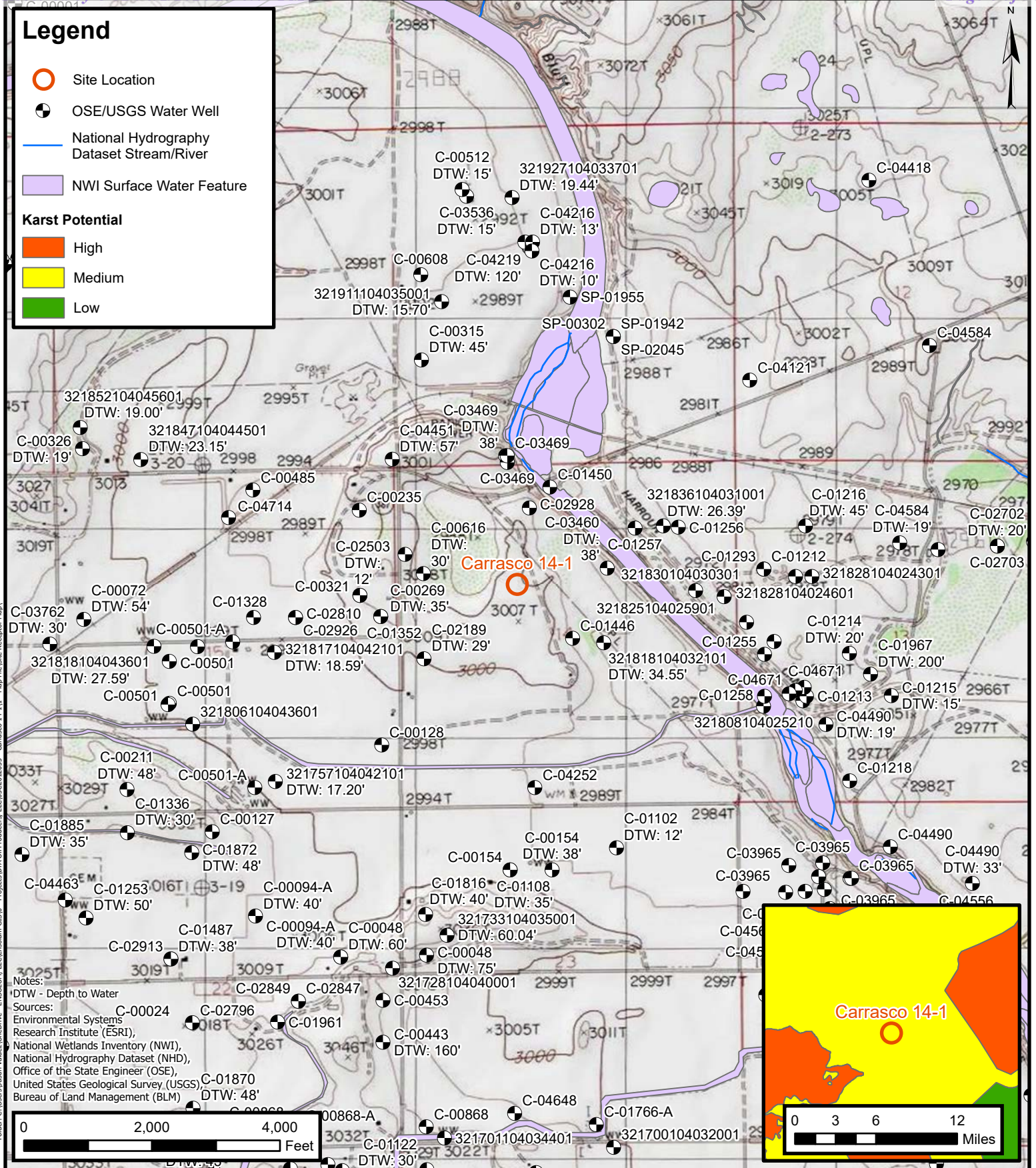
Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Photographic Log
Appendix B	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix C	<i>Deferral Request</i> , dated August 1, 2023



FIGURES



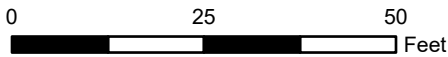


Legend

- Delineation Soil Sample in Compliance with Closure Criteria
- Delineation Soil Sample with Concentrations Previously Exceeding Closure Criteria
- Earthen Berm



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



Sources: Environmental Systems Research Institute (ESRI)

Delineation Soil Sample Locations

BTA Oil Producers

Carrasco 14-1

Incident Number: nAPP2313656375

Unit F, Sec 14, T23S, R28E

Eddy County, New Mexico

FIGURE

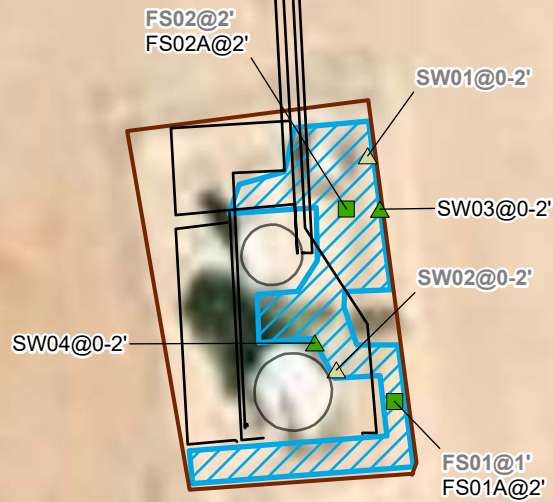
2



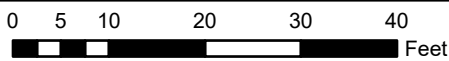


## Legend

- Excavation Floor  
Sample in Compliance with Closure Criteria
- ▲ Excavation Sidewall  
Sample in Compliance with Closure Criteria
- △ Excavated Sidewall Sample
- Utility Lines
- Earthen Berm
- ▨ Excavation Extent
- Production Equipment



Notes:  
 Sample ID @ Depth Below Ground Surface.  
 Samples in bold indicate sample exceeded applicable closure criteria.  
 Grey text indicate soil sample was removed during excavation activities.



Sources: Environmental Systems Research Institute (ESRI)

## Excavation Soil Sample Locations

BTA Oil Producers, LLC  
 Carrasco 14-1

Incident Number: nRM2024742676 and nAPP2313656375  
 Unit F, Section 14, T23S, R28E  
 Eddy County, New Mexico

FIGURE

2







TABLES



**TABLE 1**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
**Carrasco 14-1**  
**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
Delineation Soil Samples										
BH01	06/06/2023	0.5	<0.050	1.33	57.5	1,110	198	1,168	1,366	64.0
BH01A	06/06/2023	1	<0.050	7.60	469	33,500	8,070	33,969	42,039	352
BH01B	06/06/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
BH01C	06/06/2023	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112
BH01D	06/06/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144
SS01	07/12/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SS01A	07/12/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SS02	07/12/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SS02A	07/12/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SS03	07/12/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SS03A	07/12/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144
SS04	07/12/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SS04A	07/12/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
Excavation Soil Samples										
FS01	02/19/2024	1	<0.050	<0.300	<10.0	208	71.9	208	280	2,080
FS01A	07/09/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
FS02	02/19/2024	2	<0.050	<0.300	<10.0	1,500	534	1,500	2,034	336
FS02A	07/09/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW01	02/19/2024	0 - 2	<0.050	<0.300	<10.0	88.6	65.0	88.6	154	1,230
SW02	02/19/2024	0 - 2	<0.050	<0.300	<10.0	87.2	44.8	87.2	132	1,440
SW03	07/09/2024	0 - 2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW04	07/09/2024	0 - 2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0

## Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

NMAC: New Mexico Administrative Code

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

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

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

**Grey** text indicates sample that has been excavated.



## APPENDIX A

### Photographic Log

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**Photographic Log**

BTA Oil Producers, LLC

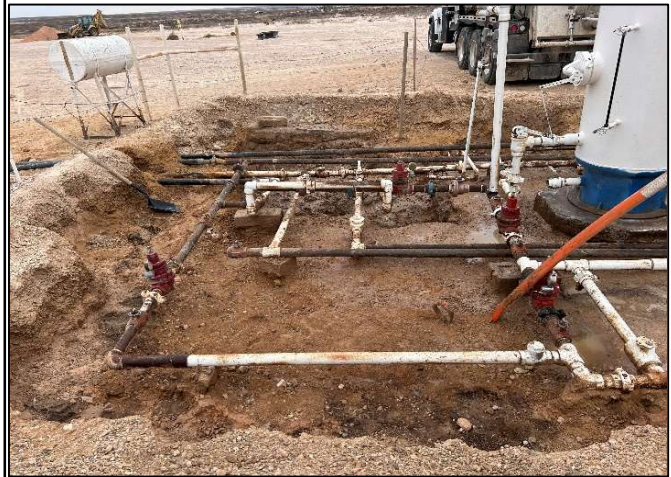
Carrasco 14-1

Incident Numbers nRM2024742676 &amp; nAPP2313656375



Photograph: 1  
Description: Excavation activities  
View: West

Date: 2/9/2024



Photograph: 2  
Description: Excavation activities  
View: West

Date: 2/9/2024



Photograph: 3  
Description: Excavation activities  
View: Northwest

Date: 7/9/2024



Photograph: 4  
Description: Excavation activities  
View: West

Date: 7/9/2024





## APPENDIX B

### Laboratory Analytical Reports & Chain of Custody Documentation

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

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February 22, 2024

HADLIE GREEN

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: CARRASCO 14-1H

Enclosed are the results of analyses for samples received by the laboratory on 02/19/24 14:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	02/19/2024	Sampling Date:	02/19/2024
Reported:	02/22/2024	Sampling Type:	Soil
Project Name:	CARRASCO 14-1H	Sampling Condition:	Cool & Intact
Project Number:	03C2012055	Sample Received By:	Dionica Hinojos
Project Location:	BTA( 32.3076687 - 104.0606657 )		

**Sample ID: FS01 1' (H240791-01)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/20/2024	ND	2.24	112	2.00	0.121	
Toluene*	<0.050	0.050	02/20/2024	ND	2.21	110	2.00	0.355	
Ethylbenzene*	<0.050	0.050	02/20/2024	ND	2.18	109	2.00	0.927	
Total Xylenes*	<0.150	0.150	02/20/2024	ND	6.38	106	6.00	0.691	
Total BTEX	<0.300	0.300	02/20/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2080	16.0	02/20/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/20/2024	ND	200	100	200	0.616	
DRO >C10-C28*	208	10.0	02/20/2024	ND	200	100	200	0.0439	
EXT DRO >C28-C36	71.9	10.0	02/20/2024	ND					

Surrogate: 1-Chlorooctane 93.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 64.4 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	02/19/2024	Sampling Date:	02/19/2024
Reported:	02/22/2024	Sampling Type:	Soil
Project Name:	CARRASCO 14-1H	Sampling Condition:	Cool & Intact
Project Number:	03C2012055	Sample Received By:	Dionica Hinojos
Project Location:	BTA( 32.3076687 - 104.0606657 )		

**Sample ID: FS02 2' (H240791-02)**

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	02/20/2024	ND	2.24	112	2.00	0.121		
Toluene*	<0.050	0.050	02/20/2024	ND	2.21	110	2.00	0.355		
Ethylbenzene*	<0.050	0.050	02/20/2024	ND	2.18	109	2.00	0.927		
Total Xylenes*	<0.150	0.150	02/20/2024	ND	6.38	106	6.00	0.691		
Total BTEX	<0.300	0.300	02/20/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	336	16.0	02/20/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/20/2024	ND	200	100	200	0.616	
DRO >C10-C28*	1500	10.0	02/20/2024	ND	200	100	200	0.0439	
EXT DRO >C28-C36	534	10.0	02/20/2024	ND					

Surrogate: 1-Chlorooctane 101 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.7 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

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

Received:	02/19/2024	Sampling Date:	02/19/2024
Reported:	02/22/2024	Sampling Type:	Soil
Project Name:	CARRASCO 14-1H	Sampling Condition:	Cool & Intact
Project Number:	03C2012055	Sample Received By:	Dionica Hinojos
Project Location:	BTA( 32.3076687 - 104.0606657 )		

**Sample ID: SW01 0-2' (H240791-03)**

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	02/20/2024	ND	2.24	112	2.00	0.121	
Toluene*	<0.050	0.050	02/20/2024	ND	2.21	110	2.00	0.355	
Ethylbenzene*	<0.050	0.050	02/20/2024	ND	2.18	109	2.00	0.927	
Total Xylenes*	<0.150	0.150	02/20/2024	ND	6.38	106	6.00	0.691	
Total BTEX	<0.300	0.300	02/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.8 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1230	16.0	02/20/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	02/20/2024	ND	184	92.1	200	1.69		
DRO >C10-C28*	88.6	10.0	02/20/2024	ND	198	98.8	200	0.273		
EXT DRO >C28-C36	65.0	10.0	02/20/2024	ND						

Surrogate: 1-Chlorooctane 70.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 75.5 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	02/19/2024	Sampling Date:	02/19/2024
Reported:	02/22/2024	Sampling Type:	Soil
Project Name:	CARRASCO 14-1H	Sampling Condition:	Cool & Intact
Project Number:	03C2012055	Sample Received By:	Dionica Hinojos
Project Location:	BTA( 32.3076687 - 104.0606657 )		

**Sample ID: SW02 0-2' (H240791-04)**

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	02/20/2024	ND	2.24	112	2.00	0.121	
Toluene*	<0.050	0.050	02/20/2024	ND	2.21	110	2.00	0.355	
Ethylbenzene*	<0.050	0.050	02/20/2024	ND	2.18	109	2.00	0.927	
Total Xylenes*	<0.150	0.150	02/20/2024	ND	6.38	106	6.00	0.691	
Total BTEX	<0.300	0.300	02/20/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1440	16.0	02/20/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/20/2024	ND	184	92.1	200	1.69	
DRO >C10-C28*	87.2	10.0	02/20/2024	ND	198	98.8	200	0.273	
EXT DRO >C28-C36	44.8	10.0	02/20/2024	ND					

Surrogate: 1-Chlorooctane 83.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 93.6 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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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

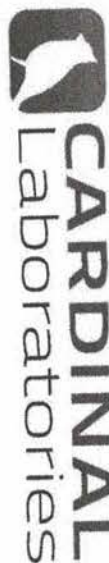
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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]





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

July 17, 2024

HADLIE GREEN

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: CARRASCO 14-1H

Enclosed are the results of analyses for samples received by the laboratory on 07/11/24 14:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	07/11/2024	Sampling Date:	07/09/2024
Reported:	07/17/2024	Sampling Type:	Soil
Project Name:	CARRASCO 14-1H	Sampling Condition:	Cool & Intact
Project Number:	03C2012055	Sample Received By:	Tamara Oldaker
Project Location:	BTA( 32.3076687 - 104.0606657 )		

**Sample ID: FS 01 A 2' (H244144-01)**

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	07/13/2024	ND	2.17	108	2.00	7.88	
Toluene*	<0.050	0.050	07/13/2024	ND	2.00	100	2.00	6.71	
Ethylbenzene*	<0.050	0.050	07/13/2024	ND	2.04	102	2.00	7.09	
Total Xylenes*	<0.150	0.150	07/13/2024	ND	6.03	100	6.00	7.44	
Total BTEX	<0.300	0.300	07/13/2024	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	48.0	16.0	07/15/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/12/2024	ND	206	103	200	2.77	
DRO >C10-C28*	<10.0	10.0	07/12/2024	ND	218	109	200	5.48	
EXT DRO >C28-C36	<10.0	10.0	07/12/2024	ND					

Surrogate: 1-Chlorooctane 104 % 48.2-134

Surrogate: 1-Chlorooctadecane 105 % 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: 07/11/2024  
Reported: 07/17/2024  
Project Name: CARRASCO 14-1H  
Project Number: 03C2012055  
Project Location: BTA( 32.3076687 - 104.0606657 )

Sampling Date: 07/09/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: FS 02 2' (H244144-02)**

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	07/13/2024	ND	2.17	108	2.00	7.88		
Toluene*	<0.050	0.050	07/13/2024	ND	2.00	100	2.00	6.71		
Ethylbenzene*	<0.050	0.050	07/13/2024	ND	2.04	102	2.00	7.09		
Total Xylenes*	<0.150	0.150	07/13/2024	ND	6.03	100	6.00	7.44		
Total BTEX	<0.300	0.300	07/13/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	07/15/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/12/2024	ND	206	103	200	2.77	
DRO >C10-C28*	<10.0	10.0	07/12/2024	ND	218	109	200	5.48	
EXT DRO >C28-C36	<10.0	10.0	07/12/2024	ND					

Surrogate: 1-Chlorooctane 106 % 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: 07/11/2024  
Reported: 07/17/2024  
Project Name: CARRASCO 14-1H  
Project Number: 03C2012055  
Project Location: BTA( 32.3076687 - 104.0606657 )

Sampling Date: 07/09/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: SW 03 0-2' (H244144-03)**

BTX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/13/2024	ND	2.17	108	2.00	7.88	
Toluene*	<0.050	0.050	07/13/2024	ND	2.00	100	2.00	6.71	
Ethylbenzene*	<0.050	0.050	07/13/2024	ND	2.04	102	2.00	7.09	
Total Xylenes*	<0.150	0.150	07/13/2024	ND	6.03	100	6.00	7.44	
Total BTX	<0.300	0.300	07/13/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	07/15/2024	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/12/2024	ND	206	103	200	2.77	
DRO >C10-C28*	<10.0	10.0	07/12/2024	ND	218	109	200	5.48	
EXT DRO >C28-C36	<10.0	10.0	07/12/2024	ND					

Surrogate: 1-Chlorooctane 100 % 48.2-134

Surrogate: 1-Chlorooctadecane 99.4 % 49.1-148

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**Analytical Results For:**

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

Received: 07/11/2024  
Reported: 07/17/2024  
Project Name: CARRASCO 14-1H  
Project Number: 03C2012055  
Project Location: BTA( 32.3076687 - 104.0606657 )

Sampling Date: 07/09/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: SW 04 0-2' (H244144-04)**

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	07/13/2024	ND	2.17	108	2.00	7.88		
Toluene*	<0.050	0.050	07/13/2024	ND	2.00	100	2.00	6.71		
Ethylbenzene*	<0.050	0.050	07/13/2024	ND	2.04	102	2.00	7.09		
Total Xylenes*	<0.150	0.150	07/13/2024	ND	6.03	100	6.00	7.44		
Total BTEX	<0.300	0.300	07/13/2024	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	07/15/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/12/2024	ND	206	103	200	2.77	
DRO >C10-C28*	<10.0	10.0	07/12/2024	ND	218	109	200	5.48	
EXT DRO >C28-C36	<10.0	10.0	07/12/2024	ND					

Surrogate: 1-Chlorooctane 96.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager

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---

**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

---

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

---

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC	BILL TO	ANALYSIS REQUEST
Project Manager: Hadlie Green	P.O. #:	
Address: 3122 National Parks Hwy	Company: BTA Oil	
City: Carlsbad	Attn: Ray Ramos	
Phone #: 432 557-8895	Address: 104 S Pecos St	
Fax #: 505 557-8895	City: Midland	
Project #: 03C2012055	State: TX Zip: 79701	
Project Name: Carrasco 14-1	Phone #:	
Project Location:	Fax #:	
Sampler Name: Connor Whitman		

Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX					PRESERV.		DATE	TIME										
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:												
H244144	FS01A	2'	C	1								7-9-24	8:50	BTEX									
	FS02	2'	C	1									8:55	TPH									
	SW03	0-2'											9:10	Chloride 4500									
	SW04	0-2'											9:15										

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Relinquished By: CHA	Date: 7-11-24	Received By: [Signature]	Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Phone #:
Relinquished By:	Date: 7-14-24	Received By: [Signature]	All Results are emailed. Please provide Email address: HGreen@ensolum.com
Delivered By: (Circle One)	Observed Temp. °C: 3.3	Sample Condition: <input checked="" type="checkbox"/> Cool <input type="checkbox"/> Intact	Turnaround Time: Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/>
Sampler - UPS - Bus - Other:	Corrected Temp. °C:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Thermometer ID: #1140
		<input type="checkbox"/> Yes <input type="checkbox"/> No	Correction Factor: 0.5°C
			Standard <input checked="" type="checkbox"/> Bacteria (only) Sample Condition
			Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No
			Observed Temp. °C
			Corrected Temp. °C

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



## APPENDIX C

*Deferral Request, dated August 1, 2023*

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August 1, 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: Deferral Request  
Carrasco 14-1  
Incident Numbers nRM2024742676 and nAPP2313656375  
Eddy County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of BTA Oil Producers, LLC (BTA), has prepared this *Deferral Request* to document assessment and soil sampling activities performed at the Carrasco 14-1 (Site). The purpose of the Site assessment and soil sampling activities was to assess for the presence or absence of impacts to soil resulting from two releases of crude oil within an earthen containment at the Site. Based on field observations, field screening activities, and soil sample laboratory analytical results, BTA is submitting this *Deferral Request*, describing Site assessment and delineation activities that have occurred and requesting deferral of final remediation for Incident Numbers nRM2024742676 and nAPP2313656375 until there is major Site reconstruction or the well is plugged and abandoned and the oil and gas production equipment are removed in order to assess the impacted soil.

**SITE DESCRIPTION AND RELEASE SUMMARY**

The Site is located in Unit F, Section 14, Township 23 South, Range 28 East, in Eddy County, New Mexico (32.3076687°, -104.0606657°) and is associated with oil and gas exploration and production operations on private land owned by Mr. Lionel Onsurez.

Incident Number nRM2024742676

On August 28, 2020, a hole in an oil tank developed while a load of crude oil was being removed from the tank by a hot oiler, resulting in the release of approximately 67 barrels (bbls) of crude oil into the earthen containment. No free-standing fluids were recovered. BTA reported the release immediately to the New Mexico Oil Conservation Division (NMOCD) via email and submitted a Release Notification Form C-141 (Form C-141) on September 1, 2020. The release was assigned Incident Number nRM2024742676.

Incident Number nAPP2313656375

On May 5, 2023, internal corrosion of a 2-inch metal recirculating line resulted in the release of approximately 35 bbls of crude oil into the earthen containment. A vacuum truck was immediately dispatched to the Site to recover all free-standing fluids; approximately 25 bbls of crude oil were recovered. BTA reported the release to the NMOCD immediately via email and submitted a (Form C-141 on May 5, 2023. The release was assigned Incident Number nAPP2313656375.



## SITE CHARACTERIZATION AND CLOSURE CRITERIA

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

Depth to groundwater at the Site is estimated to be 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 New Mexico Office of the State Engineer (NMOSE) well C-03460-POD 1, located approximately 0.27 miles east of the Site. The groundwater well has a reported depth to groundwater of 38 feet bgs and a total depth of 100 feet bgs. All wells used for depth to groundwater determination are depicted on Figure 1 and the associated well records are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is a river, located approximately 1,360 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 greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (medium potential karst designation area). Site receptors are identified on Figure 1.

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

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

## SITE ASSESSMENT ACTIVITIES

On June 6, 2023 and July 12, 2023, Site assessment activities were conducted to evaluate the release extents based on information provided on the Form C-141 and visual observations. One borehole (BH01) was advanced via hydrovac within the earthen containment to assess the vertical extent of potentially impacted soil. Five discrete delineation soil samples (BH01/BH01A/BH01B/BH01C/BH01D) were collected from the borehole at depths ranging from 0.5 feet to 4 feet bgs. Four boreholes (SS01/SS01A through SS04/SS04A) were advanced via hand-auger around the earthen containment to confirm the lateral extent of the release. Two discrete delineation soil samples were collected from the boreholes at depths of 0.5 feet and 2 feet bgs.

Soil from the delineation samples was field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The delineation soil sample locations are depicted on Figure 2. Field screening results and observations from the delineation soil samples were documented on lithologic/soil sampling logs, which are included as Appendix B. Photographic documentation was conducted at the Site. A photographic log is included in Appendix C.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Cardinal Laboratories (Cardinal) in Hobbs, New Mexico, for

BTA Oil Producers, LLC  
Deferral Request  
Carrasco 14-1



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

## LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for delineation soil samples SS01/SS01A through SS04/SS04A, collected around the earthen containment at depths of 0.5 feet and 2 feet bgs, indicated all COC concentrations were compliant with the Site Closure Criteria and successfully define the lateral extent of the release.

Laboratory analytical results for delineation soil samples BH01 and BH01A, collected within the earthen containment at depths of 0.5 feet and 1-foot bgs, respectively, indicated TPH concentrations exceeded the Site Closure Criteria. Subsequent delineation samples BH01B, BH01C, and BH01D, collected at depths ranging from 2 feet to 4 feet bgs, indicated all COC concentrations were compliant with the Site Closure Criteria and successfully define the vertical extent of the release. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix D.

## DEFERRAL REQUEST

Results of the Site assessment indicated the presence of impacts to soil, specifically concentrations of TPH exceeding the Closure Criteria within the top 2 feet of soil inside the earthen bermed containment and in the immediate vicinity of production tanks, equipment, and active flowlines. As such, BTA is requesting a deferral of final remediation due to the presence of active production equipment and surface pipelines within the earthen containment. The impacted soil is limited to the area immediately beneath the earthen containment and active production equipment, where remediation could compromise the integrity of the equipment or would require a major facility deconstruction to safely remediate.

The impacted soil remaining in place beneath the containment is delineated vertically by delineation soil sample BH01B, collected at 2 feet bgs, and laterally by delineation soil samples SS01/SS01A through SS04/SS04A. A maximum of 79 cubic yards of TPH-impacted soil remains in place beneath the containment assuming a maximum 2-foot depth based on delineation soil samples listed above.

BTA does not believe deferment will result in imminent risk to human health, the environment, or groundwater. Depth to groundwater has been determined to be less than 50 feet bgs, the release was contained laterally by the earthen containment, and the impacted soil remaining in place is limited to the area immediately beneath the containment.

Based on the presence of active production equipment within the release area and the complete lateral and vertical delineation of impacted soil remaining in place, BTA requests deferral of final remediation for Incident Numbers nRM2024742676 and nAPP2313656375 until final reclamation of the well pad or major construction, whichever comes first.

BTA Oil Producers, LLC  
Deferral Request  
Carrasco 14-1



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

Sincerely,

**Ensolum, LLC**

A handwritten signature in black ink that reads "Hadlie Green".

Hadlie Green  
Project Geologist

A handwritten signature in black ink that reads "Daniel R. Moir".

Daniel R. Moir, PG  
Senior Managing Geologist

cc: Kelton Beaird, BTA  
Mr. Lionel Onsurez

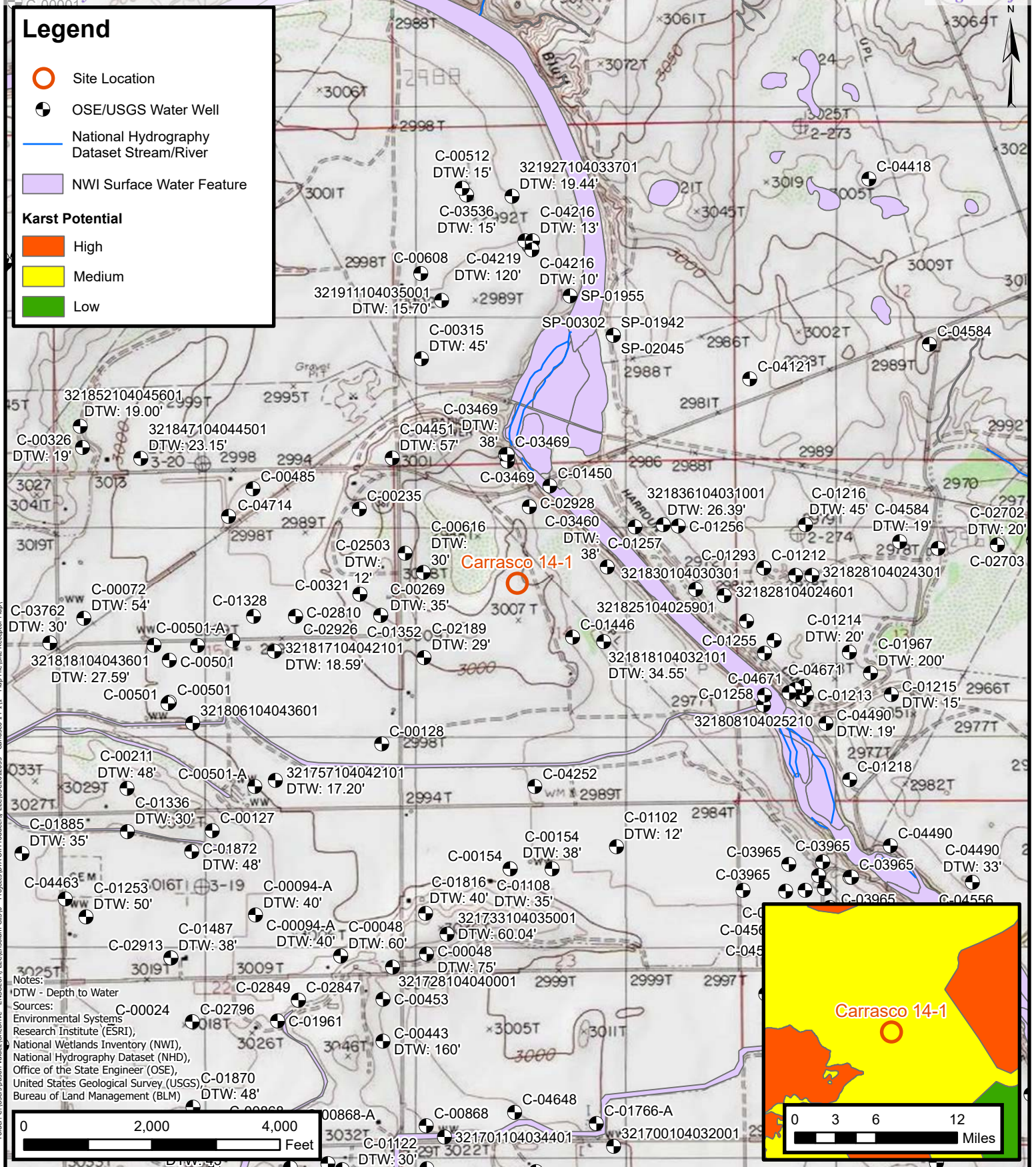
Appendices:

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



FIGURES





## Site Receptor Map

BTA Oil Producers  
 Carrasco 14-1  
 Incident Numbers: NRM2024742676 & nAPP2313656375  
 Unit F, Sec 14, T23S, R28E  
 Eddy County, New Mexico

**FIGURE**

**1**

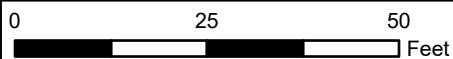


**Legend**

- Delineation Soil Sample in Compliance with Closure Criteria
- Delineation Soil Sample with Concentrations Previously Exceeding Closure Criteria
- Earthen Berm

**Notes:**

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



Sources: Environmental Systems Research Institute (ESRI)

**Delineation Soil Sample Locations**

BTA Oil Producers

Carrasco 14-1

Incident Numbers: NRM2024742676 &amp; nAPP2313656375

Unit F, Sec 14, T23S, R28E

Eddy County, New Mexico

**FIGURE****2**



TABLES



**TABLE 1**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
 Carrasco 14-1  
 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	1,000	2,500	20,000
Delineation Soil Samples										
BH01	06/06/2023	0.5	<0.050	1.33	57.5	1,110	198	<b>1,168</b>	1,366	64.0
BH01A	06/06/2023	1	<0.050	7.60	469	33,500	8,070	<b>33,969</b>	<b>42,039</b>	352
BH01B	06/06/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
BH01C	06/06/2023	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112
BH01D	06/06/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144
SS01	07/12/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SS01A	07/12/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SS02	07/12/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SS02A	07/12/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SS03	07/12/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SS03A	07/12/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144
SS04	07/12/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SS04A	07/12/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0

## Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

NMAC: New Mexico Administrative Code

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

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

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon



## APPENDIX A

### Referenced Well Records

---



# WELL RECORD & LOG

STATE ENGINEER OFFICE  
ROSSELL, NEW MEXICO  
OFFICE OF THE STATE ENGINEER  
[www.ose.state.nm.us](http://www.ose.state.nm.us)

2010 OCT 13 PM 1 22

1. GENERAL AND WELL LOCATION	POD NUMBER (WELL NUMBER) <b>C-03460-POD 1</b>				OSE FILE NUMBER(S) <b>C-3460-EXPL</b>			
	WELL OWNER NAME(S) <b>Hungry Horse, LLC</b>				PHONE (OPTIONAL) <b>575-393-3386</b>			
	WELL OWNER MAILING ADDRESS <b>PO Box 1058</b>				CITY <b>Hobbs</b>		STATE <b>NM</b>	
					ZIP <b>88241</b>			
WELL LOCATION (FROM GPS)	DEGREES		MINUTES		SECONDS			
	LATITUDE <b>N 32</b>		<b>18</b>		<b>30</b>		<b>N</b>	
	LONGITUDE <b>W 104</b>		<b>3</b>		<b>22</b>		<b>W</b>	
* ACCURACY REQUIRED: ONE TENTH OF A SECOND								
* DATUM REQUIRED: WGS 84								
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS <b>West side of Pecos River approx .50 mile south of CR 31 Bridge</b>								
2. OPTIONAL	(2.5 ACRE) <b>NE 1/4</b>		(10 ACRE) <b>NW 1/4</b>		(40 ACRE) <b>SW 1/4</b>		(160 ACRE) <b>NE 1/4</b>	
	SECTION <b>14</b>		TOWNSHIP <b>23</b>		RANGE <b>28</b>		<input type="checkbox"/> NORTH <input checked="" type="checkbox"/> SOUTH <input checked="" type="checkbox"/> EAST <input type="checkbox"/> WEST	
	SUBDIVISION NAME		LOT NUMBER		BLOCK NUMBER		UNIT/TRACT	
	HYDROGRAPHIC SURVEY		MAP NUMBER		TRACT NUMBER			
3. DRILLING INFORMATION	LICENSE NUMBER <b>W#1682</b>		NAME OF LICENSED DRILLER <b>Hungry Horse, LLC John Morris</b>				NAME OF WELL DRILLING COMPANY <b>Hungry Horse, LLC</b>	
	DRILLING STARTED <b>8 OCT 10</b>		DRILLING ENDED <b>8 OCT 10</b>		DEPTH OF COMPLETED WELL (FT) <b>Bore Hole</b>		BORE HOLE DEPTH (FT) <b>100'</b>	
					DEPTH WATER FIRST ENCOUNTERED (FT) <b>38'</b>			
	COMPLETED WELL IS:		<input type="checkbox"/> ARTESIAN		<input type="checkbox"/> DRY HOLE		<input type="checkbox"/> SHALLOW (UNCONFINED) <b>N/A</b>	
	DRILLING FLUID:		<input checked="" type="checkbox"/> AIR		<input type="checkbox"/> MUD		<input type="checkbox"/> ADDITIVES - SPECIFY:	
	DRILLING METHOD:		<input checked="" type="checkbox"/> ROTARY		<input type="checkbox"/> HAMMER		<input type="checkbox"/> CABLE TOOL	
							<input type="checkbox"/> OTHER - SPECIFY:	
	DEPTH (FT)		BORE HOLE DIA. (IN)		CASING MATERIAL		CONNECTION TYPE (CASING)	
	FROM	TO						
4. WATER BEARING STRATA	DEPTH (FT)		THICKNESS (FT)		FORMATION DESCRIPTION OF PRINCIPAL WATER-BEARING STRATA (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)			
	FROM	TO						
	<b>38'</b>	<b>50</b>	<b>12'</b>		<b>Tan Sandy Gypsum &amp; Pen Gravel</b>			
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA <b>N/A</b>						TOTAL ESTIMATED WELL YIELD (GPM) <b>N/A</b>		

FOR OSE INTERNAL USE

WELL RECORD &amp; LOG (Version 6/9/08)

FILE NUMBER **C-3460**POD NUMBER **C-03460-POD 1**TRN NUMBER **467754**LOCATION **23.28.14.2312**

PAGE 1 OF 2

<b>5. SEAL AND PUMP</b>	TYPE OF PUMP: <input type="checkbox"/> SUBMERSIBLE <input type="checkbox"/> JET <input type="checkbox"/> NO PUMP - WELL NOT EQUIPPED <input type="checkbox"/> TURBINE <input type="checkbox"/> CYLINDER <input type="checkbox"/> OTHER - SPECIFY:						
	ANNULAR SEAL AND GRAVEL PACK	DEPTH (FT)		BORE HOLE DIA. (IN)	MATERIAL TYPE AND SIZE	AMOUNT (CUBIC FT)	METHOD OF PLACEMENT
		FROM	TO				

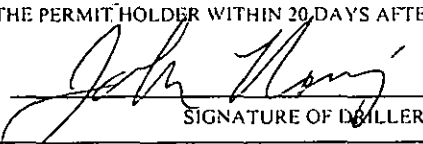
  

<b>6. GEOLOGIC LOG OF WELL</b>	DEPTH (FT)		THICKNESS (FT)	COLOR AND TYPE OF MATERIAL ENCOUNTERED (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)	WATER BEARING?	
	FROM	TO			<input type="checkbox"/> YES	<input type="checkbox"/> NO
	Surface	10'	10'	Sandy Red Topsoil	<input type="checkbox"/> YES	<input type="checkbox"/> NO
	10'	12'	2	Sandy Red Topsoil w/ Gravel	<input type="checkbox"/> YES	<input type="checkbox"/> NO
	12'	20'	8	Hard Caliche Rock Consolidated	<input type="checkbox"/> YES	<input type="checkbox"/> NO
	20'	30'	10	Moist Tan Sand w/ Pea Gravel	<input type="checkbox"/> YES	<input type="checkbox"/> NO
	30'	50'	20	Tan Sandy Gypsum w/ Pea Gravel (Water at 38')	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
	50'	75'	25	Blue/Gray Gypsum	<input type="checkbox"/> YES	<input type="checkbox"/> NO
	75'	80'	5	Blue Sandy Clay	<input type="checkbox"/> YES	<input type="checkbox"/> NO
	80'	100'	20	Red Sandy Clay (Water at 92')	<input type="checkbox"/> YES	<input type="checkbox"/> NO
					<input type="checkbox"/> YES	<input type="checkbox"/> NO
					<input type="checkbox"/> YES	<input type="checkbox"/> NO
					<input type="checkbox"/> YES	<input type="checkbox"/> NO
	ATTACH ADDITIONAL PAGES AS NEEDED TO FULLY DESCRIBE THE GEOLOGIC LOG OF THE WELL					

<b>7. TEST &amp; ADDITIONAL INFO.</b>	WELL TEST	METHOD: <input type="checkbox"/> BAILER <input type="checkbox"/> PUMP <input type="checkbox"/> AIR LIFT <input type="checkbox"/> OTHER - SPECIFY:	
	TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.		
	ADDITIONAL STATEMENTS OR EXPLANATIONS: <i>Well plugged with Bentite + cement (6 Bags)</i>		

<b>8. SIGNATURE</b>	THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:	
	 SIGNATURE OF DRILLER	10-11-10 DATE

FOR USE INTERNAL USE

WELL RECORD &amp; LOG (Version 6/9/08)

FILE NUMBER <i>C-3460</i>	POD NUMBER <i>C-3460-P001</i>	TRN NUMBER <i>467754</i>	PAGE 2 OF 2
LOCATION <i>23.28.14. 2312</i>			



National Water Information System: Web Interface


USGS Water Resources

Data Category:  
Groundwater

Geographic Area:  
New Mexico

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 New Mexico

Click to hide state-specific text

 Important: [Next Generation Monitoring Location Page](#)

Search Results -- 1 sites found

Agency code = usgs  
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

Eddy County, New Mexico  
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

<a href="#">Table of data</a>
<a href="#">Tab-separated data</a>
<a href="#">Graph of data</a>
<a href="#">Reselect period</a>

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement
1946-11-06			D 62610		2948.34	NGVD29	1		Z	
1946-11-06			D 62611		2949.90	NAVD88	1		Z	
1946-11-06			D 72019	31.10			1		Z	
1947-02-08			D 62610		2948.34	NGVD29	1		Z	
1947-02-08			D 62611		2949.90	NAVD88	1		Z	
1947-02-08			D 72019	31.10			1		Z	
1947-09-23			D 62610		2948.19	NGVD29	1		Z	
1947-09-23			D 62611		2949.75	NAVD88	1		Z	
1947-09-23			D 72019	31.25			1		Z	
1948-01-12			D 62610		2944.89	NGVD29	1		Z	
1948-01-12			D 62611		2946.45	NAVD88	1		Z	
1948-01-12			D 72019	34.55			1		Z	
1948-02-09			D 62610		2944.50	NGVD29	1		Z	
1948-02-09			D 62611		2946.06	NAVD88	1		Z	

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement
1948-02-09			D	72019	34.94		1	Z		

Explanation		
Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	A	Approved for publication -- Processing and review completed.

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**Title:** Groundwater for New Mexico: Water Levels  
**URL:** <https://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?>




Page Contact Information: [New Mexico Water Data Maintainer](#)  
Page Last Modified: 2023-07-31 08:34:30 EDT  
0.29   0.26 nadww02





## APPENDIX B

### Lithologic Soil Sampling Logs


---


<div> <b>ENSOLUM</b></div>								Sample Name: BH01		Date: 6/6/2023	
								Site Name: Carrasco 14-1			
								Incident Number: nAPP2313656375			
								Job Number: 03C2012055			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								Logged By: Ronni Hayes		Method: Hydrovac	
Coordinates: 32.3071935, -104.0605970								Hole Diameter: ~1'		Total Depth: 4'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
						0					
Wet	347.2	168.7	Y	BH01	0.5	0.5	SP-SM	SAND, medium brown, poorly sorted, some lime-stone gravel, stained, odor			
Wet	<173.8	345.4	N	BH01A	1	1	SP-SM	SAA (same as above)			
Wet	<173.8	0.6	N	BH01B	2	2	SP-SM	SAND, light brown, poorly sorted, abundant rocks, no staining, no odor			
Wet	<173.8	0.4	N	BH01C	3	3	SP-SM	SAA			
Wet	173.8	3.3	N	BH01D	4	4	CHHE	Caliche, light tan-white, no stain, odor, poorly sorted, some sand			
TD at 4 ft bgs											

								Sample Name: SS01		Date: 7/12/2023	
								Site Name: Carrasco 14-1			
								Incident Number: nAPP2313656375			
								Job Number: 03C2012055			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								Logged By: Hadlie Green		Method: Hand Auger	
Coordinates: 32.307253, -104.060586								Hole Diameter: 4"		Total Depth: 2'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included. ND - Non Detect											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
Dry	ND	0.0	N	SS01	0.5	0	SP-SM	SAND, medium brown, poorly sorted, some limestone gravel, no stain,no odor			
	ND	0.0	N		0.5	1		SP-SM	SAA		
Dry	ND	0.0	N	SS01A	2	2	SP-SM	SAND, light brown, poorly sorted, abundant gravel, no staining, no odor			
TD @ 2 feet bgs											

								Sample Name: SS02		Date: 7/12/2023	
								Site Name: Carrasco 14-1			
								Incident Number: nAPP2313656375			
								Job Number: 03C2012055			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								Logged By: Hadlie Green		Method: Hand Auger	
Coordinates: 32.307171, -104.060531								Hole Diameter: 4"		Total Depth: 2'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included. ND - Non Detect											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
Dry	ND	0.0	N	SS02	0.5	0	SP-SM	SAND, medium brown, poorly sorted, some limestone gravel, no stain,no odor			
Dry	ND	0.0	N			0.5	SP-SM	SAA			
Dry	ND	0.0	N	SS02	2	1	SP-SM	SAND, light brown, poorly sorted, abundant gravel, no staining, no odor			
TD @ 2 feet bgs											



								Sample Name: SS03		Date: 7/12/2023			
								Site Name: Carrasco 14-1					
								Incident Number: nAPP2313656375					
								Job Number: 03C2012055					
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								Logged By: Hadlie Green		Method: Hand Auger			
Coordinates: 32.307059, -104.060618								Hole Diameter: 4"		Total Depth: 2'			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included. ND - Non Detect													
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions					
Dry	ND	0.0	N	SS03	0.5	0	SP-SM	SAND, medium brown, poorly sorted, some limestone gravel, no stain,no odor  SAA  SAND, light brown, poorly sorted, abundant gravel, no staining, no odor					
Dry	ND	0.0	N			0.5	SP-SM						
Dry	144	0.0	N	SS03A	2	2	SP-SM						
TD @ 2 feet bgs													

								Sample Name: SS04		Date: 7/12/2023			
								Site Name: Carrasco 14-1					
								Incident Number: nAPP2313656375					
								Job Number: 03C2012055					
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								Logged By: Hadlie Green		Method: Hand Auger			
Coordinates: 32.307168, -104.060697								Hole Diameter: 4"		Total Depth: 2'			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included. ND - Non Detect													
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions					
Dry	ND	0.0	N	SS04	0.5	0	SP-SM	SAND, medium brown, poorly sorted, some limestone gravel, no stain,no odor					
Dry	ND	0.0	N			0.5	SP-SM	SAA					
Dry	ND	0.0	N	SS04A	2	1	SP-SM	SAND, light brown, poorly sorted, abundant gravel, no staining, no odor					
TD @ 2 feet bgs													



## APPENDIX C

### Photographic Log

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## Photographic Log

BTA Oil Producers, LLC

Carrasco 14-1

Incident Numbers nAPP2313656375 & nRM2024742676



Photograph 1

Date: June 6, 2023

Description: The earthen containment taken during delineation activities

View: South



Photograph 2

Date: June 6, 2023

Description: The earthen containment taken during delineation activities

View: Southeast



## APPENDIX D

### Laboratory Analytical Reports & Chain of Custody Documentation

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

June 12, 2023

HADLIE GREEN

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: CARRASCO 14-1H

Enclosed are the results of analyses for samples received by the laboratory on 06/07/23 14:20.

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](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager





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

**Analytical Results For:**

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

Received:	06/07/2023	Sampling Date:	06/06/2023
Reported:	06/12/2023	Sampling Type:	Soil
Project Name:	CARRASCO 14-1H	Sampling Condition:	Cool & Intact
Project Number:	03C2012055	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA( 32.3076687 - 104.0606657 )		

**Sample ID: BH 01 0.5' (H232898-01)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/09/2023	ND	2.22	111	2.00	1.28	
Toluene*	<b>0.087</b>	0.050	06/09/2023	ND	2.21	111	2.00	0.322	GC-NC1
Ethylbenzene*	<b>0.252</b>	0.050	06/09/2023	ND	2.26	113	2.00	1.27	GC-NC1
Total Xylenes*	<b>0.995</b>	0.150	06/09/2023	ND	6.68	111	6.00	1.15	GC-NC1
Total BTX	<b>1.33</b>	0.300	06/09/2023	ND					GC-NC1

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	<b>64.0</b>	16.0	06/08/2023	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<b>57.5</b>	10.0	06/08/2023	ND	205	103	200	19.8	
DRO >C10-C28*	<b>1110</b>	10.0	06/08/2023	ND	205	103	200	17.3	
EXT DRO >C28-C36	<b>198</b>	10.0	06/08/2023	ND					

Surrogate: 1-Chlorooctane 106 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 06/07/2023  
Reported: 06/12/2023  
Project Name: CARRASCO 14-1H  
Project Number: 03C2012055  
Project Location: BTA( 32.3076687 - 104.0606657 )

Sampling Date: 06/06/2023  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Shalyn Rodriguez

**Sample ID: BH 01 A 1' (H232898-02)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/09/2023	ND	2.22	111	2.00	1.28	
Toluene*	0.507	0.050	06/09/2023	ND	2.21	111	2.00	0.322	GC-NC1
Ethylbenzene*	0.627	0.050	06/09/2023	ND	2.26	113	2.00	1.27	GC-NC1
Total Xylenes*	6.47	0.150	06/09/2023	ND	6.68	111	6.00	1.15	GC-NC1
Total BTEX	7.60	0.300	06/09/2023	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 121 % 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	06/08/2023	ND	400	100	400	3.92	

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*	469	50.0	06/08/2023	ND	205	103	200	19.8	
DRO >C10-C28*	33500	50.0	06/08/2023	ND	205	103	200	17.3	
EXT DRO >C28-C36	8070	50.0	06/08/2023	ND					

Surrogate: 1-Chlorooctane 188 % 48.2-134

Surrogate: 1-Chlorooctadecane 1490 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	06/07/2023	Sampling Date:	06/06/2023
Reported:	06/12/2023	Sampling Type:	Soil
Project Name:	CARRASCO 14-1H	Sampling Condition:	Cool & Intact
Project Number:	03C2012055	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA( 32.3076687 - 104.0606657 )		

**Sample ID: BH 01 B 2' (H232898-03)**

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/09/2023	ND	2.22	111	2.00	1.28		
Toluene*	<0.050	0.050	06/09/2023	ND	2.21	111	2.00	0.322		
Ethylbenzene*	<0.050	0.050	06/09/2023	ND	2.26	113	2.00	1.27		
Total Xylenes*	<0.150	0.150	06/09/2023	ND	6.68	111	6.00	1.15		
Total BTEx	<0.300	0.300	06/09/2023	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	06/08/2023	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/08/2023	ND	205	103	200	19.8	
DRO >C10-C28*	<10.0	10.0	06/08/2023	ND	205	103	200	17.3	
EXT DRO >C28-C36	<10.0	10.0	06/08/2023	ND					

Surrogate: 1-Chlorooctane 93.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 105 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 06/07/2023  
Reported: 06/12/2023  
Project Name: CARRASCO 14-1H  
Project Number: 03C2012055  
Project Location: BTA( 32.3076687 - 104.0606657 )

Sampling Date: 06/06/2023  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Shalyn Rodriguez

**Sample ID: BH 01 C 3' (H232898-04)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/09/2023	ND	2.22	111	2.00	1.28	
Toluene*	<0.050	0.050	06/09/2023	ND	2.21	111	2.00	0.322	
Ethylbenzene*	<0.050	0.050	06/09/2023	ND	2.26	113	2.00	1.27	
Total Xylenes*	<0.150	0.150	06/09/2023	ND	6.68	111	6.00	1.15	
Total BTX	<0.300	0.300	06/09/2023	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	112	16.0	06/08/2023	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/08/2023	ND	205	103	200	19.8	
DRO >C10-C28*	<10.0	10.0	06/08/2023	ND	205	103	200	17.3	
EXT DRO >C28-C36	<10.0	10.0	06/08/2023	ND					

Surrogate: 1-Chlorooctane 90.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	06/07/2023	Sampling Date:	06/06/2023
Reported:	06/12/2023	Sampling Type:	Soil
Project Name:	CARRASCO 14-1H	Sampling Condition:	Cool & Intact
Project Number:	03C2012055	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA( 32.3076687 - 104.0606657 )		

**Sample ID: BH 01 D 4' (H232898-05)**

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	06/09/2023	ND	2.19	110	2.00	6.15		
Toluene*	<0.050	0.050	06/09/2023	ND	2.26	113	2.00	5.87		
Ethylbenzene*	<0.050	0.050	06/09/2023	ND	2.14	107	2.00	4.65		
Total Xylenes*	<0.150	0.150	06/09/2023	ND	6.65	111	6.00	4.62		
Total BTEX	<0.300	0.300	06/09/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 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	144	16.0	06/08/2023	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/08/2023	ND	177	88.3	200	4.58	
DRO >C10-C28*	<10.0	10.0	06/08/2023	ND	175	87.6	200	5.37	
EXT DRO >C28-C36	<10.0	10.0	06/08/2023	ND					

Surrogate: 1-Chlorooctane 119 % 48.2-134

Surrogate: 1-Chlorooctadecane 127 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
QR-04	The RPD for the BS/BSD was outside of historical limits.
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

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

Celey D. Keene, Lab Director/Quality Manager





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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



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

July 17, 2023

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

RE: CARRASCO 14-1

Enclosed are the results of analyses for samples received by the laboratory on 07/12/23 9:47.

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](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene  
Lab Director/Quality Manager



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: 07/12/2023  
 Reported: 07/17/2023  
 Project Name: CARRASCO 14-1  
 Project Number: 03C2012055  
 Project Location: BTA - NM

Sampling Date: 07/12/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SS 01 A 2' (H233545-01)**

BTX 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/12/2023	ND	2.02	101	2.00	0.582	
Toluene*	<0.050	0.050	07/12/2023	ND	2.03	101	2.00	0.0219	
Ethylbenzene*	<0.050	0.050	07/12/2023	ND	2.14	107	2.00	0.829	
Total Xylenes*	<0.150	0.150	07/12/2023	ND	6.45	108	6.00	0.336	
Total BTX	<0.300	0.300	07/12/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	07/12/2023	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/13/2023	ND	208	104	200	0.413	
DRO >C10-C28*	<10.0	10.0	07/13/2023	ND	208	104	200	0.292	
EXT DRO >C28-C36	<10.0	10.0	07/13/2023	ND					

Surrogate: 1-Chlorooctane 127 % 48.2-134

Surrogate: 1-Chlorooctadecane 135 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 07/12/2023  
 Reported: 07/17/2023  
 Project Name: CARRASCO 14-1  
 Project Number: 03C2012055  
 Project Location: BTA - NM

Sampling Date: 07/12/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SS 02 A 2' (H233545-02)**

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	07/12/2023	ND	2.02	101	2.00	0.582		
Toluene*	<0.050	0.050	07/12/2023	ND	2.03	101	2.00	0.0219		
Ethylbenzene*	<0.050	0.050	07/12/2023	ND	2.14	107	2.00	0.829		
Total Xylenes*	<0.150	0.150	07/12/2023	ND	6.45	108	6.00	0.336		
Total BTEx	<0.300	0.300	07/12/2023	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	07/12/2023	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/13/2023	ND	208	104	200	0.413	
DRO >C10-C28*	<10.0	10.0	07/13/2023	ND	208	104	200	0.292	
EXT DRO >C28-C36	<10.0	10.0	07/13/2023	ND					

Surrogate: 1-Chlorooctane 123 % 48.2-134

Surrogate: 1-Chlorooctadecane 133 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 07/12/2023  
 Reported: 07/17/2023  
 Project Name: CARRASCO 14-1  
 Project Number: 03C2012055  
 Project Location: BTA - NM

Sampling Date: 07/12/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SS 03 A 2' (H233545-03)**

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	07/12/2023	ND	2.02	101	2.00	0.582	
Toluene*	<0.050	0.050	07/12/2023	ND	2.03	101	2.00	0.0219	
Ethylbenzene*	<0.050	0.050	07/12/2023	ND	2.14	107	2.00	0.829	
Total Xylenes*	<0.150	0.150	07/12/2023	ND	6.45	108	6.00	0.336	
Total BTEx	<0.300	0.300	07/12/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 117 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	144	16.0	07/13/2023	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/13/2023	ND	208	104	200	0.413	
DRO >C10-C28*	<10.0	10.0	07/13/2023	ND	208	104	200	0.292	
EXT DRO >C28-C36	<10.0	10.0	07/13/2023	ND					

Surrogate: 1-Chlorooctane 122 % 48.2-134

Surrogate: 1-Chlorooctadecane 130 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received: 07/12/2023  
 Reported: 07/17/2023  
 Project Name: CARRASCO 14-1  
 Project Number: 03C2012055  
 Project Location: BTA - NM

Sampling Date: 07/12/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SS 04 A 2' (H233545-04)**

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	07/12/2023	ND	2.02	101	2.00	0.582	
Toluene*	<0.050	0.050	07/12/2023	ND	2.03	101	2.00	0.0219	
Ethylbenzene*	<0.050	0.050	07/12/2023	ND	2.14	107	2.00	0.829	
Total Xylenes*	<0.150	0.150	07/12/2023	ND	6.45	108	6.00	0.336	
Total BTEX	<0.300	0.300	07/12/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 117 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	07/13/2023	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/13/2023	ND	208	104	200	0.413	
DRO >C10-C28*	<10.0	10.0	07/13/2023	ND	208	104	200	0.292	
EXT DRO >C28-C36	<10.0	10.0	07/13/2023	ND					

Surrogate: 1-Chlorooctane 129 % 48.2-134

Surrogate: 1-Chlorooctadecane 140 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received: 07/12/2023  
 Reported: 07/17/2023  
 Project Name: CARRASCO 14-1  
 Project Number: 03C2012055  
 Project Location: BTA - NM

Sampling Date: 07/12/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SS 01 0.5' (H233545-05)**

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	07/12/2023	ND	2.02	101	2.00	0.582		
Toluene*	<0.050	0.050	07/12/2023	ND	2.03	101	2.00	0.0219		
Ethylbenzene*	<0.050	0.050	07/12/2023	ND	2.14	107	2.00	0.829		
Total Xylenes*	<0.150	0.150	07/12/2023	ND	6.45	108	6.00	0.336		
Total BTEx	<0.300	0.300	07/12/2023	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	07/13/2023	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/13/2023	ND	208	104	200	0.413	
DRO >C10-C28*	<10.0	10.0	07/13/2023	ND	208	104	200	0.292	
EXT DRO >C28-C36	<10.0	10.0	07/13/2023	ND					

Surrogate: 1-Chlorooctane 128 % 48.2-134

Surrogate: 1-Chlorooctadecane 137 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 07/12/2023  
 Reported: 07/17/2023  
 Project Name: CARRASCO 14-1  
 Project Number: 03C2012055  
 Project Location: BTA - NM

Sampling Date: 07/12/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SS 02 0.5' (H233545-06)**

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/13/2023	ND	2.00	100	2.00	0.826		
Toluene*	<0.050	0.050	07/13/2023	ND	1.97	98.7	2.00	1.56		
Ethylbenzene*	<0.050	0.050	07/13/2023	ND	1.95	97.3	2.00	1.79		
Total Xylenes*	<0.150	0.150	07/13/2023	ND	5.91	98.6	6.00	1.44		
Total BTEX	<0.300	0.300	07/13/2023	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	07/13/2023	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/13/2023	ND	208	104	200	0.413	
DRO >C10-C28*	<10.0	10.0	07/13/2023	ND	208	104	200	0.292	
EXT DRO >C28-C36	<10.0	10.0	07/13/2023	ND					

Surrogate: 1-Chlorooctane 102 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 07/12/2023  
 Reported: 07/17/2023  
 Project Name: CARRASCO 14-1  
 Project Number: 03C2012055  
 Project Location: BTA - NM

Sampling Date: 07/12/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SS 03 0.5' (H233545-07)**

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/13/2023	ND	2.00	100	2.00	0.826		
Toluene*	<0.050	0.050	07/13/2023	ND	1.97	98.7	2.00	1.56		
Ethylbenzene*	<0.050	0.050	07/13/2023	ND	1.95	97.3	2.00	1.79		
Total Xylenes*	<0.150	0.150	07/13/2023	ND	5.91	98.6	6.00	1.44		
Total BTEX	<0.300	0.300	07/13/2023	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	07/13/2023	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/14/2023	ND	204	102	200	1.38	
DRO >C10-C28*	<10.0	10.0	07/14/2023	ND	199	99.6	200	4.84	
EXT DRO >C28-C36	<10.0	10.0	07/14/2023	ND					

Surrogate: 1-Chlorooctane 117 % 48.2-134

Surrogate: 1-Chlorooctadecane 125 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 07/12/2023  
 Reported: 07/17/2023  
 Project Name: CARRASCO 14-1  
 Project Number: 03C2012055  
 Project Location: BTA - NM

Sampling Date: 07/12/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SS 04 0.5' (H233545-08)**

BTEx 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/13/2023	ND	2.00	100	2.00	0.826	
Toluene*	<0.050	0.050	07/13/2023	ND	1.97	98.7	2.00	1.56	
Ethylbenzene*	<0.050	0.050	07/13/2023	ND	1.95	97.3	2.00	1.79	
Total Xylenes*	<0.150	0.150	07/13/2023	ND	5.91	98.6	6.00	1.44	
Total BTEX	<0.300	0.300	07/13/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	07/13/2023	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/13/2023	ND	204	102	200	1.38	
DRO >C10-C28*	<10.0	10.0	07/13/2023	ND	199	99.6	200	4.84	
EXT DRO >C28-C36	<10.0	10.0	07/13/2023	ND					

Surrogate: 1-Chlorooctane 132 % 48.2-134

Surrogate: 1-Chlorooctadecane 144 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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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.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:

Ensolium, LLC

Project Manager:

Hadlie Green

Address:

601 N. Marientfield St. STE 400

City:

Midland

State: TX Zip: 79701

Phone #:

432-557-8895

Fax #:

Project #:

03C2012055

Project Owner: Ensolium

Project Name:

Carraasco 14-1

Project Location:

NM

Sampler Name:

Hadlie Green

P.O. #:

03C2012055

Company: BTA

Attn: Melton Beard

Address: 1045 Pecos St

City: Midland

State: TX Zip: 79701

Phone #:

432-312-2203

Fax #:

03C2012055

Company: BTA

Attn: Melton Beard

Address: 1045 Pecos St

City: Midland

State: TX Zip: 79701

Phone #:

432-312-2203

FOR LAB USE ONLY

Lab I.D.

Sample I.D.

Sample Depth (feet)

(G)RAB OR (C)OMP.

# CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE

TPH 8015

BTEX 8021

CHLORIDE sm 4500

1

SS01A

2

G

1

7/12/23

0930

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

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2

SS02A

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G

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7/12/23

0938

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X

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X

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X

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SS03A

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7/12/23

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SS04A

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7/12/23

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SS01

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G

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7/12/23

0926

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6

SS02

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1

7/12/23

0935

X

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7

SS03

0.5

G

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7/12/23

0945

X

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8

SS04

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7/12/23

1005

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X

X

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X

X

X

X

X

X

X

X

X

X

X</





## APPENDIX E

### NMOCD Notifications

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**From:** [Buchanan, Michael, EMNRD](#)  
**To:** [Hadlie Green](#); [Enviro, OCD, EMNRD](#)  
**Cc:** [Tacoma Morrissey](#); [Peter Van Patten](#); [Kelton Beaird](#); [Nathan Sirgo](#)  
**Subject:** RE: [EXTERNAL] BTA - Sampling Notification - Week of 06/05/2023  
**Date:** Friday, June 2, 2023 4:54:56 PM  
**Attachments:** [image005.jpg](#)  
[image006.png](#)  
[image007.png](#)  
[image008.png](#)  
[image009.png](#)

---

[ \*\*EXTERNAL EMAIL\*\* ]

Received.

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.

**Mike Buchanan** • Environmental Specialist  
Environmental Bureau  
EMNRD - Oil Conservation Division  
8801 Horizon Blvd. NE | Albuquerque, NM 87113  
| [michael.buchanan@emnrd.nm.gov](mailto:michael.buchanan@emnrd.nm.gov)  
<http://www.emnrd.nm.gov/ocd>



---

**From:** Hadlie Green <[hgreen@ensolum.com](mailto:hgreen@ensolum.com)>  
**Sent:** Friday, June 2, 2023 9:25 AM  
**To:** Enviro, OCD, EMNRD <[OCD.Enviro@emnrd.nm.gov](mailto:OCD.Enviro@emnrd.nm.gov)>  
**Cc:** Tacoma Morrissey <[tmorrissey@ensolum.com](mailto:tmorrissey@ensolum.com)>; Peter Van Patten <[pvanpatten@ensolum.com](mailto:pvanpatten@ensolum.com)>; Kelton Beaird <[KBeaird@btaoil.com](mailto:KBeaird@btaoil.com)>; Nathan Sirgo <[nsirgo@btaoil.com](mailto:nsirgo@btaoil.com)>  
**Subject:** [EXTERNAL] BTA - Sampling Notification - Week of 06/05/2023

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

All,

BTA anticipates collecting confirmation samples at the following locations the week of June 5, 2023.

- Harroun East Tank Battery / nAPP2202845563
  - Sampling Date: 6/5/2023 @ 9:00 AM MST
- Vaca Draw 9418 JV-P 001 / nCH1835540209

Sampling Date: 6/6/2023 @ 9:00 AM MST

- Carrasco 14-1H / nAPP2313656375
  - Sampling Date: 6/6/2023 @ 9:00 AM MST
- Chiso 14 State Jet Pump Excavation / nAPP2205837214
  - Sampling Date: 6/5/2023 @ 9:00 AM MST

Thank you,



**Hadlie Green**

Project Geologist

432-557-8895

[hgreen@ensolum.com](mailto:hgreen@ensolum.com)

**Ensolum, LLC**



**From:** [Buchanan, Michael, EMNRD](#)  
**To:** [Hadlie Green](#); [Enviro, OCD, EMNRD](#); [Velez, Nelson, EMNRD](#); [Hamlet, Robert, EMNRD](#)  
**Cc:** [Tacoma Morrissey](#); [Kelton Beaird](#)  
**Subject:** RE: [EXTERNAL] BTA - Sampling Notification - Week of 07/10/2023  
**Date:** Wednesday, July 5, 2023 3:17:40 PM  
**Attachments:** [image001.png](#)  
[image002.png](#)  
[image003.png](#)  
[image004.png](#)  
[image005.jpg](#)

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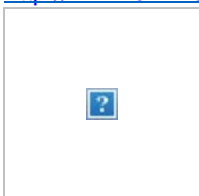
[ \*\*EXTERNAL EMAIL\*\* ]

Good afternoon,

Thank you for the notification. Please include a copy of this and all notifications in the C-141, remedial and/or closure reports to ensure the notifications are documented in the project file.

Regards,

**Mike Buchanan** • Environmental Specialist  
Environmental Bureau  
EMNRD - Oil Conservation Division  
8801 Horizon Blvd. NE | Albuquerque, NM 87113  
| [michael.buchanan@emnrd.nm.gov](mailto:michael.buchanan@emnrd.nm.gov)  
<http://www.emnrd.nm.gov/oecd>



---

**From:** Hadlie Green <[hgreen@ensolum.com](mailto:hgreen@ensolum.com)>  
**Sent:** Wednesday, July 5, 2023 1:46 PM  
**To:** Enviro, OCD, EMNRD <[OCD.Enviro@emnrd.nm.gov](mailto:OCD.Enviro@emnrd.nm.gov)>  
**Cc:** Tacoma Morrissey <[tmorrissey@ensolum.com](mailto:tmorrissey@ensolum.com)>; Kelton Beaird <[KBeaird@btaoil.com](mailto:KBeaird@btaoil.com)>  
**Subject:** [EXTERNAL] BTA - Sampling Notification - Week of 07/10/2023

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 July 10, 2023.

- Carrasco 14-1 / nAPP2313656375
  - Sampling Date: 7/12/2023 @ 9:00 AM MST

Mesa B #25 / nAPP2112744758

- Sampling Date: 7/6-7/2023 @ 9:00 AM MST

Thank you,



**Hadlie Green**

Project Geologist

432-557-8895

[hgreen@ensolum.com](mailto:hgreen@ensolum.com)

**Ensolum, LLC**





APPENDIX F

Final C-141s

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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	NRM2024742676
District RP	
Facility ID	
Application ID	

## Release Notification

### Responsible Party

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

### Location of Release Source

Latitude: **32.30763°** Longitude: **-104.06067°**

(NAD 83 in decimal degrees to 5 decimal places)

Site Name: <b>Carrasco 14 #1 Tank Battery</b>	Site Type: <b>Tank Battery</b>
Date Release Discovered: <b>8/28/2020</b>	API# (if applicable) Nearest well: <b>Carrasco 14 #1</b> <b>API #30-015-26121</b>

Unit Letter	Section	Township	Range	County
<b>F</b>	<b>14</b>	<b>23S</b>	<b>28E</b>	<b>Eddy</b>

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☐ Private (Name: \_\_\_\_\_)

### Nature and Volume of Release

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

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) <b>67 BBL</b>	Volume Recovered (bbls) <b>0 BBL</b>
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

#### Cause of Release

A hole in an oil tank opened while a load of oil was being removed from the tank by a hot oiler. Prior to the leak, the tank had been gauged to contain 204 BO. While the tank was leaking, 137 BO was transferred to another tank in the battery. The balance of the oil (67 BO) was released inside the earthen firewall and not recovered. It should be noted that a C-141 dated January 21, 2008 indicates that a 20-mil plastic liner was installed inside the tank battery containment area, leaving the tanks in place. It is expected that the liner will be encountered during remediation activities.




## Oil Conservation Division

Incident ID	NRM2024742616
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? <b>The spill volume was greater than 25 BBL, which the NMOCD Rules define as a major release.</b>
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? <b>The first notice of this release is provided is provided by the filing of this C-141 Report and distribution via email to NMOCD personnel: Mike Bratcher, Robert Hamlet, Victoria Venegas, and Jim Griswold.</b>	

### Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <b>Bob Hall</b> Title: <b>Environmental Manager</b>	
Signature: <u></u>	Date: <b>8/31/2020</b>
email: <b>bhall@btaoil.com</b>	Telephone: <b>432-682-3753</b>
<b>OCD Only</b>	
Received by: <u>Ramona Marcus</u>	Date: <u>9/3/2020</u>

Incident ID	NRM2024742676
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>&lt;50</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

<p><b>Characterization Report Checklist:</b> <i>Each of the following items must be included in the report.</i></p> <ul style="list-style-type: none"><li><input checked="" type="checkbox"/> Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.</li><li><input checked="" type="checkbox"/> Field data</li><li><input checked="" type="checkbox"/> Data table of soil contaminant concentration data</li><li><input checked="" type="checkbox"/> Depth to water determination</li><li><input checked="" type="checkbox"/> Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release</li><li><input checked="" type="checkbox"/> Boring or excavation logs</li><li><input checked="" type="checkbox"/> Photographs including date and GIS information</li><li><input checked="" type="checkbox"/> Topographic/Aerial maps</li><li><input checked="" type="checkbox"/> Laboratory data including chain of custody</li></ul>
---

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

State of New Mexico  
Oil Conservation Division

Page 4

Incident ID	NRM2024742676
District RP	
Facility ID	
Application ID	

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

Printed Name: Kelton Beaird

Title: Environmental Manager

Signature: 

Date: 8/2/2023

email: KBeaird@btaoil.com

Telephone: 432-312-2203

**OCD Only**

Received by: \_\_\_\_\_

Date: \_\_\_\_\_

Incident ID	NRM2024742676
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 BeairdTitle: Environmental ManagerSignature: Date: 8/2/2023email: KBeaird@btaoil.comTelephone: 432-312-2203**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

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

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

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	nAPP2313656375
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

Latitude 32.3076687 Longitude -104.0606657  
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Carrasco 14-1	Site Type:
Date Release Discovered: 5/5/2023	API# (if applicable) 30-015-26121

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

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

Nature and Volume of Release

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

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 35	Volume Recovered (bbls) 25
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)


A hole developed in a 2” metal recirculating line releasing fluids to the lined containment. All freestanding fluids were recovered.

Incident ID	nAPP2313656375
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?  Release greater than 25 bbls
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes, by Kevin Jones to OCD on May 6, 2023 at 8AM via email.	

## Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped.	
<input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment.	
<input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.	
<input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>Nathan J. Sirgo</u>	Title: <u>Operations Manager</u>
Signature: <u></u>	Date: <u>5/17/2023</u>
email: <u>nsirgo@btaoil.com</u>	Telephone: <u>432-682-3753</u>
<b><u>OCD Only</u></b>	
Received by: <u>Michael Buchanan</u>	Date: <u>05/31/2023</u>

**Location** Carrasco 14-1  
**API #** 30-015-26121  
**Spill Date** May 5 2023  
**Spill Description** 2" metal recirc line had a hole form where the pipe runs under containment wall

#### Spill Dimensions - Inside Containment

**ENTER** - Length of Spill 33 feet  
**ENTER** - Width of Spill 18 feet  
**ENTER** - Saturation Depth of Spill 4 inches  
 Calculated Volume - In Containment Only 35 BBL

#### Spill Dimensions - Outside Containment

**ENTER** - Length of Spill 0 feet  
**ENTER** - Width of Spill 0 feet  
**ENTER** - Saturation Depth of Spill 0 inches

**ENTER** - Porosity Factor (see chart below) 0.03 decimal

#### Oil Cut - Well Test / Vessel Throughput or Contents

Oil 100  
 Water (if leak on water sytem enter 1) 0  
 Calculated Oil Cut 1

#### Volume Recovered in Truck /100% Recoverable in Containment

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

#### Calculated Values

Release of Oil in Soil - Unrecovered 0.000 BBL  
 Release of Water in Soil - Unrecovered 0.000 BBL  
 Unrecovered Total Release 0.000 BBL

#### Calculated Values

Total Release of Oil 0 BBL  
 Total Release of Water 0 BBL  
 Total Release 35 BBL  
 Total Recovered 25 BBL

Types of Soil	Porosity Factor
Gravel	0.25
Sand	0.20
Clay/silt/sand Mix	0.15
Clay	0.05
Oil Spill	0.00



**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 221032

CONDITIONS

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID: 260297
	Action Number: 221032
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	None	5/31/2023

Incident ID	nAPP2313656375
District RP	
Facility ID	
Application ID	

## Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>&lt;50</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

<b>Characterization Report Checklist:</b> <i>Each of the following items must be included in the report.</i>
<input checked="" type="checkbox"/> Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
<input checked="" type="checkbox"/> Field data
<input checked="" type="checkbox"/> Data table of soil contaminant concentration data
<input checked="" type="checkbox"/> Depth to water determination
<input checked="" type="checkbox"/> Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
<input checked="" type="checkbox"/> Boring or excavation logs
<input checked="" type="checkbox"/> Photographs including date and GIS information
<input checked="" type="checkbox"/> Topographic/Aerial maps
<input checked="" type="checkbox"/> Laboratory data including chain of custody

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

State of New Mexico  
Oil Conservation Division

Page 4

Incident ID	nAPP2313656375
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 BeairdTitle: Environmental ManagerSignature: Date: 8/2/2023email: KBeaird@btaoil.comTelephone: 432-312-2203**OCD Only**Received by: Shelly WellsDate: 8/1/2023

Incident ID	nAPP2313656375
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 BeairdTitle: Environmental ManagerSignature: Date: 8/2/2023email: KBeaird@btaoil.comTelephone: 432-312-2203**OCD Only**Received by: Shelly Wells Date: 8/1/2023☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

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**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
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**Santa Fe, NM 87505**

QUESTIONS

Action 369461

QUESTIONS

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID: 260297
	Action Number: 369461
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	nRM2024742676
Incident Name	NRM2024742676 CARRASCO 14 #1 TANK BATTERY @ 30-015-26121
Incident Type	Oil Release
Incident Status	Remediation Closure Report Received
Incident Well	[30-015-26121] CARRASCO 14 #001

Location of Release Source	
Please answer all the questions in this group.	
Site Name	CARRASCO 14 #1 TANK BATTERY
Date Release Discovered	08/28/2020
Surface Owner	Private

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

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Cause: Corrosion   Tank (Any)   Crude Oil   Released: 67 BBL   Recovered: 0 BBL   Lost: 67 BBL.
Produced Water Released (bbls) Details	Not answered.
Is the concentration of chloride in the produced water >10,000 mg/l	Not answered.
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Not answered.

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QUESTIONS, Page 2

Action 369461

**QUESTIONS (continued)**

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID: 260297
	Action Number: 369461
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**QUESTIONS**

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

**Initial Response**

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

The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	Not answered.

Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.

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

I hereby agree and sign off to the above statement	Name: BTA ENSOLUM Title: Environmental Manager Email: rramos@btaoil.com Date: 08/01/2024
--	---

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QUESTIONS, Page 3  
  
Action 369461

**QUESTIONS (continued)**

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID:
	260297
	Action Number:
	369461
Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)	

**QUESTIONS**

<b>Site Characterization</b>	
<i>Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 26 and 50 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
<b>What is the minimum distance, between the closest lateral extents of the release and the following surface areas:</b>	
A continuously flowing watercourse or any other significant watercourse	Between 1000 (ft.) and ½ (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1000 (ft.) and ½ (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 500 and 1000 (ft.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 500 and 1000 (ft.)
Any other fresh water well or spring	Between 500 and 1000 (ft.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Between 500 and 1000 (ft.)
A wetland	Between 1000 (ft.) and ½ (mi.)
A subsurface mine	Between 1 and 5 (mi.)
An (non-karst) unstable area	Between 1 and 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Medium
A 100-year floodplain	Between 1000 (ft.) and ½ (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

<b>Remediation Plan</b>	
<i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
Requesting a remediation plan approval with this submission	Yes
<i>Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.</i>	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
<b>Soil Contamination Sampling:</b> (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	2080
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	42039
GRO+DRO (EPA SW-846 Method 8015M)	33969
BTEX (EPA SW-846 Method 8021B or 8260B)	7.6
Benzene (EPA SW-846 Method 8021B or 8260B)	0
<i>Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.</i>	
On what estimated date will the remediation commence	06/06/2023
On what date will (or did) the final sampling or liner inspection occur	07/09/2024
On what date will (or was) the remediation complete(d)	07/09/2024
What is the estimated surface area (in square feet) that will be reclaimed	331
What is the estimated volume (in cubic yards) that will be reclaimed	25
What is the estimated surface area (in square feet) that will be remediated	331
What is the estimated volume (in cubic yards) that will be remediated	25
<i>These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.</i>	
<i>The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.</i>	



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QUESTIONS, Page 4

Action 369461

**QUESTIONS (continued)**

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID: 260297
	Action Number: 369461
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**QUESTIONS**

<b>Remediation Plan (continued)</b>	
<i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
<b>This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:</b>	
<i>(Select all answers below that apply.)</i>	
(Ex Situ) Excavation and <b>off-site</b> disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for <b>off-site</b> disposal	LEA LAND LANDFILL [fEEM0112342028]
<b>OR</b> which OCD approved well (API) will be used for <b>off-site</b> disposal	Not answered.
<b>OR</b> is the <b>off-site</b> disposal site, to be used, out-of-state	Not answered.
<b>OR</b> is the <b>off-site</b> disposal site, to be used, an NMED facility	Not answered.
(Ex Situ) Excavation and <b>on-site</b> remediation (i.e. On-Site Land Farms)	Not answered.
(In Situ) Soil Vapor Extraction	Not answered.
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	Not answered.
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	Not answered.
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	Not answered.
Ground Water Abatement pursuant to 19.15.30 NMAC	Not answered.
OTHER (Non-listed remedial process)	Not answered.
<i>Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.</i>	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: BTA ENSOLUM Title: Environmental Manager Email: rramos@btaoil.com Date: 08/01/2024
<i>The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.</i>	

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QUESTIONS, Page 5  
  
Action 369461

QUESTIONS (continued)

Operator:  BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID:
	260297
	Action Number:
	369461
Action Type:	
[C-141] Remediation Closure Request C-141 (C-141-v-Closure)	

QUESTIONS

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

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QUESTIONS, Page 6

Action 369461

**QUESTIONS (continued)**

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID:	260297
	Action Number:	369461
	Action Type:	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**QUESTIONS**

Sampling Event Information	
Last sampling notification (C-141N) recorded	360823
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	07/09/2024
What was the (estimated) number of samples that were to be gathered	5
What was the sampling surface area in square feet	1075

**Remediation Closure Request**

*Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.*

Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	331
What was the total volume (cubic yards) remediated	25
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	331
What was the total volume (in cubic yards) reclaimed	25
Summarize any additional remediation activities not included by answers (above)	n/a

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

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

I hereby agree and sign off to the above statement	Name: BTA ENSOLUM Title: Environmental Manager Email: rramos@btaoil.com Date: 08/01/2024
--	---

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QUESTIONS, Page 7  
  
Action 369461

QUESTIONS (continued)

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID:
	260297
	Action Number:
	369461
Action Type:	
[C-141] Remediation Closure Request C-141 (C-141-v-Closure)	

QUESTIONS

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

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CONDITIONS  
  
Action 369461

CONDITIONS

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID:
	260297
	Action Number:
	369461
Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)	

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your Remediation Closure Report for Incident #NRM2024742676 CARRASCO 14 #1 TANK BATTERY, thank you. This Remediation Closure Report is approved.	8/27/2024