



March 26, 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: Deferral Request  
Ogden 20509 1-3H Tank Battery  
Incident Number NAB1905943420  
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 delineation soil sampling activities performed at the Ogden 20509 1-3H Tank Battery (Site). The purpose of the Site assessment, delineation, and soil sampling activities was to assess for the presence or absence of impacts to soil resulting from a historical crude oil release 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 Number NAB1905943420 until the Site is reconstructed, and/or the well pad is abandoned.

**SITE DESCRIPTION AND RELEASE SUMMARY**

The Site is located in Unit B, Section 29, Township 23 South, Range 28 East, in Eddy County, New Mexico (32.28212°, -104.10629°) and is associated with oil and gas exploration and production operations on Private Land managed by BF&G Farm, LLC.

On February 7, 2019, a heater sprayed oil into the lined secondary containment and onto the adjacent pasture west of the containment. Approximately 10 barrels (bbls) of crude oil were released. A vacuum truck was dispatched to the Site to recover free-standing fluids; approximately 6 bbls of released crude oil were recovered. BTA reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on February 20, 2019. The release was assigned Incident Number NAB1905943420.

**SITE CHARACTERIZATION AND CLOSURE CRITERIA**

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

Depth to groundwater at the Site is less than 50 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is United States Geological Survey (USGS) well 321635104062301, located approximately 0.3 miles south of the Site. The groundwater well was drilled to a total depth of 103 feet bgs and was last measured in 1947

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Deferral Request  
Ogden 20509 1-3H Tank Battery

with a depth to water level at 28.69 feet. All wells used for depth to groundwater determination are presented on Figure 1. The associated well records are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is a riverine, located approximately 1,417 feet northwest 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

## LINER INTEGRITY INSPECTION AND DELINEATION ACTIVITIES

A 48-hour advance notice of the liner inspection was provided via email to the NMOCD District I office on August 28, 2023. A liner integrity inspection was conducted by Ensolum personnel on August 30, 2023. Upon inspection, a tear was identified in the liner and the liner was determined to be insufficient. One borehole (BH01) was advanced via hand auger at the location of the tear in the liner to assess for the presence or absence of impacted soil. Three discrete delineation soil samples (BH01/BH01A/BH01B) were collected from the borehole at depths of 0.5 feet, 3 feet, and 4 feet bgs, respectively. Four boreholes (SS01 through SS04) were advanced via hand auger within the overspray release extent west of the containment. Two discrete delineation soil samples were collected from the boreholes at depths of 0.5 feet and 3 feet bgs. Additionally, four delineation soil samples (SS05 through SS08) were collected around the lined containment and overspray release extent at 0.5 feet bgs to confirm the lateral release extent.

The soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. Field screening results and observations from the boreholes were documented on lithologic/soil sampling logs, which are included as Appendix B. The soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was completed during the Site visit and a photographic log is included as Appendix C.

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

Laboratory analytical results for delineation soil samples BH01 and BH01A, collected at depths of 0.5 feet and 3 feet bgs beneath the tear in the liner, indicated TPH and/or chloride concentrations exceeded the Site Closure Criteria. Laboratory analytical results for delineation soil sample BH01B, collected at 4

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feet bgs beneath the tear in the liner, indicated all COC concentrations were compliant with the Site Closure Criteria and defined the vertical extent of the release. Laboratory analytical results for the delineation soil samples from boreholes SS01 through SS04, collected within the overspray release extent, indicated all COC concentrations were compliant with the Site Closure Criteria. Laboratory analytical results for delineation soil samples SS05 through SS08, collected at 0.5 feet bgs around the lined containment and overspray extent, indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria and successfully defined the lateral extent of the release. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix D. Based on the laboratory analytical results, no impacted soil was identified in the overspray release extent; however, impacted soil was identified immediately beneath the tear in the liner.

## DEFERRAL REQUEST

BTA is requesting a deferral of final remediation due to the presence of active production equipment and surface pipelines within the lined containment. The impacted soil is limited to the area immediately beneath the lined containment and active production equipment, where remediation would require a major facility deconstruction.

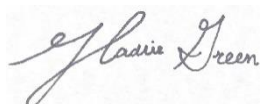
The impacted soil remaining in place beneath the liner is delineated vertically by delineation soil sample BH01B, collected at 4 feet bgs, and laterally by delineation soil samples SS01 through SS08. A maximum of 954 yards of TPH and chloride impacted soil remains in place beneath the liner assuming a maximum 4-foot depth based on the delineation soil samples listed above, that were compliant with the Site Closure Criteria.

BTA does not believe deferment will result in imminent risk to human health, the environment, or groundwater. The release was contained laterally by the lined containment, and the impacted soil remaining in place is limited to the area immediately beneath the liner. The liner has been repaired by BTA which will restrict future vertical migration of residual impacts.

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 Number NAB1905943420 until final reclamation of the well pad or major construction, whichever comes first.

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**



Hadlie Green  
Project Geologist



Aimee Cole  
Senior Managing Scientist

cc: Kelton Beaird, BTA  
Bureau of Land Management

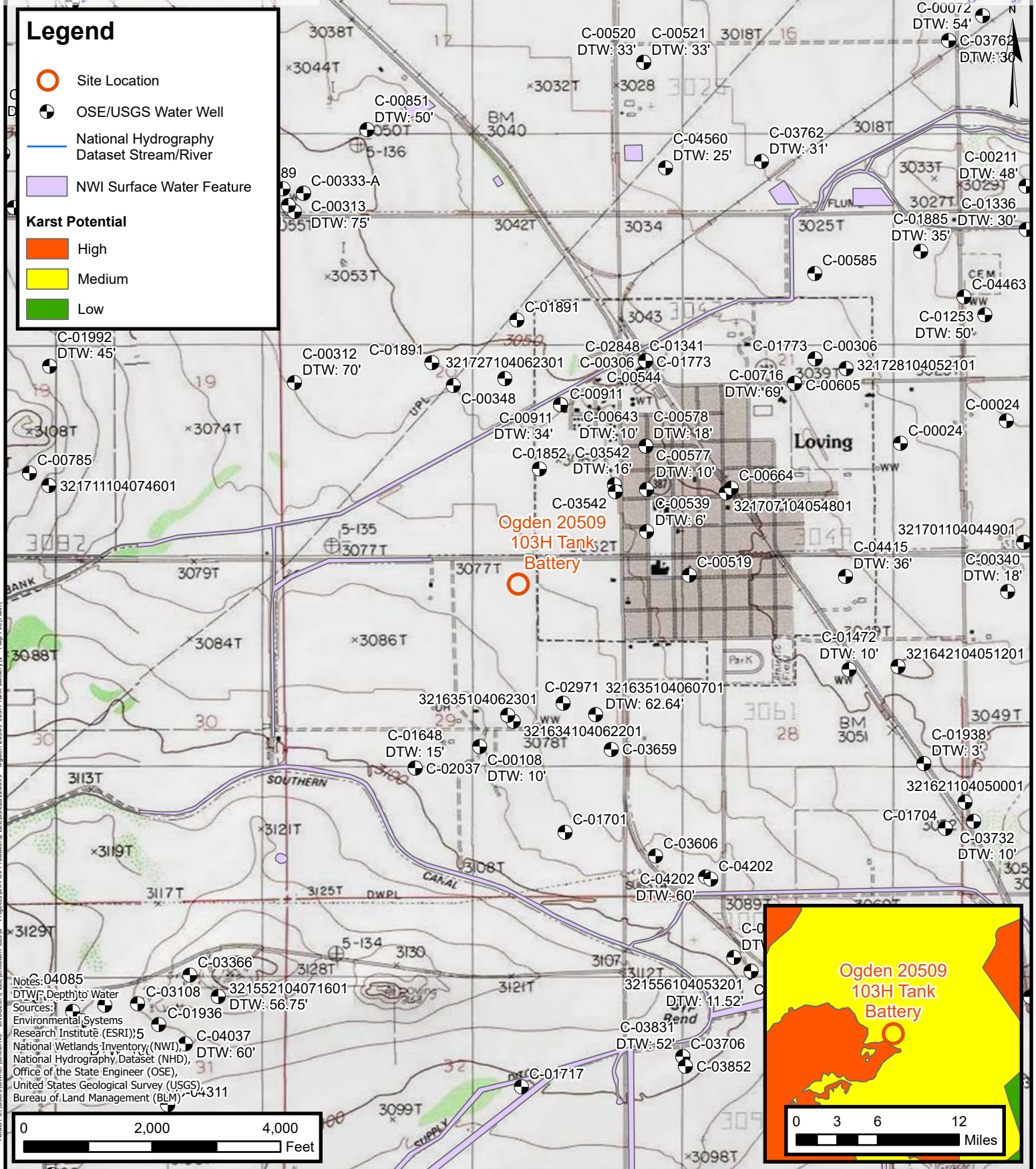
BTA Oil Producers, LLC  
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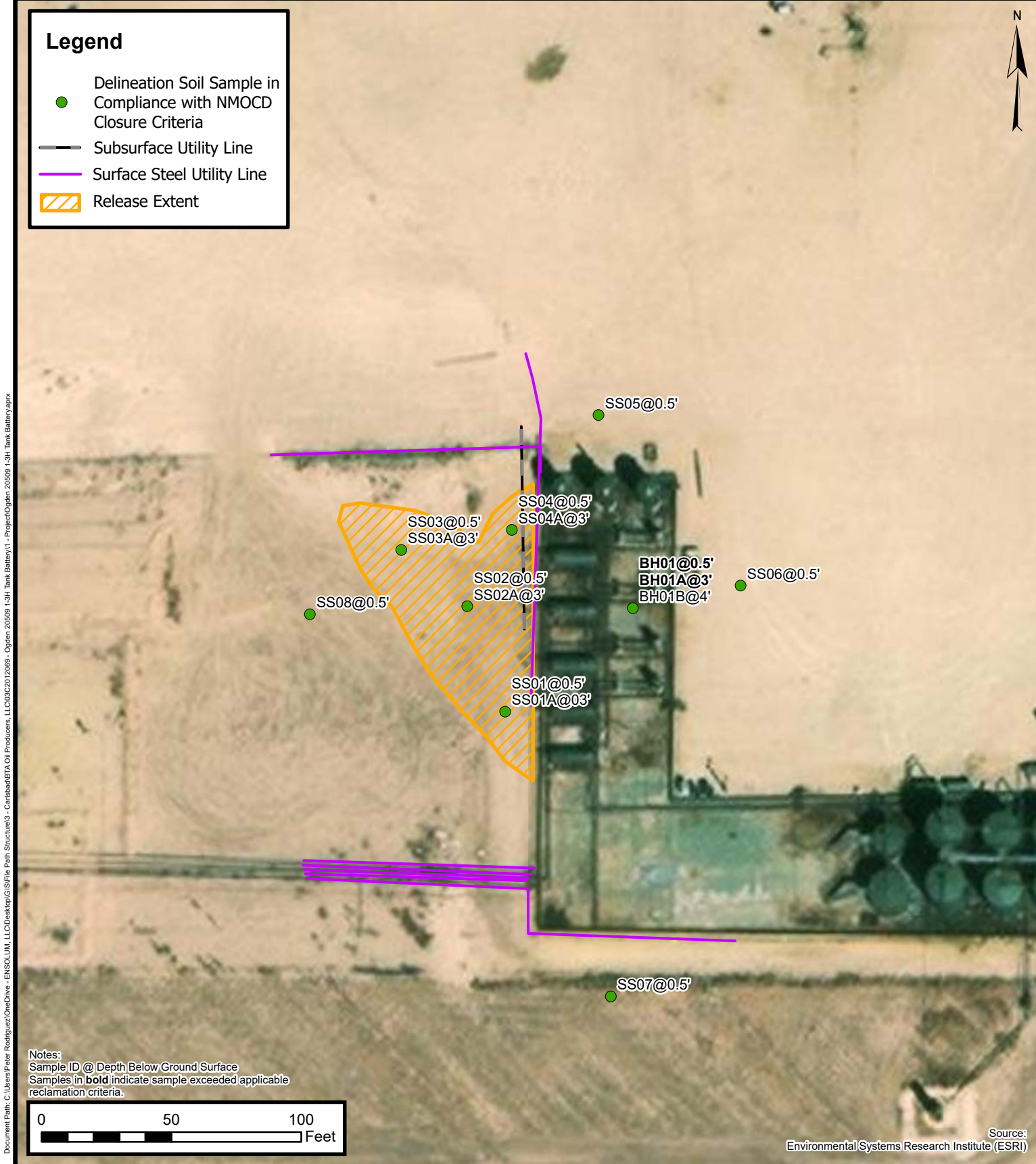
Appendices:

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-141



FIGURES





## Delineation Soil Sample Locations

BTA Oil Producers, LLC  
 Ogden 20509 1-3H Tank Battery  
 Incident Number: NAB1905943420  
 Unit B, Section 29, T23S, R28E  
 Eddy County, New Mexico

FIGURE  
**2**



TABLES

**TABLE 1**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
 Ogden 20509 103H Tank Battery  
 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										
SS01	08/30/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192
SS01A	09/18/2023	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	256
SS02	08/30/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS02A	09/18/2023	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	416
SS03	08/30/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112
SS03A	09/18/2023	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	240
SS04	08/30/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SS04A	09/18/2023	3	<0.050	<0.300	<10.0	70.0	25.6	70.0	95.6	576
SS05	08/30/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS06	08/30/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS07	08/30/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS08	08/30/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
BH01	09/18/2023	0.5	<0.050	<0.300	<10.0	854	375	854	<b>1,229</b>	384
BH01A	09/18/2023	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<b>640</b>
BH01B	10/26/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144

## Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

NMAC: New Mexico Administrative Code

NE: Not Established

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

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National Water Information System: Web Interface

USGS Water Resources

Data Category:  
Groundwater

Geographic Area:  
New Mexico

GO

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- !

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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 =

- 321635104062301

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

USGS 321635104062301 23S.28E.29.14444

Eddy County, New Mexico  
Latitude 32°16'35", Longitude 104°06'23" NAD27  
Land-surface elevation 3,086 feet above NAVD88  
The depth of the well is 190 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
1946-11-21			D 62610		3054.31	NGVD29	1		Z	
1946-11-21			D 62611		3055.90	NAVD88	1		Z	
1946-11-21			D 72019	30.10			1		Z	
1947-02-08			D 62610		3054.11	NGVD29	1		Z	
1947-02-08			D 62611		3055.70	NAVD88	1		Z	
1947-02-08			D 72019	30.30			1		Z	
1947-09-25			D 62610		3055.72	NGVD29	1		Z	
1947-09-25			D 62611		3057.31	NAVD88	1		Z	
1947-09-25			D 72019	28.69			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: 2023-09-06 09:53:53 EDT  
0.28 0.25 nadww02



# WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

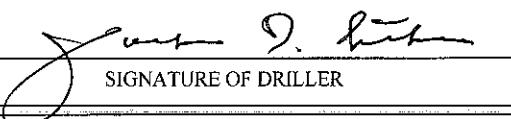
[www.ose.state.nm.us](http://www.ose.state.nm.us)

1. GENERAL AND WELL LOCATION	POD NUMBER (WELL NUMBER) POD-1 (MW-1R) <b>C-3542-POD1</b>				OSE FILE NUMBER(S) C-3542			
	WELL OWNER NAME(S) Allsup's Convenience Stores c/o EA Engineering				PHONE (OPTIONAL) (505) 224-9013			
	WELL OWNER MAILING ADDRESS 320 Gold Ave, SW Suite 1210				CITY Albuquerque		STATE NM	ZIP 87102
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 17	SECONDS 0.79 N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND			
	LONGITUDE 104	6	4.85 W	* DATUM REQUIRED: WGS 84				
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS Allsups Store #220 located at 105 N. 8th Street, Loving, NM (intersection of Cedar and US 285)								
2. OPTIONAL	(2.5 ACRE) <b>NE 1/4</b>	(10 ACRE) <b>NE 1/4</b>	(40 ACRE) <b>SE 1/4</b>	(160 ACRE) <b>SE 1/4</b>	SECTION <b>20</b>	TOWNSHIP <b>23</b>	RANGE <b>28</b>	
	SUBDIVISION NAME				LOT NUMBER	BLOCK NUMBER	UNIT/TRACT	
	HYDROGRAPHIC SURVEY					MAP NUMBER	TRACT NUMBER	
3. DRILLING INFORMATION	LICENSE NUMBER 1249		NAME OF LICENSED DRILLER Jack Atkins			NAME OF WELL DRILLING COMPANY Atkins Engineering Associates, Inc.		
	DRILLING STARTED 3-12-12		DRILLING ENDED 3-12-12		DEPTH OF COMPLETED WELL (FT) 22	BORE HOLE DEPTH (FT) 22	DEPTH WATER FIRST ENCOUNTERED (FT) 15	
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input type="checkbox"/> DRY HOLE <input checked="" type="checkbox"/> SHALLOW (UNCONFINED)						STATIC WATER LEVEL IN COMPLETED WELL (FT) 16	
	DRILLING FLUID: <input type="checkbox"/> AIR <input type="checkbox"/> MUD <input type="checkbox"/> ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input checked="" type="checkbox"/> OTHER - SPECIFY: Hollow-stem auger							
	DEPTH (FT)		BORE HOLE DIA. (IN)	CASING MATERIAL	CONNECTION TYPE (CASING)	INSIDE DIA. CASING (IN)	CASING WALL THICKNESS (IN)	SLOT SIZE (IN)
	FROM	TO						
	0	7	8.625	Sch40 PVC	flush-threaded	2.067	0.154	n/a
	7	22	8.625	Sch40 PVC	flush-threaded	2.067	0.154	0.010
4. WATER BEARING STRATA	DEPTH (FT)		THICKNESS (FT)	FORMATION DESCRIPTION OF PRINCIPAL WATER-BEARING STRATA (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)			YIELD (GPM)	
	FROM	TO						
	15	22	7	clayey sand, pale brown (10 YR 8/2), soft, wet, fine grain, no odor			ND	
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA ND						TOTAL ESTIMATED WELL YIELD (GPM) ND		


FOR OSE INTERNAL USE

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

FILE NUMBER <b>C-3542</b>	POD NUMBER <b>POD 1</b>	TRN NUMBER <b>499907</b>
LOCATION <b>23.28.20.4422</b>		PAGE 1 OF 2

5. SEAL AND PUMP	TYPE OF PUMP: <input type="checkbox"/> SUBMERSIBLE <input type="checkbox"/> JET <input checked="" 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				
		0	5				
	5	22	8.625	8/16 Silica sand	6.38	from surface	
6. GEOLOGIC LOG OF WELL	DEPTH (FT)		THICKNESS (FT)	COLOR AND TYPE OF MATERIAL ENCOUNTERED (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)	WATER BEARING?		
	FROM	TO					
	0	0.5	0.5	Concrete	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
	0.5	2.5	2	Poorly Graded Fill	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
	2.5	2.75	0.25	Clay, dark brown (7.5 YR 3/3), soft, plastic, slightly moist, no odor	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
	2.75	7.5	4.75	Silty clay, brown (7.5 YR 5/3), soft, plastic, slightly moist, no odor	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
	7.5	10	2.5	silty to sandy clay, light brown (7.5 YR 6/4)	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
	10	15	5	silty to sandy clay, light brown (7.5 YR 6/4), moist to very moist	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
	15	16	1	clayey sand, pale brown (10 YR 8/2), soft, wet, fine grain, no odor	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	
	16	16.5	0.5	clayey sand w/gravel, pale brown, soft, wet, fine grain, no odor	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	
	16.5	20	3.5	clayey sand, pale brown (10 YR 8/2), soft, wet, fine grain, no odor	<input checked="" 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						
	7. TEST & ADDITIONAL INFO	WELL TEST    METHOD: <input type="checkbox"/> BAILER <input type="checkbox"/> PUMP <input type="checkbox"/> AIR LIFT <input checked="" 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: Monitor well; no well volumes calculated. <div style="font-size: 1.2em; font-family: cursive;">C-3542-POD was not drilled, according to Atkins Engineering Ass. (Chris Cortez)</div>							
8. SIGNATURE	THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:						
	 SIGNATURE OF DRILLER			<div style="font-size: 1.2em; font-family: cursive;">April 3, 2012</div> DATE			

FOR USE INTERNAL USE		WELL RECORD & LOG (Version 6/9/08)	
FILE NUMBER	C-3542	POD NUMBER	POD1
LOCATION	23.28.20.4422	TRN NUMBER	499907
			PAGE 2 OF 2

 <b>BORING/WELL CONSTRUCTION LOG</b>						
Project:		Allsup's 220		Project Number:		6231026 03
Drilling Company:		Atkins		Start Time/Date:		3-12-12 0850
Drilling Rig/Bit:		HSA 8.625" OD 4.25" ID		Completion Time/Date:		3-12-12 1155
Driller:		Mort Bates		Final Depth:		22 feet below ground surface
Boring/Well ID:		MW-1R		Logged By:		TM and BN Page 1 of 1
Sample No.	Flow Rate (gpm)	Time (min)	Depth (ft)	Soil Type	Soil Description	Notes
CUT				SP	1 Concrete 6 inches	
					2 Poorly graded fill	
				CL	3 2.5', Clay, dark brown (7.5YR 3/3), soft, plastic, slightly moist, no odor	
			4 2.75', Silty clay, brown (7.5YR 5/3), soft, plastic, slightly moist, no odor			
			5			
				CL	6	
					7 7.5', silty to sandy clay, light brown (7.5YR 6/4)	
					8	
				SC	9	
					10 10', Same as above, moist to very moist	
					11	
				SC	12	
					13	
					14	
				SC	15 15', clayey sand, very pale brown (10YR 8/2), soft, wet, fine grained, no odor	
					16 16', Same as above with 0.5' of gravel from 16' to 16.5'	
					17	
				SC	18	
					19	
					20 20', Same as above	
				21		
				22		
				23		
				24		
				25		
				26 Depth to water 16' below ground surface		
				27 At grade surface completion		
				28 Bentonite 3/8" medium chip 1'-5'		
				29 8/16 Silica Sand 5'-22'		
				30 10 Slot Screen 7'-22'		
				31		
				32		
				33		
				34		
				35		
				36		
				37		
				38		
				39		
				40		
				41		
				42		
				43		

**Locator Tool Report****General Information:**

Application ID: 27 Date: 09-15-2015 Time: 16:49:38

WR File Number: C-03542-POD1  
Purpose: POINT OF DIVERSIONApplicant First Name: ALLSUPS CONVENIENCE STORE  
Applicant Last Name: NMED PSTB MONITOR WELL LOGGW Basin: CARLSBAD  
County: EDDYCritical Management Area Name(s): NONE  
Special Condition Area Name(s): NONE  
Land Grant Name: NON GRANT**PLSS Description (New Mexico Principal Meridian):**

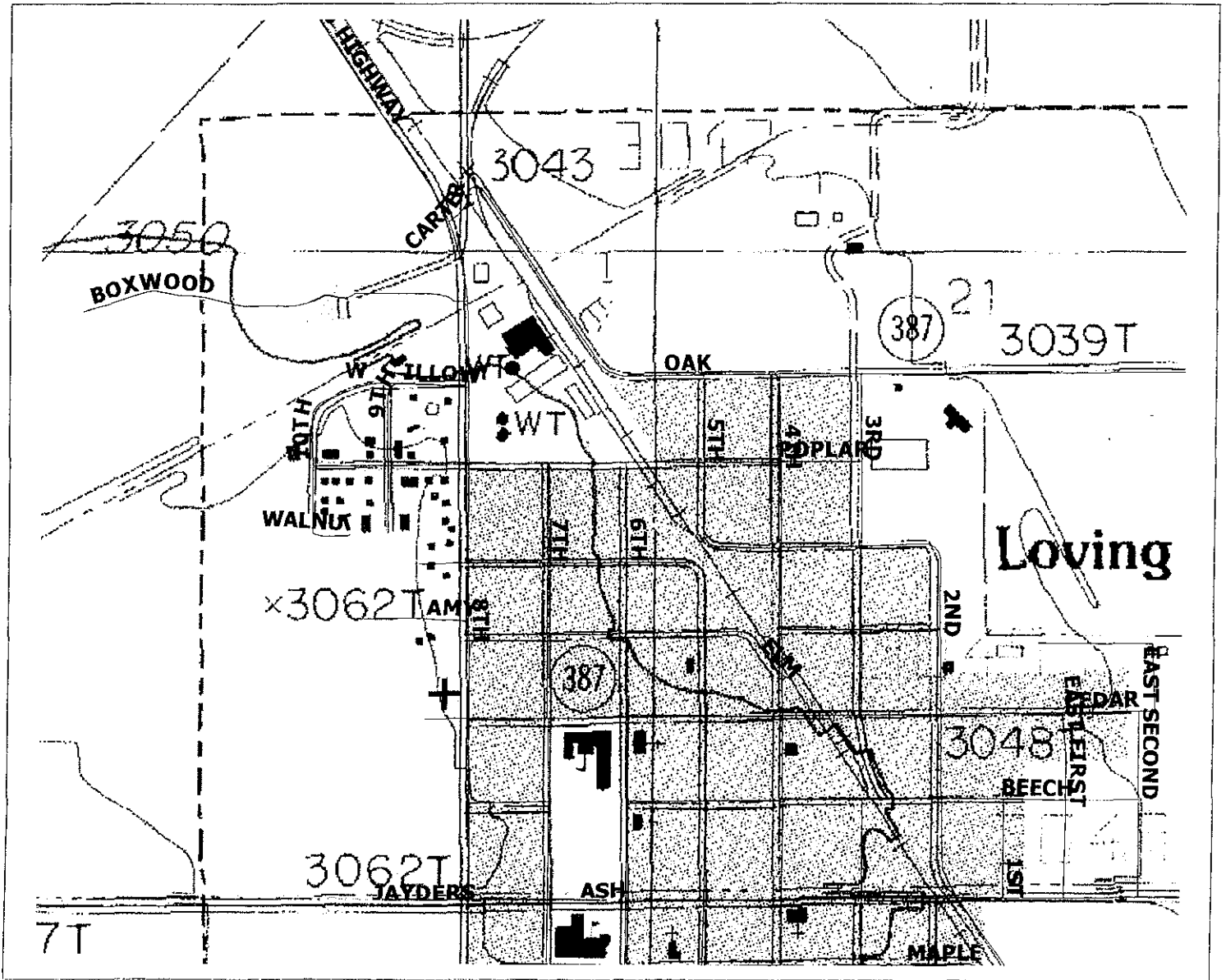
NE 1/4 of NE 1/4 of SE 1/4 of SE 1/4 of Section 20, Township 23S, Range 28E.

**Coordinate System Details:****Geographic Coordinates:**Latitude: 32 Degrees 17 Minutes 10.9 Seconds N  
Longitude: 104 Degrees 6 Minutes 5.0 Seconds W**Universal Transverse Mercator Zone: 13N**

NAD 1983(92) (Meters)	N: 3,572,530	E: 584,615
NAD 1983(92) (Survey Feet)	N: 11,720,876	E: 1,918,025
NAD 1927 (Meters)	N: 3,572,329	E: 584,664
NAD 1927 (Survey Feet)	N: 11,720,215	E: 1,918,184

**State Plane Coordinate System Zone: New Mexico East**

NAD 1983(92) (Meters)	N: 142,641	E: 186,847
NAD 1983(92) (Survey Feet)	N: 467,983	E: 613,013
NAD 1927 (Meters)	N: 142,623	E: 174,294
NAD 1927 (Survey Feet)	N: 467,924	E: 571,830

**NEW MEXICO OFFICE OF STATE ENGINEER****Locator Tool Report**

WR File Number: C-03542-POD1 Scale: 1:9,585

Northing/Easting: UTM83(92) (Meter): N: 3,572,530

E: 584,615

Northing/Easting: SPCS83(92) (Feet): N: 467,983

E: 613,013

GW Basin: Carlsbad

**Duemling, Bill, OSE**

---

**From:** Chris Cortez [Chris@atkinseng.com]  
**Sent:** Tuesday, April 10, 2012 3:42 PM  
**To:** Duemling, Bill, OSE  
**Subject:** Location of Allsup's 220 Well

<b>Position Type</b>	State Plane - New Mexico East
<b>Degrees Lat Long</b>	32.2863459°, -104.1013898°
<b>Degrees Minutes</b>	32°17.18075', -104°06.08339'
<b>Degrees Minutes Seconds</b>	32°17'10.8453", -104°06'05.0034"
<b>State Plane X Y (Meters)</b>	3001 186846.721mE 142641.467mN
<b>X Y (US Survey Feet)</b>	3001 613012.950ftUSE 467982.880ftUSN
<b>X Y (International Feet)</b>	3001 613014.176ftE 467983.816ftN
<b>UTM</b>	13S 584615mE 3572530mN
<b>MGRS</b>	13SER8461572530
<b>Grid North</b>	0.5°
<b>Maidenhead</b>	DM72WG78TR93
<b>GEOREF</b>	FJAC53911718


Christopher R. Cortez  
Project Manager  
Atkins Engineering Associates Inc. | 2904 W 2<sup>nd</sup> St | Roswell, NM 88201  
(o) 575.624.2420 | (f) 575.624.2421 | (c) 575.914.0174  
[www.atkinseng.com](http://www.atkinseng.com)


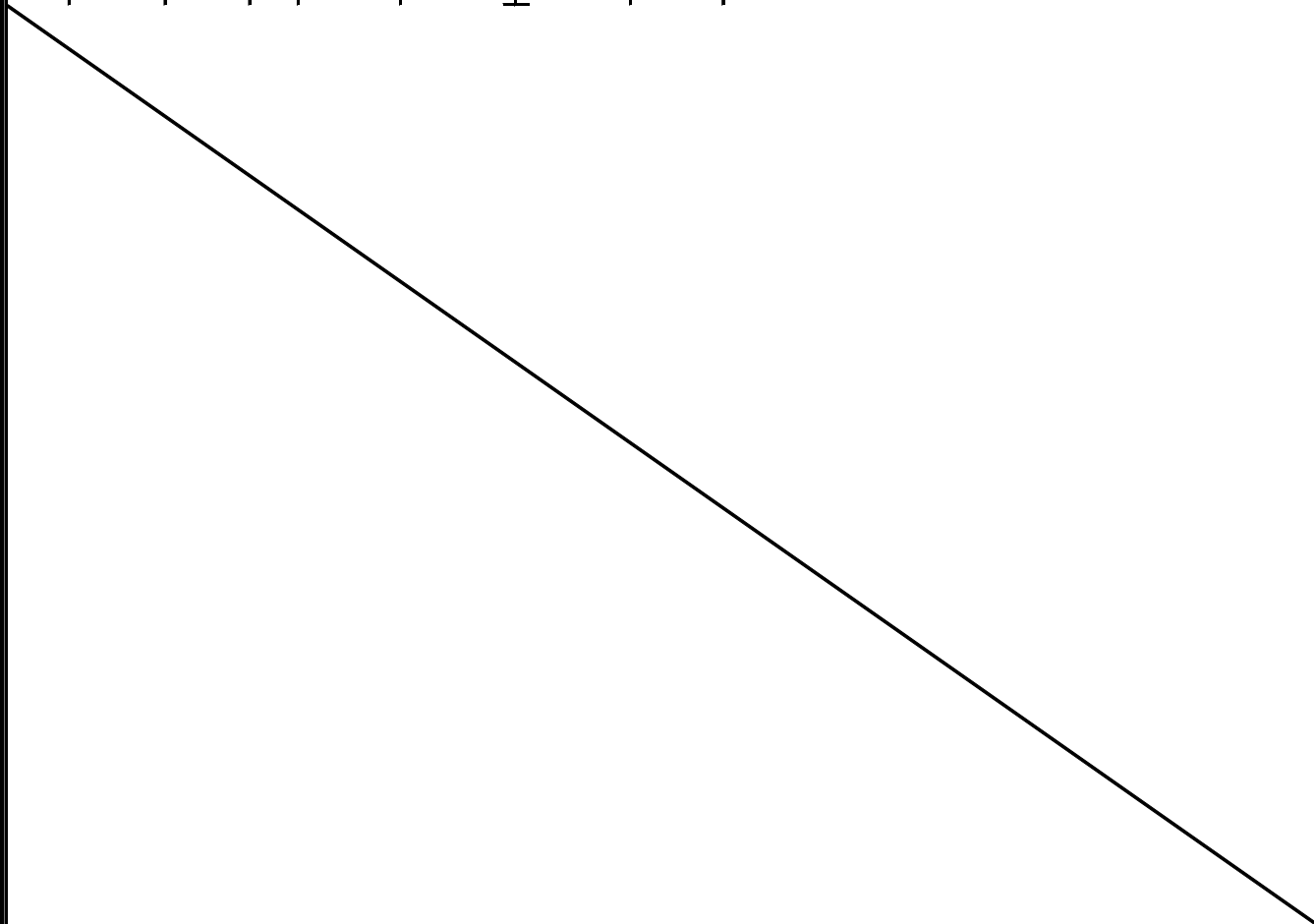



## APPENDIX B


### Lithologic/Soil Sampling Logs


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								Sample Name: BH01		Date: 9/18/23	
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								Site Name: Ogden 20509 1-3H Tank Battery			
								Incident Number: NAB1905943420			
								Job Number: 03C2012069			
Coordinates: 32.2818808, -104.1061411								Logged By: Ronni Hayes		Method: Hand auger	
								Hole Diameter: ~4"		Total Depth: 3 ft bgs	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
Dry	263.2	0.3	Y	BH01	0.5	0	GP	GRAVEL, gravel-sand mix, poorly graded, staining, odor, no cohesiveness, SAA, some limestone present			
Dry	196	0.0	Y			1	SAA				
Dry	498.4	0.1	N			2	SP				
Dry	544.4	0.0	N	BH01A	3	3	SP				
Wet	ND	0	N	BH01B	4	4	SP				
SAA(same as above) some silt/clay TD 4 feet bgs											

								Sample Name: SS01		Date: 9/18/23	
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								Site Name: Ogden 20509 1-3H Tank Battery			
								Incident Number: NAB1905943420			
								Job Number: 03C2012069			
Coordinates: 32.2817716, -104.1063012								Logged By: Ronni Hayes		Method: Hand auger	
								Hole Diameter: ~4"		Total Depth: 3 ft bgs	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
Dry	<162.4	4.3	N	SS01	0.5	0	CCHE	CALICHE, abundant limestone, no odor, no staining, light tan, poorly graded, poorly sorted SAA(same as above)  SAND, coarse sand, some limestone, dark brown, no odor, no staining, poorly sorted.  SAND, fine to coarse sand, some limestone, med brown, no odor, no staining, poorly sorted TD 3 feet bgs			
Dry	<173.8	0.0	N			1	SAA				
Dry	302.4	0.0	N			2	SP				
Dry	347.2	0.0	N	SS01A	3	3	SP				
											

<div> ENSOLUM</div>								Sample Name: SS02		Date: 9/18/23	
								Site Name: Ogden 20509 1-3H Tank Battery			
								Incident Number: NAB1905943420			
								Job Number: 03C2012069			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: Ronni Hayes		Method: Hand auger	
Coordinates: 32.2818818, -104.1063473								Hole Diameter: ~4"		Total Depth: 3 ft bgs	
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			
Drv	<162.4	3.7	N	SS02	0.5	0	CCHE	CALICHE, abundant limestone, no odor, no staining, light tan, poorly graded, poorly sorted SAA(same as above)  SAND, coarse sand, some limestone, med brown, no odor, no staining, poorly sorted.  SAND, fine to coarse sand, some limestone, med brown, no odor, no staining, poorly sorted TD 3 feet bgs			
Drv	<173.8	0.0	N			0.5	SAA				
Drv	498.4	0.0	N			1					
Drv	498.4	0.0	N			2	SP				
Drv	498.4	0.0	N	SS02A	3	3	SP				

								Sample Name: SS03		Date: 9/18/23	
								Site Name: Ogden 20509 1-3H Tank Battery			
								Incident Number: NAB1905943420			
								Job Number: 03C2012069			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								Logged By: Ronni Hayes		Method: Hand auger	
Coordinates: 32.2819426, -104.1064284								Hole Diameter: ~4"		Total Depth: 3 ft bgs	
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			
Drv	<162.4	1.2	N	SS03	0.5	0	CCHE	CALICHE, abundant limestone, no odor, no staining, light tan, poorly graded, poorly sorted SAA(same as above)  SAND, coarse sand, some limestone, med brown, no odor, no staining, poorly sorted.  SAND, fine to coarse sand, some limestone, med brown, no odor, no staining, poorly sorted TD 3 feet bgs			
Dry	302.4	0.0	N			1	SAA				
Drv	<162.4	0.0	N			2	SP				
Dry	442.4	0.0	N	SS03A	3	3	SP				

								Sample Name: SS04		Date: 9/18/23	
								Site Name: Ogden 20509 1-3H Tank Battery			
								Incident Number: NAB1905943420			
								Job Number: 03C2012069			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								Logged By: Ronni Hayes		Method: Hand auger	
Coordinates: 32.2819625, -104.1062905								Hole Diameter: ~4"		Total Depth: 3 ft bgs	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
Dry	<162.4	1.3	N	SS04	0.5	0	CCHE	CALICHE, abundant limestone, no odor, no staining, light tan, poorly graded, poorly sorted			
Dry	442.4	0.0	N			1	SAA	SAA(same as above)			
Dry	392	0.0	N			2	SP	SAND, coarse sand, some limestone, med brown, no odor, no staining, poorly sorted.			
Dry	620.6	0.0	N	SS04A	3	3	SP	SAND, fine to coarse sand, some limestone, med brown, no odor, no staining, poorly sorted			
TD 3 feet bgs											



## APPENDIX C

### Photographic Log

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**Photographic Log**

BTA Oil Producers, LLC  
Ogden 20509 1-3H Tank Battery  
NAB1905943420



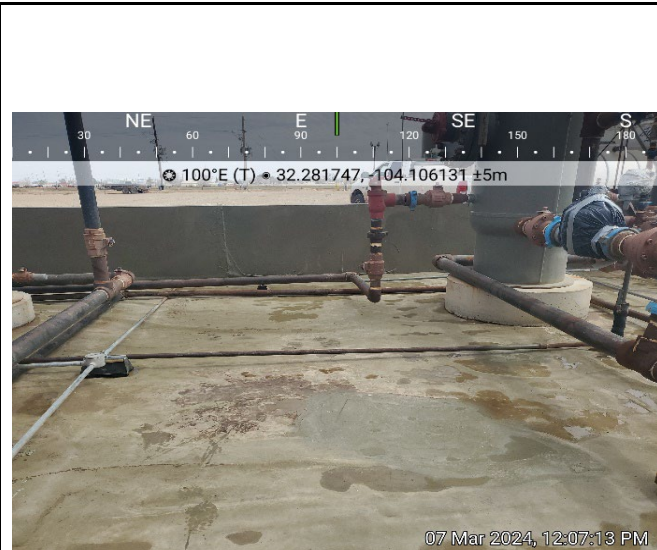
Photograph: 1 Date: 8/30/2023  
Description: Initial release  
View: Southeast



Photograph: 2 Date: 8/30/2023  
Description: Damaged liner  
View: North



Photograph: 3 Date: 9/18/2023  
Description: Delineation on pad  
View: East



Photograph: 4 Date: 3/7/2024  
Description: Repaired liner following delineation  
View: East



## APPENDIX D

### Laboratory Analytical Reports & Chain of Custody Documentation

---



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

September 05, 2023

HADLIE GREEN

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: ODGEN 20509 1-3H TANK BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 08/31/23 12:50.

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:	08/31/2023	Sampling Date:	08/30/2023
Reported:	09/05/2023	Sampling Type:	Soil
Project Name:	ODGEN 20509 1-3H TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012069	Sample Received By:	Tamara Oldaker
Project Location:	BTA ( 32.28212 - 104.10629 )		

**Sample ID: SS 01 @ 0.5' (H234735-01)**

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	09/01/2023	ND	1.79	89.5	2.00	0.827	
Toluene*	<0.050	0.050	09/01/2023	ND	2.10	105	2.00	3.63	
Ethylbenzene*	<0.050	0.050	09/01/2023	ND	2.18	109	2.00	3.17	
Total Xylenes*	<0.150	0.150	09/01/2023	ND	6.56	109	6.00	1.60	
Total BTEX	<0.300	0.300	09/01/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	08/31/2023	ND	368	92.0	400	16.0	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/05/2023	ND	181	90.7	200	22.2	
DRO >C10-C28*	<10.0	10.0	09/05/2023	ND	184	92.2	200	20.5	
EXT DRO >C28-C36	<10.0	10.0	09/05/2023	ND					

Surrogate: 1-Chlorooctane 101 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 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: 08/31/2023  
Reported: 09/05/2023  
Project Name: ODGEN 20509 1-3H TANK BATTERY  
Project Number: 03C2012069  
Project Location: BTA ( 32.28212 - 104.10629 )

Sampling Date: 08/30/2023  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: SS 02 @ 0.5' (H234735-02)**

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	09/01/2023	ND	1.79	89.5	2.00	0.827	
Toluene*	<0.050	0.050	09/01/2023	ND	2.10	105	2.00	3.63	
Ethylbenzene*	<0.050	0.050	09/01/2023	ND	2.18	109	2.00	3.17	
Total Xylenes*	<0.150	0.150	09/01/2023	ND	6.56	109	6.00	1.60	
Total BTX	<0.300	0.300	09/01/2023	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	32.0	16.0	08/31/2023	ND	368	92.0	400	16.0	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/01/2023	ND	181	90.7	200	22.2	
DRO >C10-C28*	<10.0	10.0	09/01/2023	ND	184	92.2	200	20.5	
EXT DRO >C28-C36	<10.0	10.0	09/01/2023	ND					

Surrogate: 1-Chlorooctane 113 % 48.2-134

Surrogate: 1-Chlorooctadecane 124 % 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: 08/31/2023  
Reported: 09/05/2023  
Project Name: ODGEN 20509 1-3H TANK BATTERY  
Project Number: 03C2012069  
Project Location: BTA ( 32.28212 - 104.10629 )

Sampling Date: 08/30/2023  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: SS 03 @ 0.5' (H234735-03)**

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	09/01/2023	ND	1.79	89.5	2.00	0.827	
Toluene*	<0.050	0.050	09/01/2023	ND	2.10	105	2.00	3.63	
Ethylbenzene*	<0.050	0.050	09/01/2023	ND	2.18	109	2.00	3.17	
Total Xylenes*	<0.150	0.150	09/01/2023	ND	6.56	109	6.00	1.60	
Total BTEx	<0.300	0.300	09/01/2023	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	08/31/2023	ND	368	92.0	400	16.0		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/01/2023	ND	181	90.7	200	22.2	
DRO >C10-C28*	<10.0	10.0	09/01/2023	ND	184	92.2	200	20.5	
EXT DRO >C28-C36	<10.0	10.0	09/01/2023	ND					

Surrogate: 1-Chlorooctane 100 % 48.2-134

Surrogate: 1-Chlorooctadecane 113 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 08/31/2023  
Reported: 09/05/2023  
Project Name: ODGEN 20509 1-3H TANK BATTERY  
Project Number: 03C2012069  
Project Location: BTA ( 32.28212 - 104.10629 )

Sampling Date: 08/30/2023  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: SS 04 @ 0.5' (H234735-04)**

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	09/01/2023	ND	1.79	89.5	2.00	0.827	
Toluene*	<0.050	0.050	09/01/2023	ND	2.10	105	2.00	3.63	
Ethylbenzene*	<0.050	0.050	09/01/2023	ND	2.18	109	2.00	3.17	
Total Xylenes*	<0.150	0.150	09/01/2023	ND	6.56	109	6.00	1.60	
Total BTX	<0.300	0.300	09/01/2023	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	48.0	16.0	08/31/2023	ND	368	92.0	400	16.0	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/01/2023	ND	181	90.7	200	22.2	
DRO >C10-C28*	<10.0	10.0	09/01/2023	ND	184	92.2	200	20.5	
EXT DRO >C28-C36	<10.0	10.0	09/01/2023	ND					

Surrogate: 1-Chlorooctane 103 % 48.2-134

Surrogate: 1-Chlorooctadecane 112 % 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: 08/31/2023  
Reported: 09/05/2023  
Project Name: ODGEN 20509 1-3H TANK BATTERY  
Project Number: 03C2012069  
Project Location: BTA ( 32.28212 - 104.10629 )

Sampling Date: 08/30/2023  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: SS 05 @ 0.5' (H234735-05)**

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	09/01/2023	ND	1.79	89.5	2.00	0.827	
Toluene*	<0.050	0.050	09/01/2023	ND	2.10	105	2.00	3.63	
Ethylbenzene*	<0.050	0.050	09/01/2023	ND	2.18	109	2.00	3.17	
Total Xylenes*	<0.150	0.150	09/01/2023	ND	6.56	109	6.00	1.60	
Total BTX	<0.300	0.300	09/01/2023	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	32.0	16.0	08/31/2023	ND	368	92.0	400	16.0	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/01/2023	ND	181	90.7	200	22.2	
DRO >C10-C28*	<10.0	10.0	09/01/2023	ND	184	92.2	200	20.5	
EXT DRO >C28-C36	<10.0	10.0	09/01/2023	ND					

Surrogate: 1-Chlorooctane 98.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 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: 08/31/2023  
Reported: 09/05/2023  
Project Name: ODGEN 20509 1-3H TANK BATTERY  
Project Number: 03C2012069  
Project Location: BTA ( 32.28212 - 104.10629 )

Sampling Date: 08/30/2023  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: SS 06 @ 0.5' (H234735-06)**

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	09/01/2023	ND	1.79	89.5	2.00	0.827	
Toluene*	<0.050	0.050	09/01/2023	ND	2.10	105	2.00	3.63	
Ethylbenzene*	<0.050	0.050	09/01/2023	ND	2.18	109	2.00	3.17	
Total Xylenes*	<0.150	0.150	09/01/2023	ND	6.56	109	6.00	1.60	
Total BTX	<0.300	0.300	09/01/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/31/2023	ND	368	92.0	400	16.0	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/05/2023	ND	181	90.7	200	22.2	
DRO >C10-C28*	<10.0	10.0	09/05/2023	ND	184	92.2	200	20.5	
EXT DRO >C28-C36	<10.0	10.0	09/05/2023	ND					

Surrogate: 1-Chlorooctane 91.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 99.6 % 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: 08/31/2023  
Reported: 09/05/2023  
Project Name: ODGEN 20509 1-3H TANK BATTERY  
Project Number: 03C2012069  
Project Location: BTA ( 32.28212 - 104.10629 )

Sampling Date: 08/30/2023  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: SS 07 @ 0.5' (H234735-07)**

BTX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/01/2023	ND	1.79	89.5	2.00	0.827	
Toluene*	<0.050	0.050	09/01/2023	ND	2.10	105	2.00	3.63	
Ethylbenzene*	<0.050	0.050	09/01/2023	ND	2.18	109	2.00	3.17	
Total Xylenes*	<0.150	0.150	09/01/2023	ND	6.56	109	6.00	1.60	
Total BTX	<0.300	0.300	09/01/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/31/2023	ND	368	92.0	400	16.0	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/01/2023	ND	181	90.7	200	22.2	
DRO >C10-C28*	<10.0	10.0	09/01/2023	ND	184	92.2	200	20.5	
EXT DRO >C28-C36	<10.0	10.0	09/01/2023	ND					

Surrogate: 1-Chlorooctane 95.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 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: 08/31/2023  
Reported: 09/05/2023  
Project Name: ODGEN 20509 1-3H TANK BATTERY  
Project Number: 03C2012069  
Project Location: BTA ( 32.28212 - 104.10629 )

Sampling Date: 08/30/2023  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: SS 08 @ 0.5' (H234735-08)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/01/2023	ND	1.79	89.5	2.00	0.827		
Toluene*	<0.050	0.050	09/01/2023	ND	2.10	105	2.00	3.63		
Ethylbenzene*	<0.050	0.050	09/01/2023	ND	2.18	109	2.00	3.17		
Total Xylenes*	<0.150	0.150	09/01/2023	ND	6.56	109	6.00	1.60		
Total BTEx	<0.300	0.300	09/01/2023	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	08/31/2023	ND	368	92.0	400	16.0		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/05/2023	ND	181	90.7	200	22.2	
DRO >C10-C28*	<10.0	10.0	09/05/2023	ND	184	92.2	200	20.5	
EXT DRO >C28-C36	<10.0	10.0	09/05/2023	ND					

Surrogate: 1-Chlorooctane 98.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 107 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- QR-04            The RPD for the BS/BSD was outside of historical limits.
- 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

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September 21, 2023

HADLIE GREEN

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: OGDEN 20509 1-3H TANK BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 09/18/23 14:33.

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: 09/18/2023  
Reported: 09/21/2023  
Project Name: OGDEN 20509 1-3H TANK BATTERY  
Project Number: 03C2012069  
Project Location: BTA 32.28212 -104.10629

Sampling Date: 09/18/2023  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Shalyn Rodriguez

**Sample ID: SS 01 A @ 3' (H235040-01)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/19/2023	ND	1.96	98.1	2.00	0.981	
Toluene*	<0.050	0.050	09/19/2023	ND	2.01	101	2.00	0.952	
Ethylbenzene*	<0.050	0.050	09/19/2023	ND	1.97	98.6	2.00	0.301	
Total Xylenes*	<0.150	0.150	09/19/2023	ND	6.00	100	6.00	0.946	
Total BTEX	<0.300	0.300	09/19/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 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	256	16.0	09/19/2023	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	09/19/2023	ND	203	101	200	13.2	
DRO >C10-C28*	<10.0	10.0	09/19/2023	ND	206	103	200	13.7	
EXT DRO >C28-C36	<10.0	10.0	09/19/2023	ND					

Surrogate: 1-Chlorooctane 81.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.1 % 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: 09/18/2023  
Reported: 09/21/2023  
Project Name: OGDEN 20509 1-3H TANK BATTERY  
Project Number: 03C2012069  
Project Location: BTA 32.28212 -104.10629

Sampling Date: 09/18/2023  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Shalyn Rodriguez

**Sample ID: SS 02 A @ 3' (H235040-02)**

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	09/19/2023	ND	1.96	98.1	2.00	0.981	
Toluene*	<0.050	0.050	09/19/2023	ND	2.01	101	2.00	0.952	
Ethylbenzene*	<0.050	0.050	09/19/2023	ND	1.97	98.6	2.00	0.301	
Total Xylenes*	<0.150	0.150	09/19/2023	ND	6.00	100	6.00	0.946	
Total BTX	<0.300	0.300	09/19/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 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	416	16.0	09/19/2023	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	09/19/2023	ND	200	100	200	13.9	
DRO >C10-C28*	<10.0	10.0	09/19/2023	ND	187	93.7	200	15.0	
EXT DRO >C28-C36	<10.0	10.0	09/19/2023	ND					

Surrogate: 1-Chlorooctane 97.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 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: 09/18/2023  
Reported: 09/21/2023  
Project Name: OGDEN 20509 1-3H TANK BATTERY  
Project Number: 03C2012069  
Project Location: BTA 32.28212 -104.10629

Sampling Date: 09/18/2023  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Shalyn Rodriguez

**Sample ID: SS 03 A @ 3' (H235040-03)**

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/19/2023	ND	1.96	98.1	2.00	0.981		
Toluene*	<0.050	0.050	09/19/2023	ND	2.01	101	2.00	0.952		
Ethylbenzene*	<0.050	0.050	09/19/2023	ND	1.97	98.6	2.00	0.301		
Total Xylenes*	<0.150	0.150	09/19/2023	ND	6.00	100	6.00	0.946		
Total BTEX	<0.300	0.300	09/19/2023	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	240	16.0	09/19/2023	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	09/19/2023	ND	200	100	200	13.9	
DRO >C10-C28*	<10.0	10.0	09/19/2023	ND	187	93.7	200	15.0	
EXT DRO >C28-C36	<10.0	10.0	09/19/2023	ND					

Surrogate: 1-Chlorooctane 89.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 93.7 % 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: 09/18/2023  
Reported: 09/21/2023  
Project Name: OGDEN 20509 1-3H TANK BATTERY  
Project Number: 03C2012069  
Project Location: BTA 32.28212 -104.10629

Sampling Date: 09/18/2023  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Shalyn Rodriguez

**Sample ID: SS 04 A @ 3' (H235040-04)**

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/19/2023	ND	1.96	98.1	2.00	0.981		
Toluene*	<0.050	0.050	09/19/2023	ND	2.01	101	2.00	0.952		
Ethylbenzene*	<0.050	0.050	09/19/2023	ND	1.97	98.6	2.00	0.301		
Total Xylenes*	<0.150	0.150	09/19/2023	ND	6.00	100	6.00	0.946		
Total BTEx	<0.300	0.300	09/19/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 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	576	16.0	09/19/2023	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	09/19/2023	ND	200	100	200	13.9	
DRO >C10-C28*	70.0	10.0	09/19/2023	ND	187	93.7	200	15.0	
EXT DRO >C28-C36	25.6	10.0	09/19/2023	ND					

Surrogate: 1-Chlorooctane 94.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 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: 09/18/2023  
Reported: 09/21/2023  
Project Name: OGDEN 20509 1-3H TANK BATTERY  
Project Number: 03C2012069  
Project Location: BTA 32.28212 -104.10629

Sampling Date: 09/18/2023  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Shalyn Rodriguez

**Sample ID: BH 01 @ 0.5' (H235040-05)**

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	09/20/2023	ND	1.96	98.1	2.00	0.981	
Toluene*	<0.050	0.050	09/20/2023	ND	2.01	101	2.00	0.952	
Ethylbenzene*	<0.050	0.050	09/20/2023	ND	1.97	98.6	2.00	0.301	
Total Xylenes*	<0.150	0.150	09/20/2023	ND	6.00	100	6.00	0.946	
Total BTX	<0.300	0.300	09/20/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 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	384	16.0	09/19/2023	ND	432	108	400	0.00	

TPH 8015M	mg/kg		Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2023	ND	200	100	200	13.9	
DRO >C10-C28*	854	10.0	09/19/2023	ND	187	93.7	200	15.0	
EXT DRO >C28-C36	375	10.0	09/19/2023	ND					

Surrogate: 1-Chlorooctane 105 % 48.2-134

Surrogate: 1-Chlorooctadecane 166 % 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: 09/18/2023  
Reported: 09/21/2023  
Project Name: OGDEN 20509 1-3H TANK BATTERY  
Project Number: 03C2012069  
Project Location: BTA 32.28212 -104.10629

Sampling Date: 09/18/2023  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Shalyn Rodriguez

**Sample ID: BH 01 A @ 3' (H235040-06)**

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/20/2023	ND	1.96	98.1	2.00	0.981		
Toluene*	<0.050	0.050	09/20/2023	ND	2.01	101	2.00	0.952		
Ethylbenzene*	<0.050	0.050	09/20/2023	ND	1.97	98.6	2.00	0.301		
Total Xylenes*	<0.150	0.150	09/20/2023	ND	6.00	100	6.00	0.946		
Total BTEx	<0.300	0.300	09/20/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 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	640	16.0	09/19/2023	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	09/19/2023	ND	200	100	200	13.9	
DRO >C10-C28*	<10.0	10.0	09/19/2023	ND	187	93.7	200	15.0	
EXT DRO >C28-C36	<10.0	10.0	09/19/2023	ND					

Surrogate: 1-Chlorooctane 95.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 105 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

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

Cardinal Laboratories

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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

Page 9 of 9



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

---

November 06, 2023

HADLIE GREEN

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: OGDEN 20509 1-3H TANK BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 10/31/23 13:15.

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".

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:	10/31/2023	Sampling Date:	10/26/2023
Reported:	11/06/2023	Sampling Type:	Soil
Project Name:	OGDEN 20509 1-3H TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012069	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA ( 32.28212-104.10629 )		

**Sample ID: BH01 @ 4' (H235954-01)**

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	11/03/2023	ND	2.11	105	2.00	1.45	
Toluene*	<0.050	0.050	11/03/2023	ND	1.91	95.3	2.00	2.87	
Ethylbenzene*	<0.050	0.050	11/03/2023	ND	1.94	97.0	2.00	4.22	
Total Xylenes*	<0.150	0.150	11/03/2023	ND	5.76	95.9	6.00	3.78	
Total BTX	<0.300	0.300	11/03/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	144	16.0	11/06/2023	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	11/02/2023	ND	192	96.2	200	5.85	
DRO >C10-C28*	<10.0	10.0	11/02/2023	ND	199	99.3	200	16.9	
EXT DRO >C28-C36	<10.0	10.0	11/02/2023	ND					

Surrogate: 1-Chlorooctane 89.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.3 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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

---

**Notes and Definitions**

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

---

Cardinal Laboratories

\*=Accredited Analyte

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

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]



## APPENDIX E

### NMOCD Notifications

---

**From:** [Wells, Shelly, EMNRD](#)  
**To:** [Hadlie Green](#)  
**Cc:** [Bratcher, Michael, EMNRD](#); [Hamlet, Robert, EMNRD](#)  
**Subject:** RE: [EXTERNAL] BTA - Containment Inspection - Ogden 20509 1-3H Tank Battery (Incident Number NAB1905943420)  
**Date:** Monday, August 28, 2023 12:34:02 PM  
**Attachments:** [image001.png](#)  
[image002.png](#)  
[image003.png](#)  
[image004.png](#)

---

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

Good morning Hadlie,

The OCD has received your notification. Notification requirements are **two full business days**, per rule. You may proceed on your schedule. This, and all correspondence, should be included in the closure report to ensure inclusion in the project file.

Thank you,

Shelly

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

---

**From:** Hadlie Green <[hgreen@ensolum.com](mailto:hgreen@ensolum.com)>  
**Sent:** Monday, August 28, 2023 11:08 AM  
**To:** Enviro, OCD, EMNRD <[OCD.Enviro@emnrd.nm.gov](mailto:OCD.Enviro@emnrd.nm.gov)>  
**Cc:** Kelton Beard <[KBeard@btaoil.com](mailto:KBeard@btaoil.com)>  
**Subject:** [EXTERNAL] BTA - Containment Inspection - Ogden 20509 1-3H Tank Battery (Incident Number NAB1905943420)

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

To Whom It May Concern,

Below is an email notification for liner inspection at BTA Oil Producers, LLC (BTA) Ogden 20509 1-3H Tank Battery (Incident Number NAB1905943420) / Spill Date 2-7-2019. This is a notification that Ensolum is scheduled to inspect this lined containment on behalf of BTA on Wednesday, August 30, 2023. Please call with any questions or concerns.

GPS: 32.28212, -104.10629

Thank you,



**Hadlie Green**

Project Geologist

432-557-8895

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

**Ensolum, LLC**

in f 

**From:** [Wells, Shelly, EMNRD](#)  
**To:** [Hadlie Green](#)  
**Cc:** [Bratcher, Michael, EMNRD](#); [Velez, Nelson, EMNRD](#); [Hamlet, Robert, EMNRD](#)  
**Subject:** RE: [EXTERNAL] BTA - Sampling Notification - Week of 09/04/2023  
**Date:** Wednesday, August 30, 2023 4:52:13 PM  
**Attachments:** [image001.png](#)  
[image002.png](#)  
[image003.png](#)  
[image004.png](#)

---

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

Good afternoon Hadlie,

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

Thank you,

Shelly

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

---

**From:** Hadlie Green <[hgreen@ensolum.com](mailto:hgreen@ensolum.com)>  
**Sent:** Wednesday, August 30, 2023 3:21 PM  
**To:** Enviro, OCD, EMNRD <[OCD.Enviro@emnrd.nm.gov](mailto:OCD.Enviro@emnrd.nm.gov)>  
**Cc:** Kelton Beaird <[KBeaird@btaoil.com](mailto:KBeaird@btaoil.com)>; Peter Van Patten <[pvanpatten@ensolum.com](mailto:pvanpatten@ensolum.com)>  
**Subject:** [EXTERNAL] BTA - Sampling Notification - Week of 09/04/2023

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 September 4, 2023.

- Rojo 14-17 Tank Battery / NAPP2106927983
  - Sampling Date: 9/7/2023 @ 9:00 AM MST
- Ogden 20509 1-3H Tank Battery / NAB1905943420
  - Sampling Date: 9/8/2023 @ 9:00 AM MST

Thank you,



**Hadlie Green**

Project Geologist

432-557-8895

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

**Ensolum, LLC**



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

---

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

Good morning Hadlie,

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

Thank you,

Shelly

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

---

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

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

All,

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

- RGA #1 / nAPP2228347919

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

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

Thank you,



**Hadlie Green**

Project Geologist

432-557-8895

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

**Ensolum, LLC**





APPENDIX F

Final C-141

---

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural  
Resources Department

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised August 24, 2018  
Submit to appropriate OCD District office

Incident ID	NAB1905943420
District RP	2RP-5271
Facility ID	
Application ID	pAB1905942994

## Release Notification

### Responsible Party

Responsible Party: BTA Oil Producers, LLC	OGRID: 260297
Contact Name: Bob Hall	Contact Telephone: 432-682-3753
Contact email: bhall@btaoil.com	Incident # (assigned by OCD) NAB1905943420
Contact mailing address: 104 S. Pecos St., Midland, TX 79701	

### Location of Release Source

Latitude: 32.28212° Longitude: -104.10629°

(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Ogden 20509 1-3H Tank Battery	Site Type: Tank Battery
Date Release Discovered: 2/7/2019	API# (if applicable) Nearest well: Ogden 20509 29 32 #1H API #30-015-44749

Unit Letter	Section	Township	Range	County
B	29	23S	28E	Eddy

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (Name: BF&G Farms, LLC, PQB 1275, Loving, NM 88256)

### 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) 10 BBL	Volume Recovered (bbls) 6 BBL
<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 spray of oil from a heater released oil into the lined secondary containment and onto land adjacent to the Ogden 1-3H Tank Battery.



State of New Mexico  
Oil Conservation Division

Incident ID	NAB1905943420
District RP	2RP-5271
Facility ID	
Application ID	pAB1905942994

Was this a major release as defined by 19.15.29.7(A) NMAC?  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

**Initial Response**

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

<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:  <b>Additional Information:</b> Immediate Action was taken to recover crude oil from the lined secondary containment and from the surface of the adjacent farm land. Impacted soil has been removed and closure samples have taken to show that remediation has been completed. Full details will be provided in report to request closure.	
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: 	Date: <b>2/20/2018</b>
email: <b>bhall@btaoil.com</b>	Telephone: <b>432-682-3753</b>
<b>OCD Only</b>	
Received by: 	Date: <b>2/28/2019</b>

Incident ID	NAB1905943420
District RP	2RP-5271
Facility ID	
Application ID	pAB1905942994

## Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<50 (ft bgs)
Did this release impact groundwater or surface water?	<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.

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

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

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

Incident ID	NAB1905943420
District RP	2RP-5271
Facility ID	
Application ID	pAB1905942994

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

Printed Name: Kelton Beard Title: Environmental Manager

Signature: \_\_\_\_\_ Date: 11/15/2023

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

**OCD Only**

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



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**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

QUESTIONS

Action 327127

QUESTIONS

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID:
	260297
	Action Number:
	327127
Action Type:	
[C-141] Deferral Request C-141 (C-141-v-Deferral)	

QUESTIONS

Prerequisites	
Incident ID (n#)	nAB1905943420
Incident Name	NAB1905943420 OGDEN 20509 29 32 1-3H BATTERY @ 30-015-44749
Incident Type	Oil Release
Incident Status	Deferral Request Received
Incident Well	[30-015-44749] OGDEN 20509 29 32 #001H

Location of Release Source	
Please answer all the questions in this group.	
Site Name	OGDEN 20509 29 32 1-3H BATTERY
Date Release Discovered	02/07/2019
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: Equipment Failure   Other (Specify)   Crude Oil   Released: 10 BBL   Recovered: 6 BBL   Lost: 4 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 327127

**QUESTIONS (continued)**

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID:
	260297
	Action Number:
	327127
Action Type:	
[C-141] Deferral Request C-141 (C-141-v-Deferral)	

**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	No
Reasons why this would be considered a submission for a notification of a major release	Unavailable.
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: kbeaird@btaoil.com Date: 03/27/2024
--	--

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QUESTIONS, Page 3

Action 327127

**QUESTIONS (continued)**

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID:	260297
	Action Number:	327127
	Action Type:	[C-141] Deferral Request C-141 (C-141-v-Deferral)

**QUESTIONS****Site Characterization**

Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 26 and 50 (ft.)
What method was used to determine the depth to ground water	U.S. Geological Survey
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 1 and 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1000 (ft.) and ½ (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1000 (ft.) and ½ (mi.)
Any other fresh water well or spring	Between 1000 (ft.) and ½ (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Zero feet, overlying, or within area
A wetland	Between 1 and 5 (mi.)
A subsurface mine	Between 1 and 5 (mi.)
An (non-karst) unstable area	Between ½ and 1 (mi.)
Categorize the risk of this well / site being in a karst geology	Medium
A 100-year floodplain	Between 300 and 500 (ft.)
Did the release impact areas not on an exploration, development, production, or storage site	Yes

**Remediation Plan**

Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No

**Soil Contamination Sampling:** (Provide the highest observable value for each, in milligrams per kilograms.)

Chloride	(EPA 300.0 or SM4500 Cl B)	640
TPH (GRO+DRO+MRO)	(EPA SW-846 Method 8015M)	1229
GRO+DRO	(EPA SW-846 Method 8015M)	854
BTEX	(EPA SW-846 Method 8021B or 8260B)	0
Benzene	(EPA SW-846 Method 8021B or 8260B)	0

Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.

On what estimated date will the remediation commence	08/30/2023
On what date will (or did) the final sampling or liner inspection occur	08/30/2023
On what date will (or was) the remediation complete(d)	10/26/2023
What is the estimated surface area (in square feet) that will be reclaimed	9400
What is the estimated volume (in cubic yards) that will be reclaimed	954
What is the estimated surface area (in square feet) that will be remediated	9400
What is the estimated volume (in cubic yards) that will be remediated	954

These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.

The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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QUESTIONS, Page 4

Action 327127

**QUESTIONS (continued)**

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID:	260297
	Action Number:	327127
	Action Type:	[C-141] Deferral Request C-141 (C-141-v-Deferral)

**QUESTIONS****Remediation Plan (continued)**

Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

**This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:**

(Select all answers below that apply.)

(Ex Situ) Excavation and <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.

Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.

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

I hereby agree and sign off to the above statement	Name: BTA ENSOLUM Title: Environmental Manager Email: kbeaird@btaoil.com Date: 03/27/2024
--	--

The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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QUESTIONS, Page 5

Action 327127

**QUESTIONS (continued)**

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID:	260297
	Action Number:	327127
	Action Type:	[C-141] Deferral Request C-141 (C-141-v-Deferral)

**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	Yes
Have the lateral and vertical extents of contamination been fully delineated	Yes
Is the remaining contamination in areas immediately under or around production equipment where remediation could cause a major facility deconstruction	Yes
Please list or describe the production equipment and how (re)moving the equipment would cause major facility deconstruction	5 horizontal separators, two vertical heater treaters, 3 vertical separators, and 12 storage tanks with surface utilities connecting throughout the lined containment. The facility would be deconstructed in order to remove production equipment in order to safely remove impacted soils beneath the containment with proper sloping and benching
What is the remaining surface area (in square feet) that will still need to be remediated if a deferral is granted	9400
What is the remaining volume (in cubic yards) that will still need to be remediated if a deferral is granted	954
Per Paragraph (2) of Subsection C of 19.15.29.12 NMAC if contamination is located in areas immediately under or around production equipment such as production tanks, wellheads and pipelines where remediation could cause a major facility deconstruction, the remediation, restoration and reclamation may be deferred with division written approval until the equipment is removed during other operations, or when the well or facility is plugged or abandoned, whichever comes first.	
Enter the facility ID (f#) on which this deferral should be granted	Ogden North [fAPP2130022691]
Enter the well API (30-) on which this deferral should be granted	30-015-44749 OGDEN 20509 29 32 #001H
Contamination does not cause an imminent risk to human health, the environment, or groundwater	True
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: BTA ENSOLUM Title: Environmental Manager Email: kbeaird@btaoil.com Date: 03/27/2024

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QUESTIONS, Page 6  
  
Action 327127

**QUESTIONS (continued)**

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID:	260297
	Action Number:	327127
	Action Type:	[C-141] Deferral Request C-141 (C-141-v-Deferral)

**QUESTIONS**

Sampling Event Information	
Last sampling notification (C-141N) recorded	327170
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	10/26/2023
What was the (estimated) number of samples that were to be gathered	1
What was the sampling surface area in square feet	9400

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	No

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CONDITIONS  
  
Action 327127

CONDITIONS

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID:
	260297
	Action Number:
	327127
Action Type:	
[C-141] Deferral Request C-141 (C-141-v-Deferral)	

CONDITIONS

Created By	Condition	Condition Date
scwells	Deferral approved. Deferral of sample point BH01 (under lined tank battery) is approved until plugging and abandonment or a major facility deconstruction, whichever comes first. A complete and accurate remediation report and/or reclamation report will need to be submitted at that time.	3/27/2024