



February 7, 2025

New Mexico Oil Conservation Division

1220 South St. Francis Drive
Santa Fe, New Mexico 87505

**Re: Deferral Request
Lone Shocker State Battery
Facility ID fAPP2126038235
Incident Numbers nAPP2431841883
Eddy County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared this *Deferral Request* to document assessment, delineation, and soil sampling activities at the Lone Shocker State Battery (Site). The purpose of the assessment and soil sampling activities was to assess for the presence or absence of impacts to soil following a produced water release on the pad surface due to flow line corrosion. Based on field observations, field screening activities, and soil sample laboratory analytical results, XTO is submitting this *Deferral Request*, describing Site assessment and delineation activities that have occurred and requesting deferral of final remediation for Incident Number nAPP2431841883 until the Site is reconstructed, and/or the well pad is abandoned.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit A, Section 32, Township 25 South, Range 29 East, in Eddy County, New Mexico (32.09304 °, -103.99905°) and is associated with oil and gas exploration and production operations on State Land managed by the New Mexico State Land Office (SLO) under Lease Number VB07920005.

On November 12, 2024, corrosion created a pinhole leak in a 4" water dump line 'T' joint releasing 8 barrels (bbls) of produced water onto the surface of the well pad under and between active production equipment and production lines. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; 3 bbls of produced water were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) via Notification of Release (NOR) on November 13, 2024 and subsequently submitted an Initial C-141 Application (C-141) on November 15, 2024. The release was assigned Incident Number nAPP2431841883.

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 below. Potential Site receptors are identified on Figure 1.

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Depth to groundwater at the Site is estimated to be between 50 feet and 100 feet below ground surface (bgs) based on nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is USGS well 320532104001701, located approximately 0.36 miles west of the Site. The groundwater well has a reported depth to groundwater of 98.13 feet bgs and a total depth of 128 feet bgs. The referenced well record is included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is a dry wash, located approximately 2,127 feet east 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 potentially underlain by unstable geology (medium potential karst designation area).

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

NMSLO CULTURAL RESOURCES AND BIOLOGICAL REVIEW

Cultural Properties Protection

Since the release occurred on the well pad, the site is exempt from the Cultural Properties Protection Rule (CPP). As such, no additional cultural resource surveys were completed in connection with this release.

Biological Review

Ensolum personnel conducted a desktop review to establish if the Site is within an area of possible threatened, endangered, and sensitive wildlife and plant species, environmentally sensitive areas, surface waters, and sensitive soils.

- A review of the U.S. Fish and Wildlife Services Information for Planning and Consultation (IPaC) resources indicated there are no critical wildlife habitats at the Site. A review of the BLM NM Plant Wildlife Habitat maps indicated potential habitats for Scheer's beehave cactus near the Site. Threatened and endangered plant species are potentially present in the area surrounding the Site; however, no native vegetation outside of the well pad extent was disturbed during remediation activities.
- The Site is not located within an area of possible range of the Lesser Prairie Chicken habitat based on a review of NMSLO CCAA map.
- No environmentally sensitive receptors were located near the Site, as determined by the Site Characterization.

- The Natural Resources Conservation Service (NRCS) Web Soil Survey classifies the soil type at the Site as Upton gravelly loam. The Upton gravelly loam is not considered a sensitive soil per the NMSLO guidelines.

SITE ASSESSMENT AND DELINEATION SOIL SAMPLING ACTIVITIES

On November 18, 2024, Ensolum personnel visited the Site to evaluate the release extent based on information provided on the C-141 and visual observations of the release. The release extent was mapped utilizing a handheld Global Positioning System (GPS) unit. On December 2, 2024, Ensolum personnel conducted delineation activities. Four delineation soil samples, SS01 through SS04, were collected from a depth of approximately 0.5 feet bgs around the release to assess the lateral extent. Additionally, two boreholes, BH01 and BH02, were advanced via hand auger within the release extent. Due to the competent formation below the release, hand auger refusal was reached at a depths ranging from 1-foot to 2 feet bgs. On December 13, 2024, Ensolum personnel returned to the Site to oversee additional delineation via core drill to a terminal depth of 3 feet bgs to assess the vertical extent of the release. Delineation soil sample SS02 was advanced to a terminal depth of 2 feet bgs via core drill to confirm the lateral extent of the release. Delineation soil samples SS01, SS03 and SS04 were unable to be vertically delineated due to the location and proximity to production equipment. The delineation soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride utilizing Hach® chloride QuanTab® test strips. The release extent and delineation soil sample locations are depicted in Figure 2. Photographic documentation is included in Appendix B.

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

LABORATORY ANALYTICAL RESULTS

Delineation soil samples, SS01 through SS04, collected around the release extent from a depth of 0.5 feet bgs indicated all COCs were in compliance with Site Closure Criteria, successfully defining the lateral extent of the release. Delineation soil samples SS02 through SS02C, collected from depths up to 3 feet bgs, indicated all COCs were in compliance with Closure Criteria. Laboratory analytical results for delineation soil samples BH01, BH02, BH01B, and BH02A, collected at depths ranging from 0.5 feet to 2 feet bgs, indicated chloride concentrations exceeded the Closure Criteria. Delineation soil samples BH01C and BH02C, collected at a terminal depth of 3 feet bgs, indicated all COC concentrations were in compliance with the Closure Criteria, successfully defining the vertical extent of the release.

SURFACE SCRAPING ACTIVITIES

Following delineation activities, surface scraping of visibly stained soil was conducted in the release area to the maximum extent possible. Surface scraping activities were performed utilizing hand tools, as no mechanical equipment could access the impacted soil due to active production equipment and surface pipelines. The estimated area of impacted soil left in place immediately adjacent to active production equipment measures approximately 1,432 square feet and a total of approximately 159 cubic yards of impacted soil remains in place. The estimated area of remaining impacted soil and delineation soil sample locations are presented in Figure 2.

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DEFERRAL REQUEST

XTO is requesting deferral of final remediation due to the presence of active production equipment and surface pipelines preventing excavation of impacted soil. The impacted soil is limited to the area between active production equipment, where remediation would require a major facility deconstruction. The impacted soil remaining in place is delineated vertically by delineation soil samples BH01C and BH02C, collected at 3 feet bgs. The soil is laterally defined by delineation soil samples SS01 through SS04.

XTO does not believe deferral will result in imminent risk to human health, the environment, or groundwater. Depth to groundwater was determined to be between 50 feet and 100 feet and the impacted soil remaining in place is limited in areal and vertical extent.

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, XTO requests deferral of final remediation for Incident Number nAPP2431841883 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.

Sincerely,
Ensolum, LLC

A handwritten signature in black ink, appearing to read "Tracy Hillard".

Tracy Hillard
Project Engineer

A handwritten signature in black ink, appearing to read "Daniel R. Moir".

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

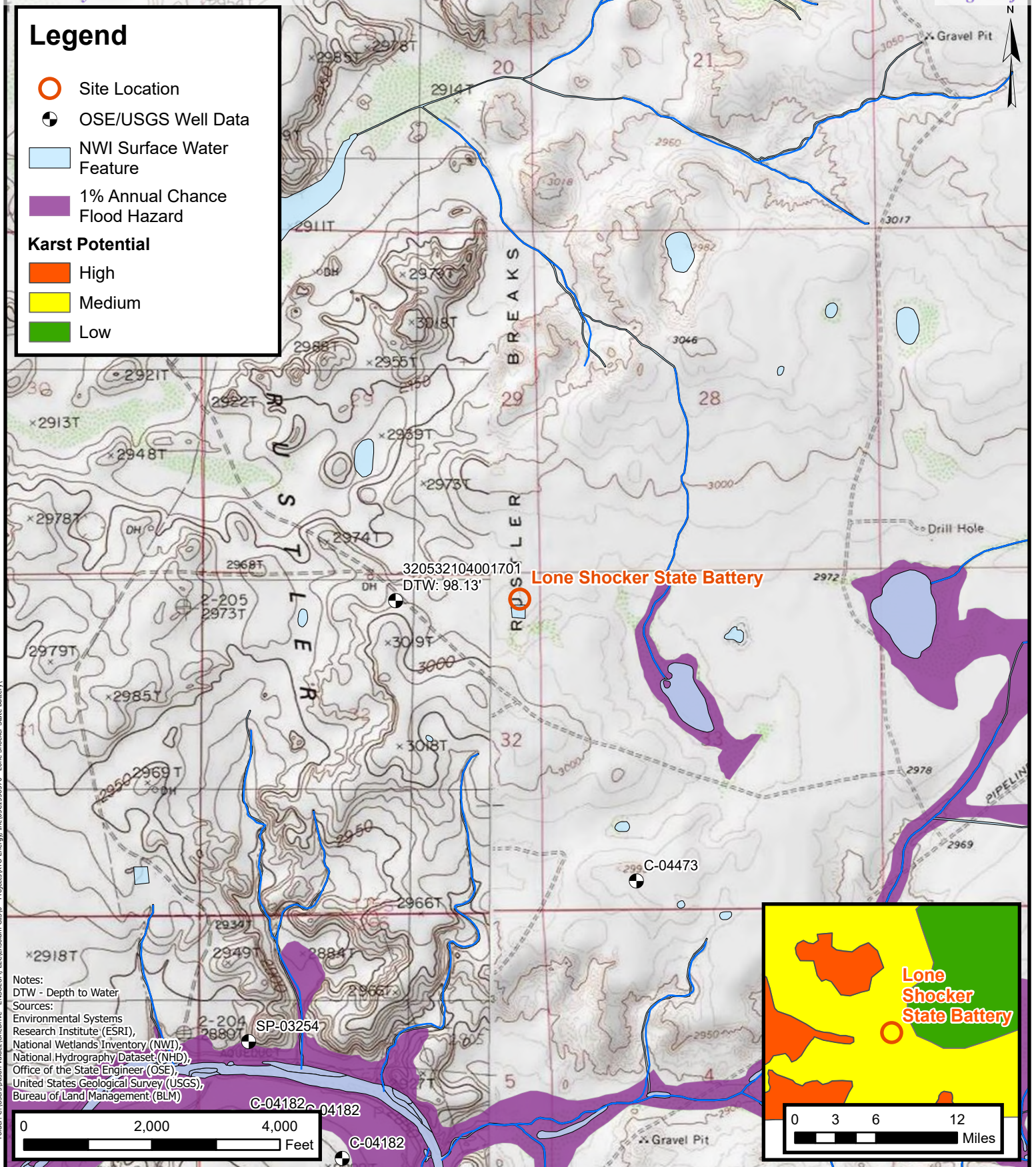
cc: Robert Woodall, XTO
Kaylan Dirkx, XTO
SLO

Appendices:

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

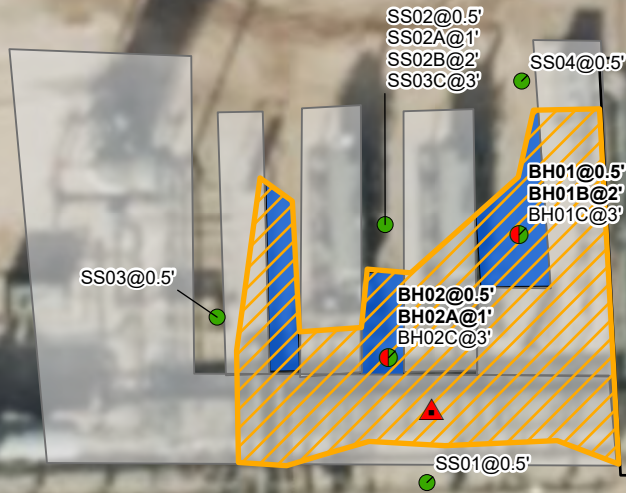


FIGURES

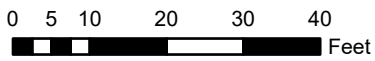


Legend

- Delineation Soil Sample in Compliance with Closure Criteria
- Delineation Soil Sample with Concentrations Previously Exceeding Closure Criteria
- ▲ Point of Release (POR)
- Release Extent and Deferral Area
- Lined Containment Area
- Production Equipment
- Surface Scrape Extent



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



Sources: Environmental Systems Research Institute (ESRI)



Delineation Soil Sample Locations

XTO Energy, Inc
Lone Shocker State Battery
Incident Number: nAPP2431841883
Unit A, Section 32, T 25S, R 29E
Eddy County, New Mexico

FIGURE
2



TABLES



TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS LONE SHOCKER STATE BATTERY XTO Energy, Inc 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	12/02/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	384
SS02	12/02/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	208
SS02A	12/13/2024	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SS02B	12/13/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS02C	12/13/2024	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SS03	12/02/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
SS04	12/02/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112
BH01	12/02/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	5,360
BH01B	12/02/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	2,280
BH01C	12/13/2024	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	400
BH02	12/02/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	7,760
BH02A	12/02/2024	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	4,320
BH02C	12/13/2024	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	272

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

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

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

NMAC: New Mexico Administrative Code

Grey text indicates soil sample removed during excavation activities



APPENDIX A

Referenced Well Records



USGS Home
Contact USGS
Search USGS

National Water Information System: Web Interface

USGS Water Resources

Data Category:
Groundwater

Geographic Area:
United States

GO

Click to hideNews Bulletins

- Explore the NEW [USGS National Water Dashboard](#) interactive map to access real-time water data from over 13,500 stations nationwide.

Groundwater levels for the Nation

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

Search Results -- 1 sites found

Agency code = usgs
site_no list =

- 320532104001701

Minimum number of levels = 1
[Save file of selected sites](#) to local disk for future upload

USGS 320532104001701 25S.29E.32.21111

Eddy County, New Mexico
Latitude 32°05'32", Longitude 104°00'17" NAD27
Land-surface elevation 2,988 feet above NAVD88
The depth of the well is 128 feet below land surface.
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

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

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 measur
1949-03-11			D 62610		2871.10	NGVD29	1		Z	
1949-03-11			D 62611		2872.66	NAVD88	1		Z	
1949-03-11			D 72019	115.34			1		Z	
1958-08-19			D 62610		2887.81	NGVD29	1		Z	
1958-08-19			D 62611		2889.37	NAVD88	1		Z	
1958-08-19			D 72019	98.63			1		Z	
1959-03-24			D 62610		2887.84	NGVD29	1		Z	
1959-03-24			D 62611		2889.40	NAVD88	1		Z	
1959-03-24			D 72019	98.60			1		Z	
1978-01-13			D 62610		2891.21	NGVD29	1		Z	
1978-01-13			D 62611		2892.77	NAVD88	1		Z	
1978-01-13			D 72019	95.23			1		Z	
1983-02-01			D 62610		2890.81	NGVD29	1		Z	
1983-02-01			D 62611		2892.37	NAVD88	1		Z	
1983-02-01			D 72019	95.63			1		Z	
1987-10-14			D 62610		2889.75	NGVD29	1		Z	
1987-10-14			D 62611		2891.31	NAVD88	1		Z	

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement
1987-10-14			D	72019	96.69			1	Z	
1988-04-06			D	62610		2889.51	NGVD29	1	Z	
1988-04-06			D	62611		2891.07	NAVD88	1	Z	
1988-04-06			D	72019	96.93			1	Z	
1992-11-03			D	62610		2888.31	NGVD29	1	S	
1992-11-03			D	62611		2889.87	NAVD88	1	S	
1992-11-03			D	72019	98.13			1	S	

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	S	Steel-tape measurement.
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.

[Questions or Comments](#)
[Help](#)
[Data Tips](#)
[Explanation of terms](#)
[Subscribe for system changes](#)

[Accessibility](#) [FOIA](#) [Privacy](#) [Policies and Notices](#)
[U.S. Department of the Interior](#) | [U.S. Geological Survey](#)
Title: Groundwater for USA: Water Levels
URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>



Page Contact Information: [USGS Water Data Support Team](#)
Page Last Modified: 2025-01-13 15:56:53 EST
0.31 0.24 nadww01



APPENDIX B

Photographic Log



Photographic Log

XTO Energy, Inc.

Lone Shocker State Battery

Incident Number nAPP2431841883



Photograph: 1 Date: 11/12/2024
Description: Initial pooling in release extent
View: Northeast

298°NW (T) 32°5'31"N, 103°59'56"W ±36ft ▲ 2991ft



Photograph: 2 Date: 12/2/2024
Description: Surface scraping and delineation
View: Northwest

316°NW (T) 32°5'32"N, 103°59'55"W ±32ft ▲ 2986ft



Photograph: 3 Date: 12/2/2024
Description: Surface scraping activities
View: Northwest

N NE E SE
0 30 60 90 120 150

80°E (T) 32°5'32"N, 103°59'56"W ±13ft ▲ 2993ft



Photograph: 4 Date: 12/2/2024
Description: Surface scraping activities
View: East

**Photographic Log**

XTO Energy, Inc.

Lone Shocker State Battery

Incident Number nAPP2431841883



Photograph: 5 Date: 12/2/2024
Description: Delineation activities
View: Northeast



Photograph: 6 Date: 12/3/2024
Description: Surface scraping activities
View: Southeast



Photograph: 7 Date: 12/3/2024
Description: Surface scraping activities
View: North





Photograph: 8 Date: 12/13/2024
Description: Core drill delineation after scrape
View: South




APPENDIX C

Lithologic Soil Sampling Logs

 ENSOLUM		Sample Name: BH01		Date: 12/13/2024				
		Site Name: Lone Shocker State Battery						
		Incident Number: nAPP2431841883						
		Job Number: 03C1558576						
LITHOLOGIC / SOIL SAMPLING LOG								
Coordinates: 32.092308, -103.998889			Logged By: US JD		Method: HA/Core drill			
			Hole Diameter: 2"		Total Depth: 3'			
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. A 40% correction factor is included.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
D	5,360	2.3	Y	BH01	0.5	0	SW	(0-1') SAND, tan, coarse grained, with some silt, no odor.
D	3,338	3.3	N		1	1	SW-SM	(1-2') SAND, tan, well graded, with silt, no staining.
D	2,280	3.1	N	BH01B	2	2		(2') Some odor, hand auger refusal
D	400	0	N	BH01C	3	3	CCHE	(3') CALICHE, Light brown, some silt.
						Total depth @ 3 feet bgs		

 ENSOLUM		Sample Name: BH02		Date: 12/13/24				
		Site Name: Lone Shocker State Battery						
		Incident Number: nAPP2431841883						
		Job Number: 03C1558576						
LITHOLOGIC / SOIL SAMPLING LOG								
Coordinates: 32.092264, -103.998944			Logged By: US JD		Method: HA/ Core drill			
			Hole Diameter: 2"		Total Depth: 3'			
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. A 40% correction factor is included.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
D	7,760	2.1	Y	BH02	0.5	0	SW-SM	(0-1') SAND, tan, coarse grained, with some silt, no odor.
D	5,443	0.1	N	BHUZA	1	1		(1-2') SAND, tan, well graded, with silt, no staining. hand auger refusal
D	4,320	0.1	N		2	2		(@2') Some odor, hand auger refusal
D	272	0	N	BH02C	3	3	CCHE	(3') CALICHE, Light brown, some silt.
						Total depth @ 3 feet bgs		

 ENSOLUM		Sample Name: SS02		Date: 12/13/24				
		Site Name: Lone Shocker State Battery						
		Incident Number: nAPP2431841883						
		Job Number: 03C1558576						
LITHOLOGIC / SOIL SAMPLING LOG								
Coordinates: 32.092311, -103.998945			Logged By: JD		Method: Core drill			
			Hole Diameter: 2"		Total Depth: 3'			
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. A 40% correction factor is included.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	SW-SM	(0-2') SAND, tan, coarse, with silt, no odor, no stain
D	208	0.8	N	SS02	0.5			
D	48.0	0	N	SS02A	1	1		
D	32.0	0	N	SS02B	2	2		(2-3') With brown sand.
D	48.0	0	N	SS02C	3	3		
						Total depth @ 3 feet bgs		



APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation



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

December 04, 2024

TRACY HILLARD

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: LONE SHOCKER STATE BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 12/03/13 13:49.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
TRACY HILLARD
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received: 12/03/2013
Reported: 12/04/2024
Project Name: LONE SHOCKER STATE BATTERY
Project Number: 03C1558576
Project Location: XTO 32.09304-103.99905

Sampling Date: 12/02/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SS 01 (H247331-01)

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	12/03/2024	ND	2.05	103	2.00	2.99	
Toluene*	<0.050	0.050	12/03/2024	ND	2.11	106	2.00	3.00	
Ethylbenzene*	<0.050	0.050	12/03/2024	ND	2.10	105	2.00	2.88	
Total Xylenes*	<0.150	0.150	12/03/2024	ND	6.25	104	6.00	2.85	
Total BTEX	<0.300	0.300	12/03/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	384	16.0	12/04/2024	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/03/2024	ND	196	98.2	200	0.832	
DRO >C10-C28*	<10.0	10.0	12/03/2024	ND	201	101	200	1.44	
EXT DRO >C28-C36	<10.0	10.0	12/03/2024	ND					

Surrogate: 1-Chlorooctane 97.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
TRACY HILLARD
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received: 12/03/2013
Reported: 12/04/2024
Project Name: LONE SHOCKER STATE BATTERY
Project Number: 03C1558576
Project Location: XTO 32.09304-103.99905

Sampling Date: 12/02/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SS 02 (H247331-02)

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/03/2024	ND	2.05	103	2.00	2.99	
Toluene*	<0.050	0.050	12/03/2024	ND	2.11	106	2.00	3.00	
Ethylbenzene*	<0.050	0.050	12/03/2024	ND	2.10	105	2.00	2.88	
Total Xylenes*	<0.150	0.150	12/03/2024	ND	6.25	104	6.00	2.85	
Total BTEX	<0.300	0.300	12/03/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	12/04/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/03/2024	ND	196	98.2	200	0.832	
DRO >C10-C28*	<10.0	10.0	12/03/2024	ND	201	101	200	1.44	
EXT DRO >C28-C36	<10.0	10.0	12/03/2024	ND					

Surrogate: 1-Chlorooctane 104 % 48.2-134

Surrogate: 1-Chlorooctadecane 110 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TRACY HILLARD
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received: 12/03/2013
Reported: 12/04/2024
Project Name: LONE SHOCKER STATE BATTERY
Project Number: 03C1558576
Project Location: XTO 32.09304-103.99905

Sampling Date: 12/02/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SS 03 (H247331-03)

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	12/03/2024	ND	2.05	103	2.00	2.99	
Toluene*	<0.050	0.050	12/03/2024	ND	2.11	106	2.00	3.00	
Ethylbenzene*	<0.050	0.050	12/03/2024	ND	2.10	105	2.00	2.88	
Total Xylenes*	<0.150	0.150	12/03/2024	ND	6.25	104	6.00	2.85	
Total BTEX	<0.300	0.300	12/03/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	12/04/2024	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/03/2024	ND	196	98.2	200	0.832	
DRO >C10-C28*	<10.0	10.0	12/03/2024	ND	201	101	200	1.44	
EXT DRO >C28-C36	<10.0	10.0	12/03/2024	ND					

Surrogate: 1-Chlorooctane 99.0 % 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
TRACY HILLARD
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received: 12/03/2013
Reported: 12/04/2024
Project Name: LONE SHOCKER STATE BATTERY
Project Number: 03C1558576
Project Location: XTO 32.09304-103.99905

Sampling Date: 12/02/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SS 04 (H247331-04)

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/03/2024	ND	2.05	103	2.00	2.99	
Toluene*	<0.050	0.050	12/03/2024	ND	2.11	106	2.00	3.00	
Ethylbenzene*	<0.050	0.050	12/03/2024	ND	2.10	105	2.00	2.88	
Total Xylenes*	<0.150	0.150	12/03/2024	ND	6.25	104	6.00	2.85	
Total BTEX	<0.300	0.300	12/03/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	12/04/2024	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/04/2024	ND	196	98.2	200	0.832	
DRO >C10-C28*	<10.0	10.0	12/04/2024	ND	201	101	200	1.44	
EXT DRO >C28-C36	<10.0	10.0	12/04/2024	ND					

Surrogate: 1-Chlorooctane 97.2 % 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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Notes and Definitions

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

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

Celey D. Keene, Lab Director/Quality Manager

Page 7 of 7

(575) 393-2326 FAX (575) 393-2476

[illegible]



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

December 04, 2024

TRACY HILLARD

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: LONE SHOCKER STATE BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 12/03/24 13:49.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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
TRACY HILLARD
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received: 12/03/2024
Reported: 12/04/2024
Project Name: LONE SHOCKER STATE BATTERY
Project Number: 03C1558576
Project Location: XTO 32.09304-103.99905

Sampling Date: 12/02/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BH 01 (H247332-01)

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	12/03/2024	ND	2.05	103	2.00	2.99		
Toluene*	<0.050	0.050	12/03/2024	ND	2.11	106	2.00	3.00		
Ethylbenzene*	<0.050	0.050	12/03/2024	ND	2.10	105	2.00	2.88		
Total Xylenes*	<0.150	0.150	12/03/2024	ND	6.25	104	6.00	2.85		
Total BTX	<0.300	0.300	12/03/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5360	16.0	12/04/2024	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/04/2024	ND	196	98.2	200	0.832	
DRO >C10-C28*	<10.0	10.0	12/04/2024	ND	201	101	200	1.44	
EXT DRO >C28-C36	<10.0	10.0	12/04/2024	ND					

Surrogate: 1-Chlorooctane 103 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TRACY HILLARD
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received: 12/03/2024
Reported: 12/04/2024
Project Name: LONE SHOCKER STATE BATTERY
Project Number: 03C1558576
Project Location: XTO 32.09304-103.99905

Sampling Date: 12/02/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BH 01B (H247332-02)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/03/2024	ND	2.05	103	2.00	2.99		
Toluene*	<0.050	0.050	12/03/2024	ND	2.11	106	2.00	3.00		
Ethylbenzene*	<0.050	0.050	12/03/2024	ND	2.10	105	2.00	2.88		
Total Xylenes*	<0.150	0.150	12/03/2024	ND	6.25	104	6.00	2.85		
Total BTEx	<0.300	0.300	12/03/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2280	16.0	12/04/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/03/2024	ND	199	99.4	200	2.68	
DRO >C10-C28*	<10.0	10.0	12/03/2024	ND	182	91.1	200	5.38	
EXT DRO >C28-C36	<10.0	10.0	12/03/2024	ND					

Surrogate: 1-Chlorooctane 100 % 48.2-134

Surrogate: 1-Chlorooctadecane 114 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TRACY HILLARD
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received: 12/03/2024
Reported: 12/04/2024
Project Name: LONE SHOCKER STATE BATTERY
Project Number: 03C1558576
Project Location: XTO 32.09304-103.99905

Sampling Date: 12/02/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BH 02 (H247332-03)

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	12/03/2024	ND	2.05	103	2.00	2.99	
Toluene*	<0.050	0.050	12/03/2024	ND	2.11	106	2.00	3.00	
Ethylbenzene*	<0.050	0.050	12/03/2024	ND	2.10	105	2.00	2.88	
Total Xylenes*	<0.150	0.150	12/03/2024	ND	6.25	104	6.00	2.85	
Total BTEX	<0.300	0.300	12/03/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	7760	16.0	12/04/2024	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/03/2024	ND	199	99.4	200	2.68	
DRO >C10-C28*	<10.0	10.0	12/03/2024	ND	182	91.1	200	5.38	
EXT DRO >C28-C36	<10.0	10.0	12/03/2024	ND					

Surrogate: 1-Chlorooctane 86.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 99.1 % 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
TRACY HILLARD
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received: 12/03/2024
Reported: 12/04/2024
Project Name: LONE SHOCKER STATE BATTERY
Project Number: 03C1558576
Project Location: XTO 32.09304-103.99905

Sampling Date: 12/02/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BH 02A (H247332-04)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/03/2024	ND	2.05	103	2.00	2.99		
Toluene*	<0.050	0.050	12/03/2024	ND	2.11	106	2.00	3.00		
Ethylbenzene*	<0.050	0.050	12/03/2024	ND	2.10	105	2.00	2.88		
Total Xylenes*	<0.150	0.150	12/03/2024	ND	6.25	104	6.00	2.85		
Total BTEX	<0.300	0.300	12/03/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4320	16.0	12/04/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/03/2024	ND	199	99.4	200	2.68	
DRO >C10-C28*	<10.0	10.0	12/03/2024	ND	182	91.1	200	5.38	
EXT DRO >C28-C36	<10.0	10.0	12/03/2024	ND					

Surrogate: 1-Chlorooctane 96.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 49.1-148

Cardinal Laboratories

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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

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

Celey D. Keene, Lab Director/Quality Manager



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

December 18, 2024

TRACY HILLARD

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: LONE SHOCKER STATE BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 12/16/24 11:47.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
TRACY HILLARD
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received: 12/16/2024
Reported: 12/18/2024
Project Name: LONE SHOCKER STATE BATTERY
Project Number: 03C1558576
Project Location: XTO 32.09304-103.99905

Sampling Date: 12/13/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Alyssa Parras

Sample ID: BH 01 C 3 (H247584-01)

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	12/16/2024	ND	1.95	97.5	2.00	7.80	
Toluene*	<0.050	0.050	12/16/2024	ND	1.87	93.7	2.00	7.72	
Ethylbenzene*	<0.050	0.050	12/16/2024	ND	1.88	93.8	2.00	7.38	
Total Xylenes*	<0.150	0.150	12/16/2024	ND	5.60	93.3	6.00	7.47	
Total BTX	<0.300	0.300	12/16/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	12/17/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2024	ND	182	91.1	200	3.10	
DRO >C10-C28*	<10.0	10.0	12/17/2024	ND	179	89.6	200	1.50	
EXT DRO >C28-C36	<10.0	10.0	12/17/2024	ND					

Surrogate: 1-Chlorooctane 116 % 48.2-134

Surrogate: 1-Chlorooctadecane 108 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TRACY HILLARD
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received: 12/16/2024
Reported: 12/18/2024
Project Name: LONE SHOCKER STATE BATTERY
Project Number: 03C1558576
Project Location: XTO 32.09304-103.99905

Sampling Date: 12/13/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Alyssa Parras

Sample ID: BH 02 C 3 (H247584-02)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/16/2024	ND	1.95	97.5	2.00	7.80		
Toluene*	<0.050	0.050	12/16/2024	ND	1.87	93.7	2.00	7.72		
Ethylbenzene*	<0.050	0.050	12/16/2024	ND	1.88	93.8	2.00	7.38		
Total Xylenes*	<0.150	0.150	12/16/2024	ND	5.60	93.3	6.00	7.47		
Total BTEX	<0.300	0.300	12/16/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	272	16.0	12/17/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2024	ND	182	91.1	200	3.10	
DRO >C10-C28*	<10.0	10.0	12/17/2024	ND	179	89.6	200	1.50	
EXT DRO >C28-C36	<10.0	10.0	12/17/2024	ND					

Surrogate: 1-Chlorooctane 117 % 48.2-134

Surrogate: 1-Chlorooctadecane 110 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TRACY HILLARD
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received: 12/16/2024
Reported: 12/18/2024
Project Name: LONE SHOCKER STATE BATTERY
Project Number: 03C1558576
Project Location: XTO 32.09304-103.99905

Sampling Date: 12/13/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Alyssa Parras

Sample ID: SS 02 A 1 (H247584-03)

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	12/16/2024	ND	1.95	97.5	2.00	7.80		
Toluene*	<0.050	0.050	12/16/2024	ND	1.87	93.7	2.00	7.72		
Ethylbenzene*	<0.050	0.050	12/16/2024	ND	1.88	93.8	2.00	7.38		
Total Xylenes*	<0.150	0.150	12/16/2024	ND	5.60	93.3	6.00	7.47		
Total BTEX	<0.300	0.300	12/16/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	12/17/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2024	ND	182	91.1	200	3.10	
DRO >C10-C28*	<10.0	10.0	12/17/2024	ND	179	89.6	200	1.50	
EXT DRO >C28-C36	<10.0	10.0	12/17/2024	ND					

Surrogate: 1-Chlorooctane 116 % 48.2-134

Surrogate: 1-Chlorooctadecane 108 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TRACY HILLARD
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received: 12/16/2024
Reported: 12/18/2024
Project Name: LONE SHOCKER STATE BATTERY
Project Number: 03C1558576
Project Location: XTO 32.09304-103.99905

Sampling Date: 12/13/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Alyssa Parras

Sample ID: SS 02 B 2 (H247584-04)

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/16/2024	ND	1.95	97.5	2.00	7.80	
Toluene*	<0.050	0.050	12/16/2024	ND	1.87	93.7	2.00	7.72	
Ethylbenzene*	<0.050	0.050	12/16/2024	ND	1.88	93.8	2.00	7.38	
Total Xylenes*	<0.150	0.150	12/16/2024	ND	5.60	93.3	6.00	7.47	
Total BTEX	<0.300	0.300	12/16/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/17/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2024	ND	182	91.1	200	3.10	
DRO >C10-C28*	<10.0	10.0	12/17/2024	ND	179	89.6	200	1.50	
EXT DRO >C28-C36	<10.0	10.0	12/17/2024	ND					

Surrogate: 1-Chlorooctane 113 % 48.2-134

Surrogate: 1-Chlorooctadecane 105 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TRACY HILLARD
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received: 12/16/2024
Reported: 12/18/2024
Project Name: LONE SHOCKER STATE BATTERY
Project Number: 03C1558576
Project Location: XTO 32.09304-103.99905

Sampling Date: 12/13/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Alyssa Parras

Sample ID: SS 02 C 3 (H247584-05)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/16/2024	ND	1.95	97.5	2.00	7.80		
Toluene*	<0.050	0.050	12/16/2024	ND	1.87	93.7	2.00	7.72		
Ethylbenzene*	<0.050	0.050	12/16/2024	ND	1.88	93.8	2.00	7.38		
Total Xylenes*	<0.150	0.150	12/16/2024	ND	5.60	93.3	6.00	7.47		
Total BTEX	<0.300	0.300	12/16/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	12/17/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2024	ND	182	91.1	200	3.10	
DRO >C10-C28*	<10.0	10.0	12/17/2024	ND	179	89.6	200	1.50	
EXT DRO >C28-C36	<10.0	10.0	12/17/2024	ND					

Surrogate: 1-Chlorooctane 115 % 48.2-134

Surrogate: 1-Chlorooctadecane 107 % 49.1-148

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Notes and Definitions

S-05	The surrogate recovery is outside of lab established statistical control limits but still within method limits. Data is not adversely affected.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

[illegible]

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

State of New Mexico

Energy, Minerals and Natural Resources

Oil Conservation Division

1220 S. St Francis Dr.

Santa Fe, NM 87505

QUESTIONS

Action 429708

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 429708
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2431841883
Incident Name	NAPP2431841883 LONE SHOCKER STATE BATTERY @ 0
Incident Type	Produced Water Release
Incident Status	Deferral Request Received
Incident Facility	[fAPP2126038235] Lone Shocker State

Location of Release Source	
Please answer all the questions in this group.	
Site Name	LONE SHOCKER STATE BATTERY
Date Release Discovered	11/12/2024
Surface Owner	State

Incident Details	
Please answer all the questions in this group.	
Incident Type	Produced Water 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	Not answered.
Produced Water Released (bbls) Details	Cause: Corrosion Flow Line - Production Produced Water Released: 8 BBL Recovered: 3 BBL Lost: 5 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
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.

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

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

QUESTIONS, Page 2

Action 429708

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 429708
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Nature and Volume of Release (continued)	
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: Colton Brown Title: Environmental Advisor Email: colton.s.brown@exxonmobil.com Date: 02/07/2025
--	--

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

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

QUESTIONS, Page 3

Action 429708

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:
	5380
	Action Number: 429708
Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)	

QUESTIONS

Site Characterization	
<i>Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 75 and 100 (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
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
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)	Greater than 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Greater than 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between ½ and 1 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Zero feet, overlying, or within area
Categorize the risk of this well / site being in a karst geology	Medium
A 100-year floodplain	Between 1000 (ft.) and ½ (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan	
<i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
Requesting a remediation plan approval with this submission	Yes
<i>Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.</i>	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	7760
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	0
GRO+DRO (EPA SW-846 Method 8015M)	0
BTEX (EPA SW-846 Method 8021B or 8260B)	0
Benzene (EPA SW-846 Method 8021B or 8260B)	0
<i>Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.</i>	
On what estimated date will the remediation commence	12/02/2024
On what date will (or did) the final sampling or liner inspection occur	12/13/2024
On what date will (or was) the remediation complete(d)	12/13/2024
What is the estimated surface area (in square feet) that will be reclaimed	1432
What is the estimated volume (in cubic yards) that will be reclaimed	159
What is the estimated surface area (in square feet) that will be remediated	1432
What is the estimated volume (in cubic yards) that will be remediated	159
<i>These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.</i>	
<i>The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.</i>	

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

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

QUESTIONS, Page 4

Action 429708

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 429708
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Remediation Plan (continued)	
<i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
<i>(Select all answers below that apply.)</i>	
(Ex Situ) Excavation and off-site disposal (i.e. dig and haul, hydrovac, etc.)	No
(Ex Situ) Excavation and on-site remediation (i.e. On-Site Land Farms)	<i>Not answered.</i>
(In Situ) Soil Vapor Extraction	<i>Not answered.</i>
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	<i>Not answered.</i>
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	<i>Not answered.</i>
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	<i>Not answered.</i>
Ground Water Abatement pursuant to 19.15.30 NMAC	<i>Not answered.</i>
OTHER (Non-listed remedial process)	Yes
Other Non-listed Remedial Process. Please specify	Surficial scraping of soil completed with hand tools. Additional remediation activities will occur at the time of abandonment
<i>Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.</i>	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: Colton Brown Title: Environmental Advisor Email: colton.s.brown@exxonmobil.com Date: 02/07/2025
<i>The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.</i>	

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QUESTIONS, Page 5

Action 429708

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 429708
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Deferral Requests Only	
<i>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.</i>	
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	Surface pipelines, seperators, staircases and equipment access areas,
What is the remaining surface area (in square feet) that will still need to be remediated if a deferral is granted	1432
What is the remaining volume (in cubic yards) that will still need to be remediated if a deferral is granted	159
<i>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.</i>	
Enter the facility ID (f#) on which this deferral should be granted	Lone Shocker State [fAPP2126038235]
Enter the well API (30-) on which this deferral should be granted	Not answered.
Contamination does not cause an imminent risk to human health, the environment, or groundwater	True
<i>Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.</i>	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: Colton Brown Title: Environmental Advisor Email: colton.s.brown@exxonmobil.com Date: 02/07/2025

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QUESTIONS, Page 6

Action 429708

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 429708
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	408600
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	12/13/2024
What was the (estimated) number of samples that were to be gathered	10
What was the sampling surface area in square feet	2000

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 429708

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 429708
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

CONDITIONS

Created By	Condition	Condition Date
scwells	Deferral approved. Deferral of BH01 and BH02 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. Also note that referring to pg. 6 of the submitted topographic map, the minimum distances to both a playa and a wetland should be updated to between 1000 ft and 1/2 mile in future submissions for this site.	2/13/2025