



November 19, 2024

**New Mexico Energy Minerals and Natural Resources Department**

New Mexico Oil and Gas Conservation Division  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

**Re: Closure Request  
PLU 20 Brushy Draw West Battery  
Incident Number nAPP2423455892  
Eddy County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum) on behalf of XTO Energy, Inc. (XTO), has prepared this *Closure Request* to document assessment, excavation, and soil sampling activities at the PLU 20 Brushy Draw West Battery (Site). The purpose of the assessment and soil sampling activities was to assess the presence or absence of impacts to soil following a release of crude oil. Based on field observations, field screening activities, and soil sample laboratory analytical results, XTO is submitting this *Closure Request*, describing delineation and excavation activities that have occurred and requesting no further action for Incident Number nAPP2423455892.

## **SITE DESCRIPTION AND RELEASE SUMMARY**

The Site is located in Unit N, Section 20, Township 25 South, Range 30 East, in Eddy County, New Mexico (32.11149°, -103.90729°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On August 21, 2024, human error resulted in the release of 26 barrels (bbls) of crude oil onto the pad surface around production equipment. XTO immediately dispatched a vacuum truck and 15 bbls of crude oil were recovered. XTO submitted a Notification of Release (NOR) and an Initial C-141 Application (C-141) on August 21, 2024. The release was assigned Incident Number nAPP2423455892.

## **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 and potential site receptors are identified on Figure 1.

Depth to groundwater at the Site is greater than 100 feet below ground surface (bgs) based on a recent soil boring drilled for determination of regional groundwater depth. On February 4, 2020, a soil boring (C-4394) was drilled 0.49 miles west of the Site utilizing sonic drilling method. Soil boring C-4394 was drilled to a depth of 110 feet bgs. A field geologist logged and described soils continuously. No moisture or groundwater was encountered during drilling activities. The borehole was left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period without observing

XTO Energy, Inc  
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groundwater, it was confirmed that groundwater was greater than 110 feet bgs. The borehole was properly abandoned with drill cuttings and hydrated bentonite chips. The referenced well records are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is an seasonal dry wash, located approximately 467 feet southwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area).

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)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 20,000 mg/kg

## DELINEATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On October 17, 2024, Ensolum personnel conducted a Site visit to evaluate the release extent based on information provided on the C-141, internal reports, and visual observations. Delineation potholes PH01 through PH03 were advanced via backhoe to assess the vertical extent of the release to a maximum depth of 4 feet bgs. Delineation soil samples were collected from each pothole at depths ranging from 0.5 feet to 4 feet bgs. The soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The delineation soil sample locations and release extent were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was completed during the Site visits and a photographic log is included in Appendix B. Field screening results and observations were logged on lithologic/soil sampling logs, which are included in Appendix C.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Cardinal Laboratories (Cardinal) in Hobbs, New Mexico, for 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 Standards Method SM4500.

Laboratory analytical results for delineation soil sample for PH01, collected at 0.5 feet bgs, indicated TPH concentrations exceeded Closure Criteria. Delineation soil samples for PH01, collected at 1-foot and 4 feet bgs, indicated all COCs were in compliance with Site Closure Criteria and reclamation requirements. Laboratory analytical results for PH02 and PH03 indicated all COCs were in compliance with Site Closure Criteria and reclamation requirements. All terminal soil samples of the delineation potholes were in compliance with the Closure Criteria, successfully defining the vertical extent of the

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release. The laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included in Appendix D.

## EXCAVATION ACTIVITIES

Between November 11, 2024, and November 14, 2024, Ensolum personnel were onsite to oversee excavation activities of the impacted soil that was identified. Impacted soil was then excavated from the release area as indicated by laboratory analytical results, visible staining and field screening activities. Excavation activities were performed utilizing a backhoe and a transport vehicle. To direct excavation activities, Ensolum personnel field screened soil for VOCs and chlorides. Following removal of impacted soil to the maximum extent possible, Ensolum personnel collected 5-point composite soil samples representing no more than 200 square feet from the sidewalls and floor of the excavation and release extent. The 5-point composite soil samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Excavation soil samples FS01 through FS25 were collected from the floor of the excavation at a depth of 2 feet bgs. Excavation sidewall soil samples SW01 through SW04 were collected from the sidewalls of the excavation at depths ranging from ground surface to 2 feet bgs. The soil samples were collected, handled, and analyzed following the same procedures described above at Cardinal in Hobbs, New Mexico. The excavation extent and excavation soil sample locations are depicted in Figure 3.

The final excavation extent measured approximately 4,765 square feet. A total of approximately 350 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Landfill Facility in Hobbs, New Mexico.

## LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for all excavation floor soil samples, FS01 through FS25, indicated all COC concentrations were compliant with Site Closure Criteria. Excavation sidewall soil samples SW01 through SW04 were in compliance with Site Closure Criteria and the strictest Table I Closure Criteria, successfully defining the lateral extent of the release. Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included in Appendix D.

## CLOSURE REQUEST

Delineation and excavation activities were conducted at the Site to address the August 21, 2024, release of crude oil. Laboratory analytical results for the confirmation soil samples, collected from the final excavation extent, indicated that all COCs were compliant with the Site Closure. Based on the soil sample analytical results, no further remediation was required. XTO will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions.

Excavation of impacted soil has mitigated impacts at this Site. Depth to groundwater has been estimated to be greater than 100 feet bgs and no other sensitive receptors were identified near the release extent. XTO believes these remedial actions are protective of human health, the environment, and groundwater. As such, XTO respectfully requests closure for Incident Number nAPP2423455892.

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

XTO Energy, Inc  
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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 "Tacoma Morrissey".

Tacoma Morrissey, M.S.  
Associate Principal

cc: Colton Brown, XTO  
Kaylan Dirkx, XTO  
BLM

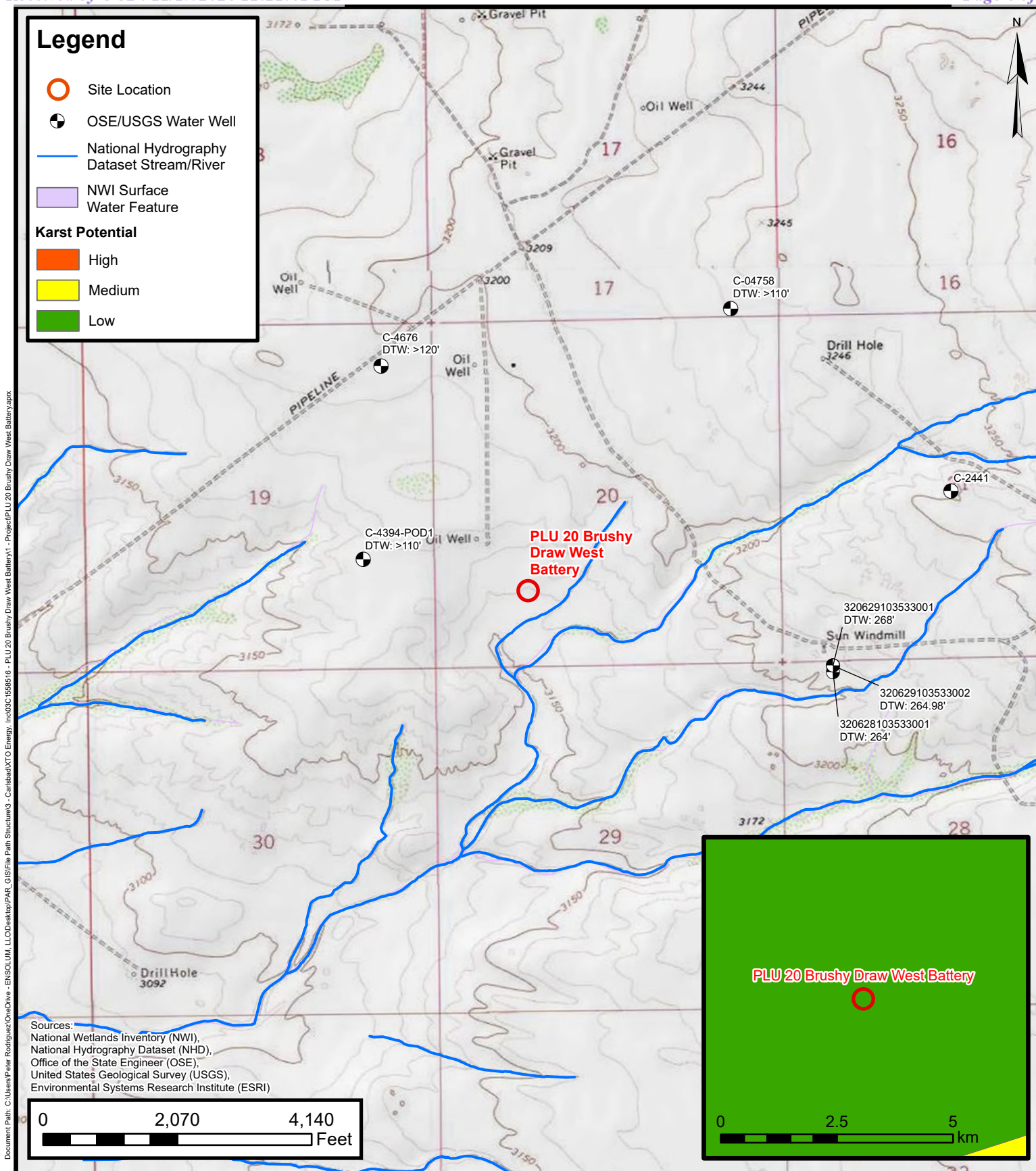
Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Referenced Well Records
Appendix B	Photographic Log
Appendix C	Lithologic / Soil Sampling Logs
Appendix D	Laboratory Analytical Reports & Chain-of-Custody Documentation





FIGURES



## Site Receptor Map

XTO Energy, Inc  
PLU 20 Brushy Draw West Battery  
Incident Number: nAPP2423455892  
Unit N, Sec 20, T25S, R30E  
Eddy County, New Mexico

**FIGURE**  
**1**



Path: C:\Users\Peter Rodriguez\OneDrive - ENSOLUM, LLC\Desktop\PAR - GIS\File Path Structure\3 - Cardinal\XTO Energy, Inc\03158516 - PLU 20 Brushy Draw West Battery.aprx



## Delineation Soil Sample Locations

XTO Energy, Inc  
PLU 20 Brushy Draw West Battery  
Incident Number: nAPP2423455892  
Unit 4, Sec 20, T25S, R30E  
Eddy County, New Mexico

FIGURE  
2

Path: C:\Users\Peter Rodriguez\OneDrive - ENSOLUM, LLC\Desktop\PAR\_GIS\File Path Structure\3 - Cardinal\XTO Energy, Inc\04158516 - PLU 20 Brushy Draw West Battery.aprx

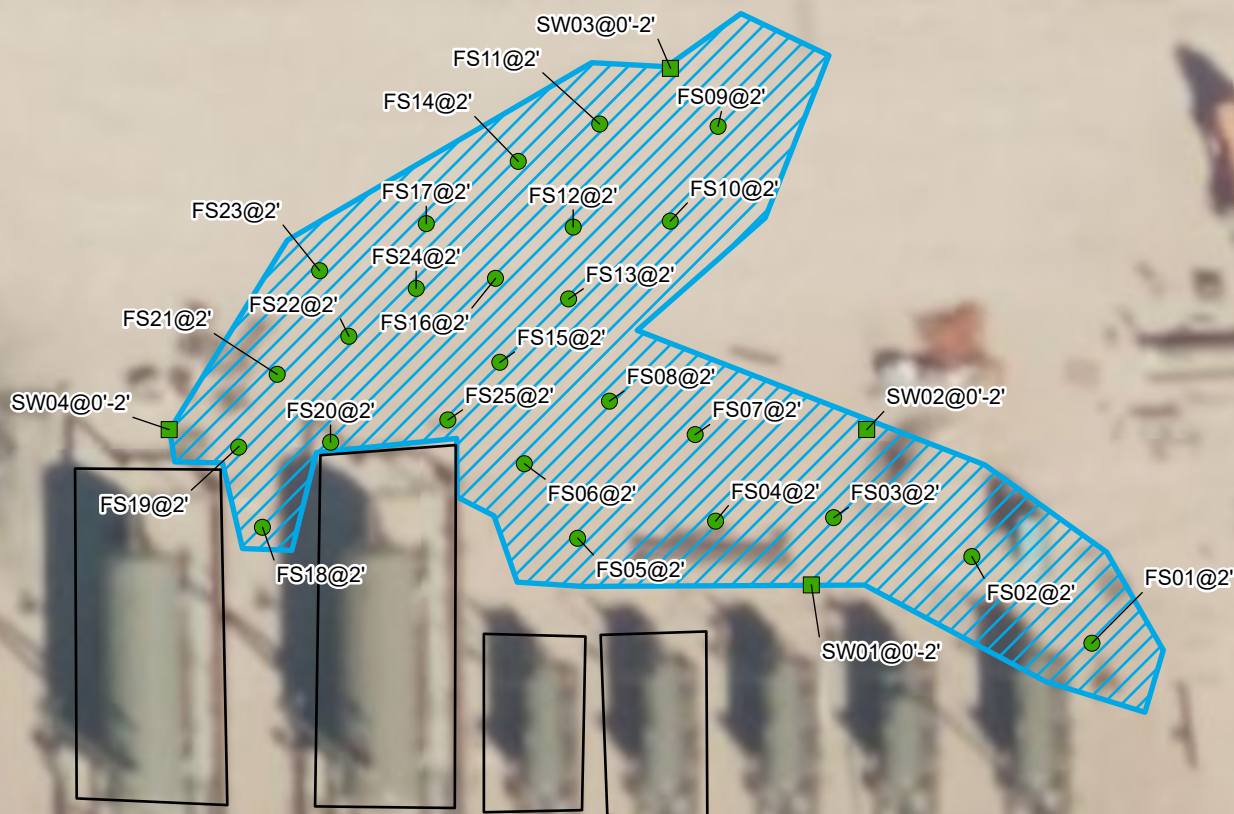
## Legend

● Confirmation Soil Sample  
in Compliance with  
Closure Criteria

■ Confirmation Sidewall Soil  
Sample in Compliance with  
Closure Criteria

□ Production Equipment

▨ Proposed Excavation Extent



Notes:  
Sample ID @ Depth Below Ground Surface

0 25 50  
Feet

Sources:  
Bing Maps



## Confirmation Soil Sample Locations

XTO Energy, Inc  
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Incident Number: nAPP2423455892  
Unit N, Sec 20, T25S, R30E  
Eddy County, New Mexico

FIGURE  
4



TABLES



**TABLE 1**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
**PLU 20 Brushy Draw West 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	1,000	2,500	20,000
Delineation Soil Samples										
PH01	10/17/2024	0-5	<0.050	<0.300	27.1	3,070	465	3,097	3,564	336
PH01	10/17/2024	1	<0.050	<0.300	<10.0	71.2	10.2	71.2	81.4	112
PH02	10/17/2024	0-5	<0.050	<0.300	<10.0	20.8	<10.0	20.8	20.8	32.0
PH02	10/17/2024	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
PH03	10/17/2024	0-5	<0.050	<0.300	<10.0	64.1	<10.0	64.1	64.1	464
PH03	10/17/2024	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	128
Confirmation Soil Samples										
FS01	11/13/2024	2	<0.050	<0.300	<10.0	79.3	<10.0	79.3	79.3	48.0
FS02	11/13/2024	2	<0.050	<0.300	<10.0	17.3	<10.0	17.3	17.3	48.0
FS03	11/13/2024	2	<0.050	<0.300	<10.0	26.4	<10.0	26.4	26.4	16.0
FS04	11/13/2024	2	<0.050	<0.300	<10.0	115	<10.0	115	115	64.0
FS05	11/13/2024	2	<0.050	<0.300	<10.0	262	23.8	262	286	48.0
FS06	11/13/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
FS07	11/13/2024	2	<0.050	<0.300	<10.0	114	11.5	114	126	48.0
FS08	11/13/2024	2	<0.050	<0.300	<10.0	61.2	<10.0	61.2	61.2	64.0
FS09	11/13/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
FS10	11/13/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
FS11	11/13/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
FS12	11/13/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
FS13	11/13/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
FS14	11/13/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
FS15	11/13/2024	2	<0.050	<0.300	<10.0	119	<10.0	119	119	80.0
FS16	11/13/2024	2	<0.050	<0.300	<10.0	56.9	<10.0	56.9	56.9	80.0
FS17	11/13/2024	2	<0.050	<0.300	<10.0	75.3	<10.0	75.3	75.3	80.0
FS18	11/13/2024	2	<0.050	<0.300	<10.0	77.9	<10.0	77.9	77.9	80.0
FS19	11/13/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
FS20	11/13/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
FS21	11/13/2024	2	<0.050	<0.300	<10.0	69.7	11.6	69.7	81.3	64.0
FS22	11/13/2024	2	<0.050	<0.300	<10.0	34.3	<10.0	34.3	34.3	48.0
FS23	11/13/2024	2	<0.050	<0.300	<10.0	14.4	<10.0	14.4	14.4	160
FS24	11/13/2024	2	<0.050	<0.300	<10.0	15.9	<10.0	15.9	15.9	64.0
FS25	11/13/2024	2	<0.050	<0.300	<10.0	16.0	<10.0	16.0	16.0	80.0
SW01	11/14/2024	0-2	<0.050	<0.300	<10.0	63.6	<10.0	63.6	63.6	160





TABLE 1  
SOIL SAMPLE ANALYTICAL RESULTS  
PLU 20 Brushy Draw West 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	1,000	2,500	20,000
SW02	11/14/2024	0-2	<0.050	<0.300	<10.0	32.4	<10.0	32.4	32.4	176
SW03	11/14/2024	0-2	<0.050	<0.300	<10.0	76.9	13.6	76.9	90.5	176
SW04	11/14/2024	0-2	<0.050	<0.300	<10.0	18.1	<10.0	18.1	18.1	176

## 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

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		<b>LT Environmental, Inc.</b> 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Identifier: <b>MW01 C 4394</b>		Date: <b>2/4/2020</b>		
				Project Name: <b>PLU 423</b>		RP Number: <b>ZRP-3790</b>		
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>				Logged By: <b>FS</b>		Method: <b>SONIC</b>		
Lat/Long:		Field Screening: <del>CHLORIDES, PID</del>		Hole Diameter: <b>4"/6"</b>		Total Depth: <b>110'</b>		
Comments: <b>No sampling, Lithology remarks only</b>								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					1			hydrovac excavated (refusal @ 1')
					2			2.5' SAND, dry, well graded, coarse-fine graind,
					3		SW-S	light brwn - tan, no stain, no odor
					4			5' few silty sand pockets, reddish brwn, no plas, non cohesive
					5			
					6			
					7		SP	6' SAND, dry, poorly graded, light brwn - brwn, fine - very fine
					8			
					9			7.5' some mod. consol. ss
					10		SW-S	light brwn - brwn, sub rounded
					11			
					12			10' abundant ss 10-11' color change
					13		SP	12' ss gravel? absent tan-off white
					14			16' abundant ss gravel 13' back t/ (mod consol) light brwn -
					15			19' abundant - some brwn
					16			21.5' sandstone, light, abundant
					17		SW-S	brwn - tan, dry, mod well consolidated
					18			23' sandstone chunks absent
					19			
					20			
					21			
					22			
					23			
					24			
					25			



**LT Environmental, Inc.**  
508 West Stevens Street  
Carlsbad, New Mexico 88220

Compliance · Engineering · Remediation

Identifier:  
**MW01 C 4394**

Date:  
**2/4/2020**

Project Name:  
**PLU 423**

RP Number:  
~~2RP-2674~~  
**2RP-3790**

### LITHOLOGIC / SOIL SAMPLING LOG

Logged By: **FS**

Method: **SONIC**

Lat/Long:

Field Screening: ~~CHLORIDES, PID~~

Hole Diameter: **4 1/8"**

Total Depth: **110'**

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					26			
					27			
					28		SP	27.5' SAND, dry, light brown-tan, poorly graded, fine-very fine grey-grey
					29			30' trace light brown-tan caliche pebbles (gravel), rounded
					30			
					31			31' caliche pebbles absent
					32			
					33			31.5' color change light brown-reddish brown
					34			
					35			33-34' abundant ss chunks, mod consol
					36			35' ss chunks absent
					37		SW-S	36' some clay pockets, reddish brown, few pebbles, rounded-subrounded, grey-light grey, few laminations w/ clay, caliche, dolomite?
					38			
					39			
					40			
					41			
					42			42.5' clay laminations, trace, reddish brown
					43			
					44			44' color change, light brown-tan, SILTY sand
					45			44.5' some SILTY sand, light brown
					46		SP-SM	-tan, no plasticity, non cohesive, trace high plas clay nodules, reddish brown
					47			
					48			
					49			48.5' low plas clay band, orange (35-40 mm)
					50			49.5' faint yellow band, (15-20 mm)

rig adding water



**LT Environmental, Inc.**  
508 West Stevens Street  
Carlsbad, New Mexico 88220  
Compliance · Engineering · Remediation

Identifier:

MW01 C 4394

Date:

2/4/2020

Project Name:

PLU 423

RP Number:

ZRP-3790

## LITHOLOGIC / SOIL SAMPLING LOG

Logged By: FS

Method: sonic

Lat/Long:

Field Screening: CHLORIDES, PH

Hole Diameter:

4" / 6"

Total Depth:

110'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
U			Z		51		SP	51.5' trace, high plas clay nodules
U			Z		52			
U			Z		53			53-54' some silty ss, poorly consolidated
M			Z		54			
M			Z		55			55.5' color change tan-grey band (30mm)
M			Z		56			
M			Z		57			59.5' SILTY sand, light brwn-brwn, moist, no plas, non cohesive, no stain
M			Z		58			
M			Z		59			
M			Z		60		SM	62' more consolidated
U			Z		61			64' dark brwn color change, silty clay nodules
M			Z		62		sm-S	
M			Z		63			66' pockets of silty clay brwn-green
M			Z		64			
M			Z		65			68' low plas clay pockets some, few low plas clay laminations
U			Z		66			
M			Z		67			
M			Z		68			71' SILTY sand, dry, no plas, non cohesive, light brwn-tan
U			Z		69			
M			Z		70			74' trace caliche pebbles, light grey-grey
U			Z		71		SM	
					72			
					73			
					74			
					75			





LT Environmental, Inc.  
508 West Stevens Street  
Carlsbad, New Mexico 88220

Compliance · Engineering · Remediation

Identifier:

MWDI C 4394

Date:

2/4/2020

Project Name:

PLU 423

RP Number:

2RP-3790

# LITHOLOGIC / SOIL SAMPLING LOG

Logged By: FS, BB

Method: sonic

Lat/Long:


Field Screening: CHLORIDES, PID

Hole Diameter: 6 1/4"

Total Depth: 110'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D			N		76		SM	76.5' trace low plas clay nodules, reddish brown
D			N		77			
D			N		78			82' CLAYSTONE, moist, brown-greenish grey, low plasticity, cohesive, no stain, no odor
D			N		79			mod consolidated
D			N		80			85' SILTY sand, dry, light brown-brown, no plas, non cohesive, no stain, no odor
D			N		81			
D			N		82		CL-S	
D			N		83			
D			N		84			
D			N		85		SM	87' color change tan-off white
D			N		86		SM	88' light brown-brown
D			N		87		SM-S	
D			N		88			87' SILTSTONE, dry, w/ clay pockets, low plas
D			N		89			
D			N		90			
D			N		91			91' abundant clay pockets
D			N		92			94.5' band yellow low plas clay
D			N		93			
D			N		94		SM	
D			N		95		CH	end @ 95' 2/4/2020
D			N		96			2/5/20
D			N		97			95'-101' CLAY, moist, brown-dark brown, high plasticity, cohesive, some tan clay laminations, no stain, no odor.
D			N		98			98'-99' tan fine grain sandstone stringers.
D			N		99			
D			N		100			

 <b>LT Environmental, Inc.</b> 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Identifier: MWO F 4394	Date: 2/5/2020					
		Project Name: PLU 423	RP Number: 2RP-3790					
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>		Logged By: BP	Method: Sonic					
Lat/Long:		Field Screening: CHLORIDES, PID.	Hole Diameter: 6" / 4"					
			Total Depth: 110'					
Comments:								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D			N		101		CH SP-S	101' - 105' SANDSTONE, tan-light brown, dry, moderately consolidated, calcareous cemented, poorly graded, no stain, no odor.
D			N		102			
D			N		103			
D			N		104			
m			N		105		CH	105' - 110' CLAY, moist, dark brown - brown, high plasticity, cohesive, thin sand laminations, no stain, no odor.
D			N		106			
D			N		107			
D			N		108			
m			N		109			107' - 109' tan - light brown well consolidated fine green sandstone stringer.
					110			
					111		TD @ 110'	TD @ 110'
					112			
					113			
					114			
					115			
					116			
					117			
					118			
					119			
					120			
					121			
					122			
					123			
					124			
					125			



## APPENDIX B

### Photographic Log

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**Photographic Log**

XTO Energy, Inc.

PLU 20 Brushy Draw West Battery

nAPP2423455892



Photograph: 1  
Description: Initial release  
View: Southwest

Date: 8/21/2024



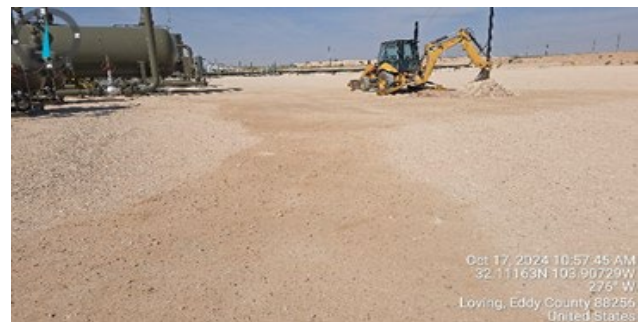
Photograph: 2  
Description: Soil staining in release footprint  
View: Southwest

Date: 10/17/2024



Photograph: 3  
Description: Soil staining in release footprint  
View: Southwest

Date: 10/17/2024



Photograph: 4  
Description: Delineation activities  
View: West

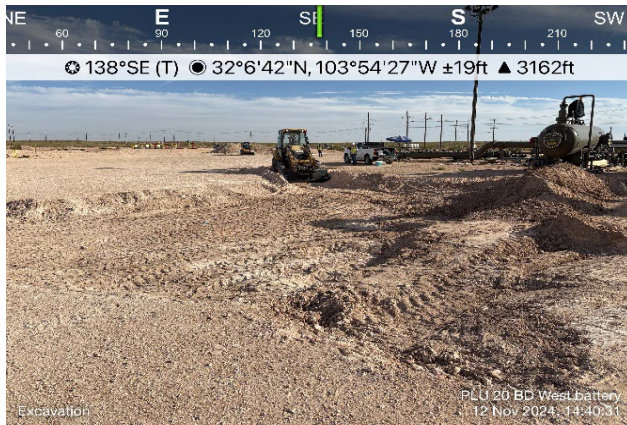
Date: 10/17/2024

**Photographic Log**

XTO Energy, Inc.

PLU 20 Brushy Draw West Battery

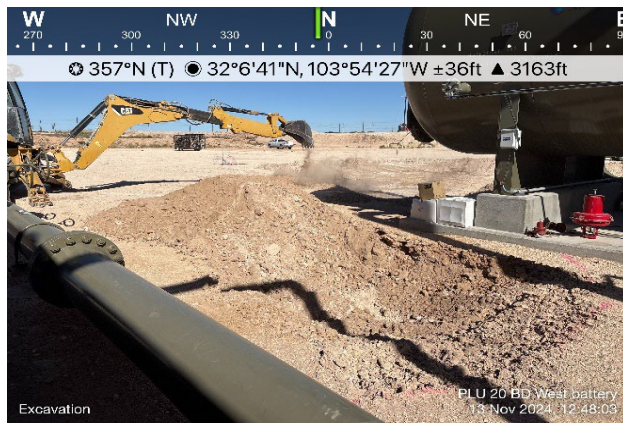
nAPP2423455892



Photograph: 5                      Date: 11/12/2024  
 Description: Excavation activities  
 View: Southeast



Photograph: 6                      Date: 11/12/2024  
 Description: Excavation activities  
 View: North



Photograph: 7                      Date: 11/13/2024  
 Description: Excavation activities  
 View: North




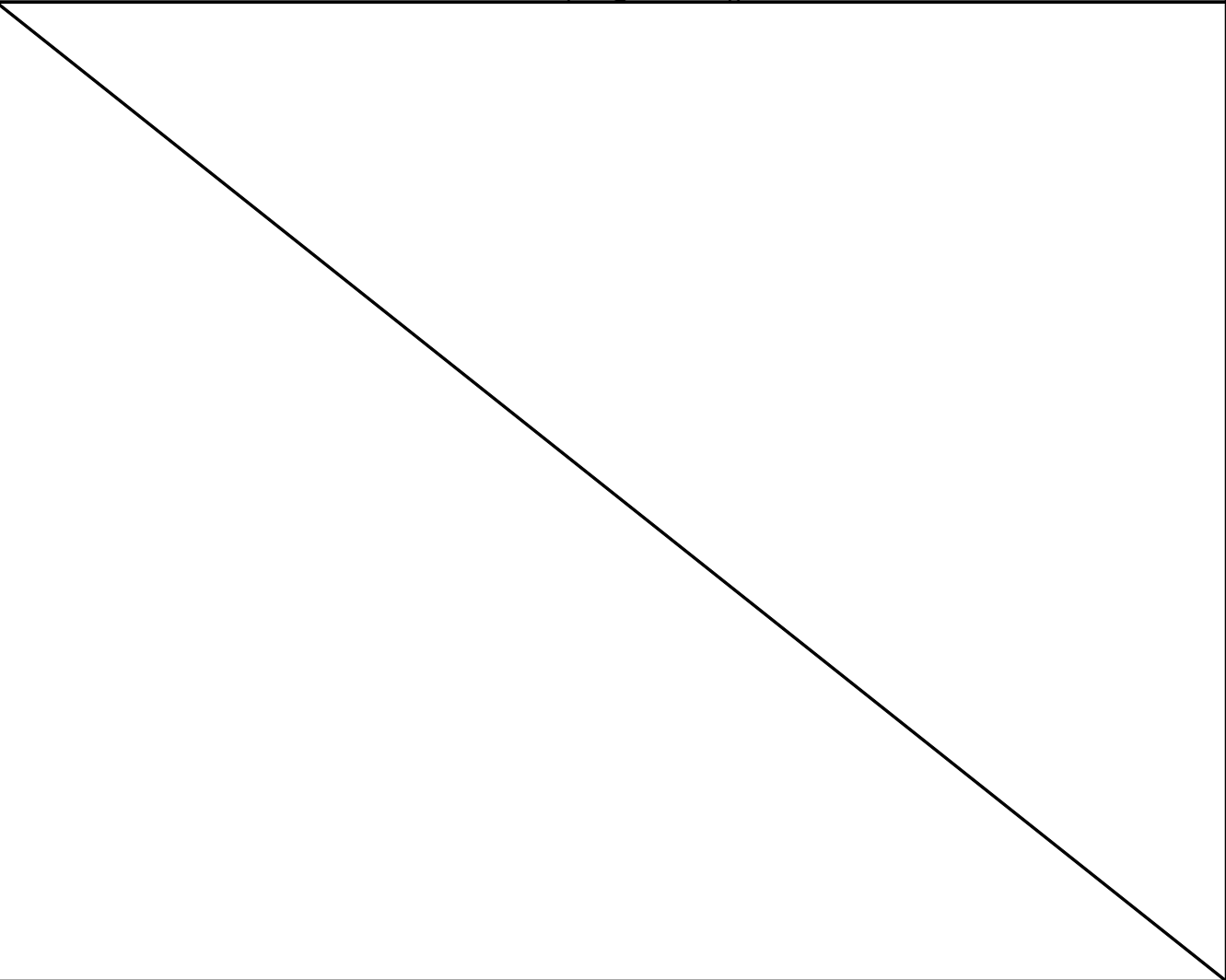
Photograph: 8                      Date: 11/19/2024  
 Description: Final Excavation Extent  
 View: North




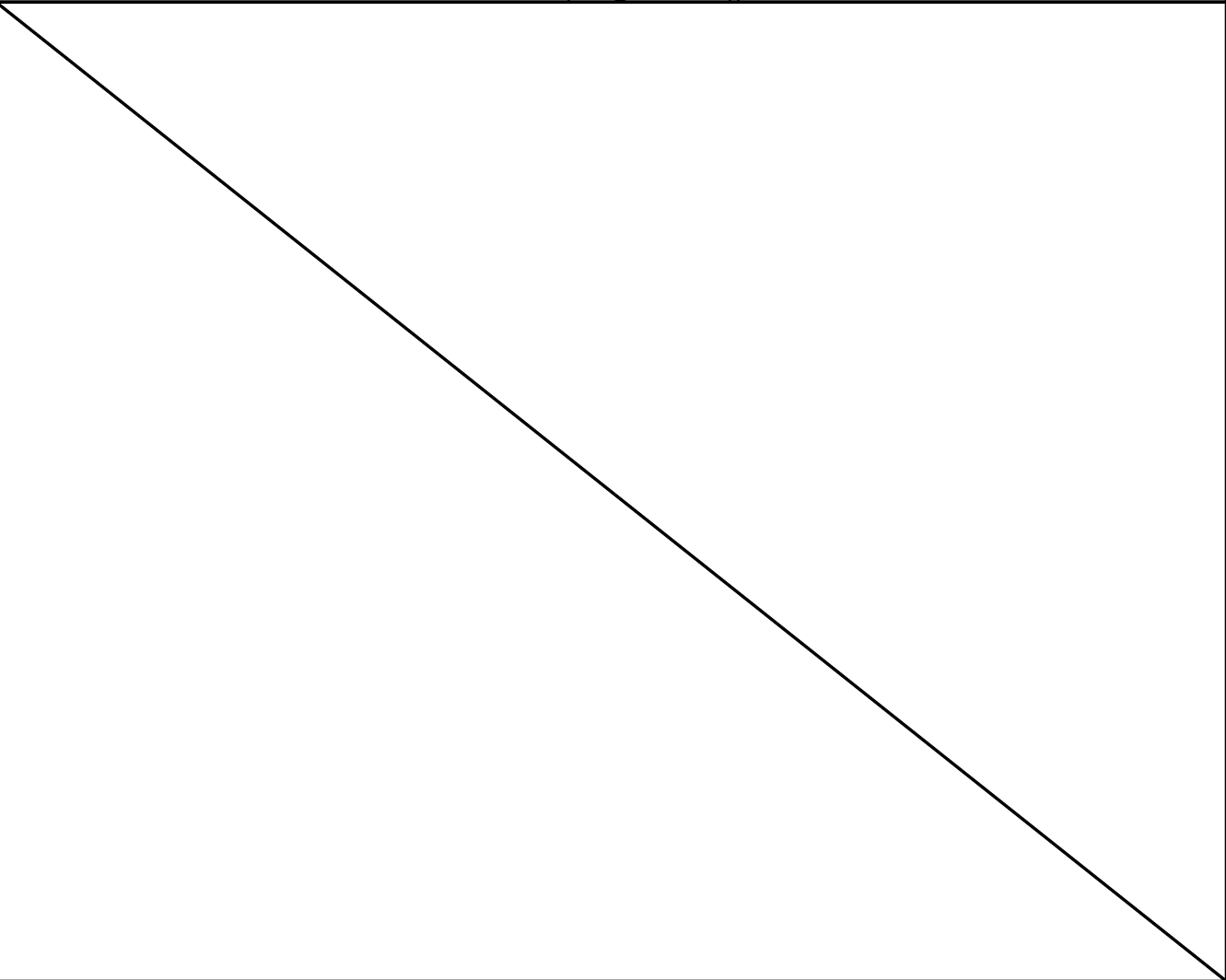
## APPENDIX C


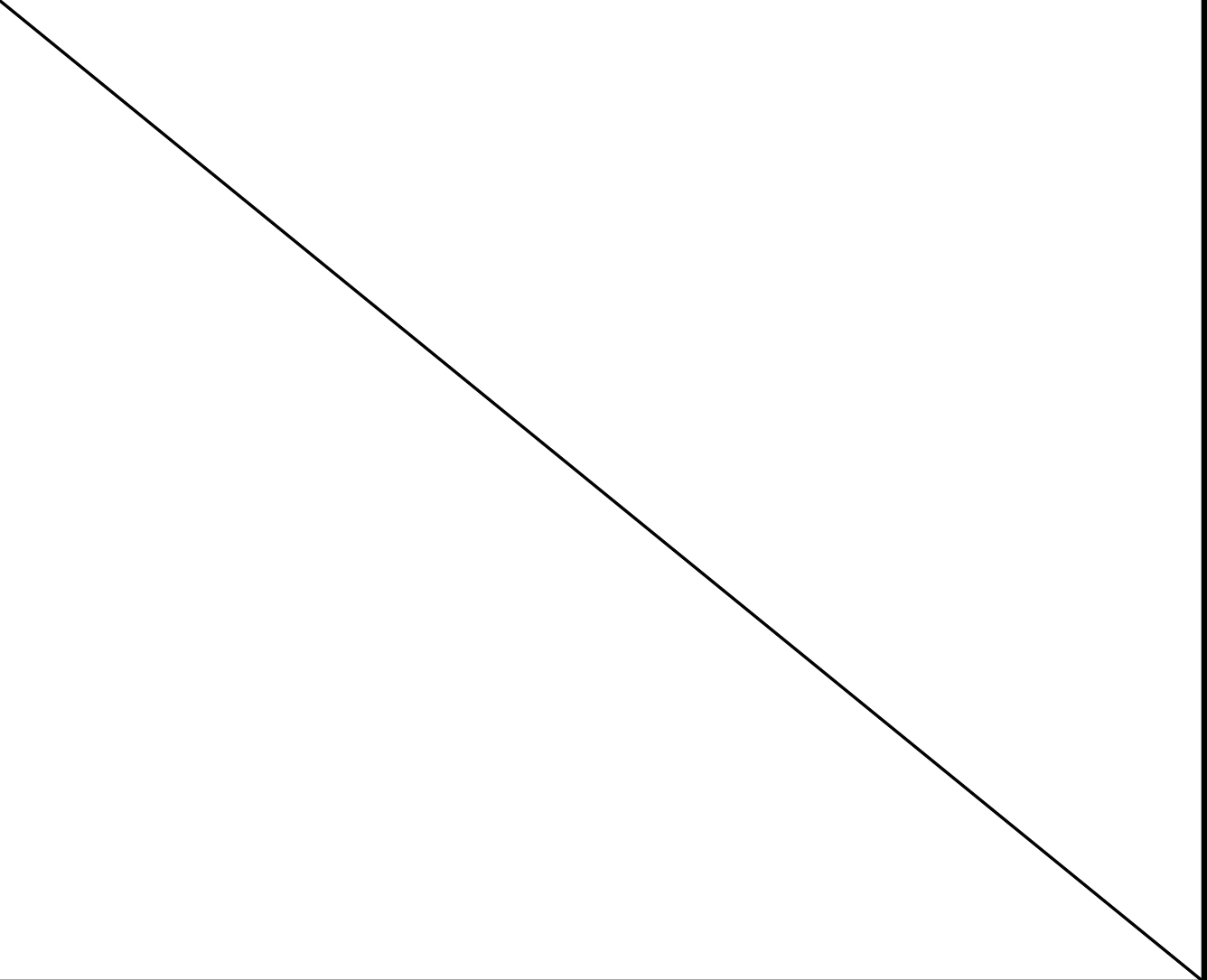
### Lithologic Soil Sampling Logs

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 <b>ENSOLUM</b>								Sample Name: PH01		Date: 10/17/2024	
								Site Name: PLU 20 Brushy Draw West Battery			
								Incident Number: nAPP2423455892			
								Job Number: 03C1558516			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								Logged By: MS		Method: Backhoe	
Coordinates: 32.111754, -103.907560								Hole Diameter: 36"		Total Depth: 1'	
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	442	44.8	N	PH01	0.5	0	CCHE	(0-1') CALICHE, tan to grey, mixed with dark brown silty sand, loose, non-plastic, non cohesive, fine grain			
D	<162	8.2	N	PH01	1	1					
Total Depth @ 1-foot bgs											
											



 <b>ENSOLUM</b>								Sample Name: PH02		Date: 10/17/2024	
								Site Name: PLU 20 Brushy Draw West Battery			
								Incident Number: nAPP2423455892			
								Job Number: 03C1558516			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								Logged By: MS		Method: Backhoe	
Coordinates: 32.111587, -103.907372								Hole Diameter: 36"		Total Depth: 1'	
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	<162	2.2	N	PH02	0.5	0	CCHE	(0-1') CALICHE, tan to white, loose, fine grain, non-plastic, non-cohesive			
D	<162	2.2	N	PH02	1	1					
Total Depth @ 1-foot bgs											
											

								Sample Name: PH03		Date: 10/17/2024	
								Site Name: PLU 20 Brushy Draw West Battery			
								Incident Number: nAPP2423455892			
								Job Number: 03C1558516			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								Logged By: MS		Method: Backhoe	
Coordinates: 32.111685, -103.907670								Hole Diameter: 36"		Total Depth: 1'	
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	554	10.6	N	PH03	0.5	0	CCHE	(0-1') CALICHE, tan to white, loose, non-plastic, non-cohesive, very fine grain			
D	<162	3.3	N	PH03	1	1					
Total Depth @ 1-foot bgs											
											



## APPENDIX D

### Laboratory Analytical Reports & Chain of Custody Documentation

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

November 15, 2024

TRACY HILLARD

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: PLU 20 BRUSHY DRAW WEST BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 11/14/24 13:55.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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: 11/14/2024  
Reported: 11/15/2024  
Project Name: PLU 20 BRUSHY DRAW WEST BATTERY  
Project Number: 03C1558516  
Project Location: XTO 32.11165-103.90780

Sampling Date: 11/13/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: FS 01 (H246958-01)**

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	11/14/2024	ND	1.94	97.2	2.00	7.03	
Toluene*	<0.050	0.050	11/14/2024	ND	1.98	99.2	2.00	6.85	
Ethylbenzene*	<0.050	0.050	11/14/2024	ND	1.98	98.8	2.00	6.80	
Total Xylenes*	<0.150	0.150	11/14/2024	ND	5.85	97.6	6.00	6.80	
Total BTEX	<0.300	0.300	11/14/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 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	11/15/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/14/2024	ND	203	101	200	1.28	
DRO >C10-C28*	79.3	10.0	11/14/2024	ND	200	100	200	2.85	
EXT DRO >C28-C36	<10.0	10.0	11/14/2024	ND					

Surrogate: 1-Chlorooctane 105 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.1 % 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: 11/14/2024  
Reported: 11/15/2024  
Project Name: PLU 20 BRUSHY DRAW WEST BATTERY  
Project Number: 03C1558516  
Project Location: XTO 32.11165-103.90780

Sampling Date: 11/13/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: FS 02 (H246958-02)**

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	11/14/2024	ND	1.94	97.2	2.00	7.03		
Toluene*	<0.050	0.050	11/14/2024	ND	1.98	99.2	2.00	6.85		
Ethylbenzene*	<0.050	0.050	11/14/2024	ND	1.98	98.8	2.00	6.80		
Total Xylenes*	<0.150	0.150	11/14/2024	ND	5.85	97.6	6.00	6.80		
Total BTEX	<0.300	0.300	11/14/2024	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	48.0	16.0	11/15/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/14/2024	ND	203	101	200	1.28	
DRO >C10-C28*	17.3	10.0	11/14/2024	ND	200	100	200	2.85	
EXT DRO >C28-C36	<10.0	10.0	11/14/2024	ND					

Surrogate: 1-Chlorooctane 117 % 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

**Analytical Results For:**

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

Received: 11/14/2024  
Reported: 11/15/2024  
Project Name: PLU 20 BRUSHY DRAW WEST BATTERY  
Project Number: 03C1558516  
Project Location: XTO 32.11165-103.90780

Sampling Date: 11/13/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: FS 03 (H246958-03)**

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	11/14/2024	ND	1.94	97.2	2.00	7.03		
Toluene*	<0.050	0.050	11/14/2024	ND	1.98	99.2	2.00	6.85		
Ethylbenzene*	<0.050	0.050	11/14/2024	ND	1.98	98.8	2.00	6.80		
Total Xylenes*	<0.150	0.150	11/14/2024	ND	5.85	97.6	6.00	6.80		
Total BTEX	<0.300	0.300	11/14/2024	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	16.0	16.0	11/15/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/14/2024	ND	203	101	200	1.28	
DRO >C10-C28*	26.4	10.0	11/14/2024	ND	200	100	200	2.85	
EXT DRO >C28-C36	<10.0	10.0	11/14/2024	ND					

Surrogate: 1-Chlorooctane 113 % 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: 11/14/2024  
Reported: 11/15/2024  
Project Name: PLU 20 BRUSHY DRAW WEST BATTERY  
Project Number: 03C1558516  
Project Location: XTO 32.11165-103.90780

Sampling Date: 11/13/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: FS 04 (H246958-04)**

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	11/14/2024	ND	1.94	97.2	2.00	7.03	
Toluene*	<0.050	0.050	11/14/2024	ND	1.98	99.2	2.00	6.85	
Ethylbenzene*	<0.050	0.050	11/14/2024	ND	1.98	98.8	2.00	6.80	
Total Xylenes*	<0.150	0.150	11/14/2024	ND	5.85	97.6	6.00	6.80	
Total BTEX	<0.300	0.300	11/14/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 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	64.0	16.0	11/15/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/14/2024	ND	203	101	200	1.28	
DRO >C10-C28*	115	10.0	11/14/2024	ND	200	100	200	2.85	
EXT DRO >C28-C36	<10.0	10.0	11/14/2024	ND					

Surrogate: 1-Chlorooctane 107 % 48.2-134

Surrogate: 1-Chlorooctadecane 98.3 % 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  
TRACY HILLARD  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received: 11/14/2024  
Reported: 11/15/2024  
Project Name: PLU 20 BRUSHY DRAW WEST BATTERY  
Project Number: 03C1558516  
Project Location: XTO 32.11165-103.90780

Sampling Date: 11/13/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: FS 05 (H246958-05)**

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	11/14/2024	ND	1.94	97.2	2.00	7.03		
Toluene*	<0.050	0.050	11/14/2024	ND	1.98	99.2	2.00	6.85		
Ethylbenzene*	<0.050	0.050	11/14/2024	ND	1.98	98.8	2.00	6.80	GC-NC	
Total Xylenes*	<0.150	0.150	11/14/2024	ND	5.85	97.6	6.00	6.80		
Total BTEX	<0.300	0.300	11/14/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 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	11/15/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/14/2024	ND	203	101	200	1.28	
DRO >C10-C28*	262	10.0	11/14/2024	ND	200	100	200	2.85	
EXT DRO >C28-C36	23.8	10.0	11/14/2024	ND					

Surrogate: 1-Chlorooctane 118 % 48.2-134

Surrogate: 1-Chlorooctadecane 113 % 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: 11/14/2024  
Reported: 11/15/2024  
Project Name: PLU 20 BRUSHY DRAW WEST BATTERY  
Project Number: 03C1558516  
Project Location: XTO 32.11165-103.90780

Sampling Date: 11/13/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: FS 06 (H246958-06)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/14/2024	ND	1.94	97.2	2.00	7.03		
Toluene*	<0.050	0.050	11/14/2024	ND	1.98	99.2	2.00	6.85		
Ethylbenzene*	<0.050	0.050	11/14/2024	ND	1.98	98.8	2.00	6.80		
Total Xylenes*	<0.150	0.150	11/14/2024	ND	5.85	97.6	6.00	6.80		
Total BTEX	<0.300	0.300	11/14/2024	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	48.0	16.0	11/15/2024	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/15/2024	ND	203	101	200	1.28	
DRO >C10-C28*	<10.0	10.0	11/15/2024	ND	200	100	200	2.85	
EXT DRO >C28-C36	<10.0	10.0	11/15/2024	ND					

Surrogate: 1-Chlorooctane 107 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.4 % 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  
TRACY HILLARD  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received: 11/14/2024  
Reported: 11/15/2024  
Project Name: PLU 20 BRUSHY DRAW WEST BATTERY  
Project Number: 03C1558516  
Project Location: XTO 32.11165-103.90780

Sampling Date: 11/13/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: FS 07 (H246958-07)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/14/2024	ND	1.94	97.2	2.00	7.03		
Toluene*	<0.050	0.050	11/14/2024	ND	1.98	99.2	2.00	6.85		
Ethylbenzene*	<0.050	0.050	11/14/2024	ND	1.98	98.8	2.00	6.80		
Total Xylenes*	<0.150	0.150	11/14/2024	ND	5.85	97.6	6.00	6.80		
Total BTEX	<0.300	0.300	11/14/2024	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	48.0	16.0	11/15/2024	ND	400	100	400	3.92		

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	11/15/2024	ND	203	101	200	1.28	
DRO >C10-C28*	114	10.0	11/15/2024	ND	200	100	200	2.85	
EXT DRO >C28-C36	11.5	10.0	11/15/2024	ND					

Surrogate: 1-Chlorooctane 144 % 48.2-134

Surrogate: 1-Chlorooctadecane 131 % 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: 11/14/2024  
Reported: 11/15/2024  
Project Name: PLU 20 BRUSHY DRAW WEST BATTERY  
Project Number: 03C1558516  
Project Location: XTO 32.11165-103.90780

Sampling Date: 11/13/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: FS 08 (H246958-08)**

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	11/14/2024	ND	1.94	97.2	2.00	7.03	
Toluene*	<0.050	0.050	11/14/2024	ND	1.98	99.2	2.00	6.85	
Ethylbenzene*	<0.050	0.050	11/14/2024	ND	1.98	98.8	2.00	6.80	
Total Xylenes*	<0.150	0.150	11/14/2024	ND	5.85	97.6	6.00	6.80	
Total BTEX	<0.300	0.300	11/14/2024	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	64.0	16.0	11/15/2024	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/15/2024	ND	203	101	200	1.28	
DRO >C10-C28*	61.2	10.0	11/15/2024	ND	200	100	200	2.85	
EXT DRO >C28-C36	<10.0	10.0	11/15/2024	ND					

Surrogate: 1-Chlorooctane 111 % 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  
TRACY HILLARD  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received: 11/14/2024  
Reported: 11/15/2024  
Project Name: PLU 20 BRUSHY DRAW WEST BATTERY  
Project Number: 03C1558516  
Project Location: XTO 32.11165-103.90780

Sampling Date: 11/13/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: FS 09 (H246958-09)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/14/2024	ND	1.94	97.2	2.00	7.03	
Toluene*	<0.050	0.050	11/14/2024	ND	1.98	99.2	2.00	6.85	
Ethylbenzene*	<0.050	0.050	11/14/2024	ND	1.98	98.8	2.00	6.80	
Total Xylenes*	<0.150	0.150	11/14/2024	ND	5.85	97.6	6.00	6.80	
Total BTEX	<0.300	0.300	11/14/2024	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	48.0	16.0	11/15/2024	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/15/2024	ND	203	101	200	1.28	
DRO >C10-C28*	<10.0	10.0	11/15/2024	ND	200	100	200	2.85	
EXT DRO >C28-C36	<10.0	10.0	11/15/2024	ND					

Surrogate: 1-Chlorooctane 114 % 48.2-134

Surrogate: 1-Chlorooctadecane 103 % 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: 11/14/2024  
Reported: 11/15/2024  
Project Name: PLU 20 BRUSHY DRAW WEST BATTERY  
Project Number: 03C1558516  
Project Location: XTO 32.11165-103.90780

Sampling Date: 11/13/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: FS 10 (H246958-10)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/14/2024	ND	1.94	97.2	2.00	7.03		
Toluene*	<0.050	0.050	11/14/2024	ND	1.98	99.2	2.00	6.85		
Ethylbenzene*	<0.050	0.050	11/14/2024	ND	1.98	98.8	2.00	6.80		
Total Xylenes*	<0.150	0.150	11/14/2024	ND	5.85	97.6	6.00	6.80		
Total BTEX	<0.300	0.300	11/14/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	11/15/2024	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/15/2024	ND	203	101	200	1.28	
DRO >C10-C28*	<10.0	10.0	11/15/2024	ND	200	100	200	2.85	
EXT DRO >C28-C36	<10.0	10.0	11/15/2024	ND					

Surrogate: 1-Chlorooctane 109 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.3 % 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: 11/14/2024  
Reported: 11/15/2024  
Project Name: PLU 20 BRUSHY DRAW WEST BATTERY  
Project Number: 03C1558516  
Project Location: XTO 32.11165-103.90780

Sampling Date: 11/13/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: FS 11 (H246958-11)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/14/2024	ND	1.94	97.2	2.00	7.03		
Toluene*	<0.050	0.050	11/14/2024	ND	1.98	99.2	2.00	6.85		
Ethylbenzene*	<0.050	0.050	11/14/2024	ND	1.98	98.8	2.00	6.80		
Total Xylenes*	<0.150	0.150	11/14/2024	ND	5.85	97.6	6.00	6.80		
Total BTEX	<0.300	0.300	11/14/2024	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	64.0	16.0	11/15/2024	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/15/2024	ND	203	101	200	1.28	
DRO >C10-C28*	<10.0	10.0	11/15/2024	ND	200	100	200	2.85	
EXT DRO >C28-C36	<10.0	10.0	11/15/2024	ND					

Surrogate: 1-Chlorooctane 93.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.9 % 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: 11/14/2024  
Reported: 11/15/2024  
Project Name: PLU 20 BRUSHY DRAW WEST BATTERY  
Project Number: 03C1558516  
Project Location: XTO 32.11165-103.90780

Sampling Date: 11/13/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: FS 12 (H246958-12)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/14/2024	ND	1.94	97.2	2.00	7.03		
Toluene*	<0.050	0.050	11/14/2024	ND	1.98	99.2	2.00	6.85		
Ethylbenzene*	<0.050	0.050	11/14/2024	ND	1.98	98.8	2.00	6.80		
Total Xylenes*	<0.150	0.150	11/14/2024	ND	5.85	97.6	6.00	6.80		
Total BTEX	<0.300	0.300	11/14/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	11/15/2024	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/15/2024	ND	203	101	200	1.28	
DRO >C10-C28*	<10.0	10.0	11/15/2024	ND	200	100	200	2.85	
EXT DRO >C28-C36	<10.0	10.0	11/15/2024	ND					

Surrogate: 1-Chlorooctane 113 % 48.2-134

Surrogate: 1-Chlorooctadecane 100 % 49.1-148

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**Analytical Results For:**

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

Received: 11/14/2024  
Reported: 11/15/2024  
Project Name: PLU 20 BRUSHY DRAW WEST BATTERY  
Project Number: 03C1558516  
Project Location: XTO 32.11165-103.90780

Sampling Date: 11/13/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: FS 13 (H246958-13)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/14/2024	ND	1.94	97.2	2.00	7.03		
Toluene*	<0.050	0.050	11/14/2024	ND	1.98	99.2	2.00	6.85		
Ethylbenzene*	<0.050	0.050	11/14/2024	ND	1.98	98.8	2.00	6.80		
Total Xylenes*	<0.150	0.150	11/14/2024	ND	5.85	97.6	6.00	6.80		
Total BTEX	<0.300	0.300	11/14/2024	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	48.0	16.0	11/15/2024	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/15/2024	ND	203	101	200	1.28	
DRO >C10-C28*	<10.0	10.0	11/15/2024	ND	200	100	200	2.85	
EXT DRO >C28-C36	<10.0	10.0	11/15/2024	ND					

Surrogate: 1-Chlorooctane 103 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.8 % 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: 11/14/2024  
Reported: 11/15/2024  
Project Name: PLU 20 BRUSHY DRAW WEST BATTERY  
Project Number: 03C1558516  
Project Location: XTO 32.11165-103.90780

Sampling Date: 11/13/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: FS 14 (H246958-14)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/14/2024	ND	1.97	98.4	2.00	8.56		
Toluene*	<0.050	0.050	11/14/2024	ND	1.99	99.3	2.00	9.64		
Ethylbenzene*	<0.050	0.050	11/14/2024	ND	2.15	107	2.00	7.04		
Total Xylenes*	<0.150	0.150	11/14/2024	ND	6.42	107	6.00	7.43		
Total BTEX	<0.300	0.300	11/14/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	11/15/2024	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/15/2024	ND	203	101	200	1.28	
DRO >C10-C28*	<10.0	10.0	11/15/2024	ND	200	100	200	2.85	
EXT DRO >C28-C36	<10.0	10.0	11/15/2024	ND					

Surrogate: 1-Chlorooctane 108 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.9 % 49.1-148

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**Analytical Results For:**

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

Received: 11/14/2024  
Reported: 11/15/2024  
Project Name: PLU 20 BRUSHY DRAW WEST BATTERY  
Project Number: 03C1558516  
Project Location: XTO 32.11165-103.90780

Sampling Date: 11/13/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: FS 15 (H246958-15)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/14/2024	ND	1.97	98.4	2.00	8.56		
Toluene*	<0.050	0.050	11/14/2024	ND	1.99	99.3	2.00	9.64		
Ethylbenzene*	<0.050	0.050	11/14/2024	ND	2.15	107	2.00	7.04		
Total Xylenes*	<0.150	0.150	11/14/2024	ND	6.42	107	6.00	7.43		
Total BTEX	<0.300	0.300	11/14/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	11/15/2024	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/15/2024	ND	203	101	200	1.28	
DRO >C10-C28*	119	10.0	11/15/2024	ND	200	100	200	2.85	
EXT DRO >C28-C36	<10.0	10.0	11/15/2024	ND					

Surrogate: 1-Chlorooctane 95.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 88.2 % 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: 11/14/2024  
Reported: 11/15/2024  
Project Name: PLU 20 BRUSHY DRAW WEST BATTERY  
Project Number: 03C1558516  
Project Location: XTO 32.11165-103.90780

Sampling Date: 11/13/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: FS 16 (H246958-16)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/14/2024	ND	1.97	98.4	2.00	8.56	
Toluene*	<0.050	0.050	11/14/2024	ND	1.99	99.3	2.00	9.64	
Ethylbenzene*	<0.050	0.050	11/14/2024	ND	2.15	107	2.00	7.04	
Total Xylenes*	<0.150	0.150	11/14/2024	ND	6.42	107	6.00	7.43	
Total BTEX	<0.300	0.300	11/14/2024	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	80.0	16.0	11/15/2024	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/15/2024	ND	203	101	200	1.28	
DRO >C10-C28*	56.9	10.0	11/15/2024	ND	200	100	200	2.85	
EXT DRO >C28-C36	<10.0	10.0	11/15/2024	ND					

Surrogate: 1-Chlorooctane 112 % 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  
TRACY HILLARD  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received: 11/14/2024  
Reported: 11/15/2024  
Project Name: PLU 20 BRUSHY DRAW WEST BATTERY  
Project Number: 03C1558516  
Project Location: XTO 32.11165-103.90780

Sampling Date: 11/13/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: FS 17 (H246958-17)**

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	11/14/2024	ND	1.97	98.4	2.00	8.56		
Toluene*	<0.050	0.050	11/14/2024	ND	1.99	99.3	2.00	9.64		
Ethylbenzene*	<0.050	0.050	11/14/2024	ND	2.15	107	2.00	7.04		
Total Xylenes*	<0.150	0.150	11/14/2024	ND	6.42	107	6.00	7.43		
Total BTEX	<0.300	0.300	11/14/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	11/15/2024	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/15/2024	ND	203	101	200	1.28	
DRO >C10-C28*	75.3	10.0	11/15/2024	ND	200	100	200	2.85	
EXT DRO >C28-C36	<10.0	10.0	11/15/2024	ND					

Surrogate: 1-Chlorooctane 101 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.0 % 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: 11/14/2024  
Reported: 11/15/2024  
Project Name: PLU 20 BRUSHY DRAW WEST BATTERY  
Project Number: 03C1558516  
Project Location: XTO 32.11165-103.90780

Sampling Date: 11/13/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: FS 18 (H246958-18)**

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	11/14/2024	ND	1.97	98.4	2.00	8.56		
Toluene*	<0.050	0.050	11/14/2024	ND	1.99	99.3	2.00	9.64		
Ethylbenzene*	<0.050	0.050	11/14/2024	ND	2.15	107	2.00	7.04		
Total Xylenes*	<0.150	0.150	11/14/2024	ND	6.42	107	6.00	7.43		
Total BTEX	<0.300	0.300	11/14/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.0 % 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	80.0	16.0	11/15/2024	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/15/2024	ND	203	101	200	1.28	
DRO >C10-C28*	77.9	10.0	11/15/2024	ND	200	100	200	2.85	
EXT DRO >C28-C36	<10.0	10.0	11/15/2024	ND					

Surrogate: 1-Chlorooctane 107 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.0 % 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: 11/14/2024  
Reported: 11/15/2024  
Project Name: PLU 20 BRUSHY DRAW WEST BATTERY  
Project Number: 03C1558516  
Project Location: XTO 32.11165-103.90780

Sampling Date: 11/13/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: FS 19 (H246958-19)**

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	11/14/2024	ND	1.97	98.4	2.00	8.56		
Toluene*	<0.050	0.050	11/14/2024	ND	1.99	99.3	2.00	9.64		
Ethylbenzene*	<0.050	0.050	11/14/2024	ND	2.15	107	2.00	7.04		
Total Xylenes*	<0.150	0.150	11/14/2024	ND	6.42	107	6.00	7.43		
Total BTEX	<0.300	0.300	11/14/2024	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	48.0	16.0	11/15/2024	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/15/2024	ND	203	101	200	1.28	
DRO >C10-C28*	<10.0	10.0	11/15/2024	ND	200	100	200	2.85	
EXT DRO >C28-C36	<10.0	10.0	11/15/2024	ND					

Surrogate: 1-Chlorooctane 118 % 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: 11/14/2024  
Reported: 11/15/2024  
Project Name: PLU 20 BRUSHY DRAW WEST BATTERY  
Project Number: 03C1558516  
Project Location: XTO 32.11165-103.90780

Sampling Date: 11/13/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: FS 20 (H246958-20)**

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	11/14/2024	ND	1.97	98.4	2.00	8.56		
Toluene*	<0.050	0.050	11/14/2024	ND	1.99	99.3	2.00	9.64		
Ethylbenzene*	<0.050	0.050	11/14/2024	ND	2.15	107	2.00	7.04		
Total Xylenes*	<0.150	0.150	11/14/2024	ND	6.42	107	6.00	7.43		
Total BTEX	<0.300	0.300	11/14/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	11/15/2024	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/15/2024	ND	203	101	200	1.28	
DRO >C10-C28*	<10.0	10.0	11/15/2024	ND	200	100	200	2.85	
EXT DRO >C28-C36	<10.0	10.0	11/15/2024	ND					

Surrogate: 1-Chlorooctane 99.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 88.1 % 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: 11/14/2024  
Reported: 11/15/2024  
Project Name: PLU 20 BRUSHY DRAW WEST BATTERY  
Project Number: 03C1558516  
Project Location: XTO 32.11165-103.90780

Sampling Date: 11/13/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: FS 21 (H246958-21)**

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	11/14/2024	ND	1.97	98.4	2.00	8.56		
Toluene*	<0.050	0.050	11/14/2024	ND	1.99	99.3	2.00	9.64		
Ethylbenzene*	<0.050	0.050	11/14/2024	ND	2.15	107	2.00	7.04		
Total Xylenes*	<0.150	0.150	11/14/2024	ND	6.42	107	6.00	7.43		
Total BTEX	<0.300	0.300	11/14/2024	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	64.0	16.0	11/15/2024	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/14/2024	ND	214	107	200	2.95	
DRO >C10-C28*	69.7	10.0	11/14/2024	ND	215	107	200	6.91	
EXT DRO >C28-C36	11.6	10.0	11/14/2024	ND					

Surrogate: 1-Chlorooctane 104 % 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: 11/14/2024  
Reported: 11/15/2024  
Project Name: PLU 20 BRUSHY DRAW WEST BATTERY  
Project Number: 03C1558516  
Project Location: XTO 32.11165-103.90780

Sampling Date: 11/13/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: FS 22 (H246958-22)**

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	11/14/2024	ND	1.97	98.4	2.00	8.56		
Toluene*	<0.050	0.050	11/14/2024	ND	1.99	99.3	2.00	9.64		
Ethylbenzene*	<0.050	0.050	11/14/2024	ND	2.15	107	2.00	7.04		
Total Xylenes*	<0.150	0.150	11/14/2024	ND	6.42	107	6.00	7.43		
Total BTEX	<0.300	0.300	11/14/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.4 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	11/15/2024	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/14/2024	ND	214	107	200	2.95	
DRO >C10-C28*	34.3	10.0	11/14/2024	ND	215	107	200	6.91	
EXT DRO >C28-C36	<10.0	10.0	11/14/2024	ND					

Surrogate: 1-Chlorooctane 100 % 48.2-134

Surrogate: 1-Chlorooctadecane 103 % 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: 11/14/2024  
Reported: 11/15/2024  
Project Name: PLU 20 BRUSHY DRAW WEST BATTERY  
Project Number: 03C1558516  
Project Location: XTO 32.11165-103.90780

Sampling Date: 11/13/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: FS 23 (H246958-23)**

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	11/14/2024	ND	1.97	98.4	2.00	8.56		
Toluene*	<0.050	0.050	11/14/2024	ND	1.99	99.3	2.00	9.64		
Ethylbenzene*	<0.050	0.050	11/14/2024	ND	2.15	107	2.00	7.04		
Total Xylenes*	<0.150	0.150	11/14/2024	ND	6.42	107	6.00	7.43		
Total BTEX	<0.300	0.300	11/14/2024	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	160	16.0	11/15/2024	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/14/2024	ND	214	107	200	2.95	
DRO >C10-C28*	14.4	10.0	11/14/2024	ND	215	107	200	6.91	
EXT DRO >C28-C36	<10.0	10.0	11/14/2024	ND					

Surrogate: 1-Chlorooctane 104 % 48.2-134

Surrogate: 1-Chlorooctadecane 108 % 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: 11/14/2024  
Reported: 11/15/2024  
Project Name: PLU 20 BRUSHY DRAW WEST BATTERY  
Project Number: 03C1558516  
Project Location: XTO 32.11165-103.90780

Sampling Date: 11/13/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: FS 24 (H246958-24)**

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	11/14/2024	ND	1.97	98.4	2.00	8.56		
Toluene*	<0.050	0.050	11/14/2024	ND	1.99	99.3	2.00	9.64		
Ethylbenzene*	<0.050	0.050	11/14/2024	ND	2.15	107	2.00	7.04		
Total Xylenes*	<0.150	0.150	11/14/2024	ND	6.42	107	6.00	7.43		
Total BTEX	<0.300	0.300	11/14/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	11/15/2024	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/14/2024	ND	214	107	200	2.95	
DRO >C10-C28*	15.9	10.0	11/14/2024	ND	215	107	200	6.91	
EXT DRO >C28-C36	<10.0	10.0	11/14/2024	ND					

Surrogate: 1-Chlorooctane 107 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 49.1-148

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\*=Accredited Analyte

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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: 11/14/2024  
Reported: 11/15/2024  
Project Name: PLU 20 BRUSHY DRAW WEST BATTERY  
Project Number: 03C1558516  
Project Location: XTO 32.11165-103.90780

Sampling Date: 11/13/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: FS 25 (H246958-25)**

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	11/14/2024	ND	1.97	98.4	2.00	8.56		
Toluene*	<0.050	0.050	11/14/2024	ND	1.99	99.3	2.00	9.64		
Ethylbenzene*	<0.050	0.050	11/14/2024	ND	2.15	107	2.00	7.04		
Total Xylenes*	<0.150	0.150	11/14/2024	ND	6.42	107	6.00	7.43		
Total BTEX	<0.300	0.300	11/14/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	11/15/2024	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/14/2024	ND	214	107	200	2.95	
DRO >C10-C28*	16.0	10.0	11/14/2024	ND	215	107	200	6.91	
EXT DRO >C28-C36	<10.0	10.0	11/14/2024	ND					

Surrogate: 1-Chlorooctane 113 % 48.2-134

Surrogate: 1-Chlorooctadecane 115 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

S-05	The surrogate recovery is outside of lab established statistical control limits but still within method limits. Data is not adversely affected.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
GC-NC	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are reported as ND.
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 "C. D. Keene".

Celey D. Keene, Lab Director/Quality Manager

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum

**BILL TO**

ANALYSIS REQUEST

Page 28 of 30

Company Name: Ensolum										BILL TO										ANALYSIS REQUEST																													
Project manager: Tracy Hillard										P.O. #:																																							
Address: 3122 National Parks Hwy										Company: XTO Energy																																							
City: Carlsbad										Attn: Colton Brown																																							
State: NM										Address: 3104 E Greene st.																																							
ZIP: 88220																																																	
Phone #: 575-937-3906										City: Carlsbad																																							
Project #: 03C1558516										State: NM																																							
Project Name: PLU 20 Brushy Draw West Battery										Zip: 88220																																							
Project Location: 32.11167, -103.907281										Phone #:																																							
Sample Name: Uriel Santillana										Fax #:																																							
FOR LAB USE ONLY																																																	
Lab I.D.										PRESERV.										SAMPLING																													
Sample I.D.										(G)RAB OR (C)OMP.										# CONTAINERS										DATE										TIME									
										GROUNDWATER										WASTEWATER										SOIL																			
										OIL										SLUDGE										OTHER :																			
										ACID/BASE:										ICE / COOL										OTHER :																			
1240958										C										11/13/24										1110																			
F501										X										X										X																			
F502										X										X										X																			
F503										X										X										X																			
F504										X										X										X																			
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Relinquished By: [Signature]										Received By: [Signature]										Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No										Add'l Phone #:																			
Time: 11/14/24										Time: 1355										Thermal Time: Rush 24hr										Standard <input type="checkbox"/> Bacteria (only) Sample Condition																			
Date: 1355										Date: 1355										Thermometer ID #140										Cool Intact <input type="checkbox"/> Observed Temp. °C																			
Time: 1355										Time: 1355										Correction Factor 0.00										Yes <input type="checkbox"/> No <input type="checkbox"/> Corrected Temp. °C																			
Delivered By: (Circle One) Sampler - UPS - Bus - Other:										Observed Temp. °C 58.0										Sample Condition Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No										CHECKED BY: (Initials) [Signature]																			
Relinquished By: [Signature]										Received By: [Signature]										REMARKS: Cost center: 2147581001 Incident ID: nAPP2423455892 APl: fAPP2126355870																													





CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2-3

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

Company Name: Ensolum

BILL TO

ANALYSIS REQUEST

Project manager: Tracy Hillard

P.O. #:

Address: 3122 National Parks Hwy

Company: XTO Energy

City: Carlsbad State: NM ZIP: 88220

Attn: Colton Brown

Phone #: 575-937-3906

Address: 3104 E Greene st.

Project #:

City: Carlsbad

Project Name: PLU 20 Brushy Draw West Battery

State: NM Zip: 88220

Project Location: 32.1167, -103.907281

Phone #:

Sampler Name: Uriel Santillana

Fax #:

FOR LAB USE ONLY  
Lab I.D.

Sample I.D.

Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX					PRESERV.	SAMPLING	CHLORIDE				
			GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE			S	D	E	S	
11	FS11	1			X					X	X	X	X	
12	FS12	1												
13	FS13	1												
14	FS14	1												
15	FS15	1												
16	FS16	1												
17	FS17	1												
18	FS18	1												
19	FS19	1												
20	FS20	1												

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Relinquished By: Uriel Santillana Date: 11-14-24 Time: 1:55 Received By: Colton Brown

Relinquished By: Uriel Santillana Date: 11-14-24 Time: 1:55 Received By: Colton Brown

Observed Temp. °C 4.4 Sample Condition Cool Intact ☒ Yes ☐ No ☐ No

Thermometer ID #140 Correction Factor 0.0 Standard ☐ Bacteria (only) Sample Condition ☐ Yes ☐ No ☐ No ☐ No

Verbal Result: ☐ Yes ☐ No Add'l Phone #: thillard@ensolum.com tmorrissey@ensolum.com kthomason@ensolum.com usantillana@ensolum.com

REMARKS: Cost center: 2147561001 Incident ID: nAPP2423455892 API: IAPP2126355870



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

3-3

Company Name: Ensolum

BILL TO

ANALYSIS REQUEST

Project manager: Tracy Hillard

P.O. #:

Address: 3122 National Parks Hwy

Company: XTO Energy

City: Carlsbad

State: NM ZIP: 88220

Attn: Colton Brown

Phone #: 575-937-3906

Address: 3104 E Greene st.

Project #:

City: Carlsbad

Project Name: PLU 20 Brushy Draw West Battery

State: NM ZIP: 88220

Project Location: 32.11167, -103.907281

Phone #:

Sample Name: Uriel Santillana

Fax #:

FOR LAB USE ONLY

Lab I.D.

Sample I.D.

HAUTGAS

B1  
B2  
B3  
B4  
B5

F321  
F322  
F323  
F324  
F325

11/14/24  
1355

Received By: A. Davis

Observed Temp. °C  
Corrected Temp. °C

Sample Condition  
Cool Intact  
Yes No

CHECKED BY: (Initials)

Turnaround Time: Rush 24hr  
Thermometer ID #140  
Correction Factor

Standard Bacteria (only) Sample Condition  
Cool Intact Observed Temp. °C

Verbal Result: Yes No  
thillard@ensolum.com timorrissey@ensolum.com kthomason@ensolum.com usantillana@ensolum.com

REMARKS: Cost center: 2147581001 Incident ID: nAPP2423455892 API: IAPP2126355870

Add'l Phone #:

Yes No Corrected Temp. °C

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November 18, 2024

TRACY HILLARD

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: PLU 20 BRUSHY DRAW WEST BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 11/15/24 8:00.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Mike Snyder". The signature is fluid and cursive, with the first name "Mike" and last name "Snyder" clearly distinguishable.

Mike Snyder For 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:	11/15/2024	Sampling Date:	11/14/2024
Reported:	11/18/2024	Sampling Type:	Soil
Project Name:	PLU 20 BRUSHY DRAW WEST BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558516	Sample Received By:	Shari Cisneros
Project Location:	XTO 32.11165-103.90780		

**Sample ID: SW01 (H246978-01)**

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	11/15/2024	ND	2.10	105	2.00	3.19		
Toluene*	<0.050	0.050	11/15/2024	ND	2.31	116	2.00	11.1		
Ethylbenzene*	<0.050	0.050	11/15/2024	ND	2.58	129	2.00	13.9		
Total Xylenes*	<0.150	0.150	11/15/2024	ND	7.83	130	6.00	14.8		
Total BTEX	<0.300	0.300	11/15/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	11/15/2024	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	11/15/2024	ND	188	93.9	200	6.59	
DRO >C10-C28*	63.6	10.0	11/15/2024	ND	177	88.6	200	2.18	
EXT DRO >C28-C36	<10.0	10.0	11/15/2024	ND					

Surrogate: 1-Chlorooctane 80.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 88.4 % 49.1-148

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Mike Snyder For 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: 11/15/2024  
Reported: 11/18/2024  
Project Name: PLU 20 BRUSHY DRAW WEST BATTERY  
Project Number: 03C1558516  
Project Location: XTO 32.11165-103.90780

Sampling Date: 11/14/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Shari Cisneros

**Sample ID: SW02 (H246978-02)**

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	11/15/2024	ND	2.10	105	2.00	3.19	
Toluene*	<0.050	0.050	11/15/2024	ND	2.31	116	2.00	11.1	
Ethylbenzene*	<0.050	0.050	11/15/2024	ND	2.58	129	2.00	13.9	
Total Xylenes*	<0.150	0.150	11/15/2024	ND	7.83	130	6.00	14.8	
Total BTEX	<0.300	0.300	11/15/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 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	176	16.0	11/15/2024	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	11/15/2024	ND	188	93.9	200	6.59	
DRO >C10-C28*	32.4	10.0	11/15/2024	ND	177	88.6	200	2.18	
EXT DRO >C28-C36	<10.0	10.0	11/15/2024	ND					

Surrogate: 1-Chlorooctane 77.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.0 % 49.1-148

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Mike Snyder For 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: 11/15/2024  
Reported: 11/18/2024  
Project Name: PLU 20 BRUSHY DRAW WEST BATTERY  
Project Number: 03C1558516  
Project Location: XTO 32.11165-103.90780

Sampling Date: 11/14/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Shari Cisneros

**Sample ID: SW03 (H246978-03)**

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	11/15/2024	ND	2.10	105	2.00	3.19	
Toluene*	<0.050	0.050	11/15/2024	ND	2.31	116	2.00	11.1	
Ethylbenzene*	<0.050	0.050	11/15/2024	ND	2.58	129	2.00	13.9	
Total Xylenes*	<0.150	0.150	11/15/2024	ND	7.83	130	6.00	14.8	
Total BTEX	<0.300	0.300	11/15/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	176	16.0	11/15/2024	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	11/15/2024	ND	188	93.9	200	6.59	
DRO >C10-C28*	76.9	10.0	11/15/2024	ND	177	88.6	200	2.18	
EXT DRO >C28-C36	13.6	10.0	11/15/2024	ND					

Surrogate: 1-Chlorooctane 79.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.1 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Mike Snyder For 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:	11/15/2024	Sampling Date:	11/14/2024
Reported:	11/18/2024	Sampling Type:	Soil
Project Name:	PLU 20 BRUSHY DRAW WEST BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558516	Sample Received By:	Shari Cisneros
Project Location:	XTO 32.11165-103.90780		

**Sample ID: SW04 (H246978-04)**

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	11/15/2024	ND	2.10	105	2.00	3.19	
Toluene*	<0.050	0.050	11/15/2024	ND	2.31	116	2.00	11.1	
Ethylbenzene*	<0.050	0.050	11/15/2024	ND	2.58	129	2.00	13.9	
Total Xylenes*	<0.150	0.150	11/15/2024	ND	7.83	130	6.00	14.8	
Total BTEX	<0.300	0.300	11/15/2024	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	176	16.0	11/15/2024	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	11/15/2024	ND	188	93.9	200	6.59	
DRO >C10-C28*	18.1	10.0	11/15/2024	ND	177	88.6	200	2.18	
EXT DRO >C28-C36	<10.0	10.0	11/15/2024	ND					

Surrogate: 1-Chlorooctane 79.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 85.1 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
BS1	Blank spike recovery above laboratory acceptance criteria. Results for analyte potentially biased high.
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 "Mike Snyder".

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Foster, LLC

Project Manager: Tracy Hillard

Address: 601 N Martinefield

City: Midland State: TX Zip: 79701

Phone #: 575 937 3906 Fax #:

Project #: 03C1558516 Project Owner: X70

Project Name: PLY 20 BUSHY DRAW WEST BATTERY

Project Location: EDDY COUNTY, NM

Sampler Name: JOHN AZUKA

BILL TO

P.O. #:

Company: X70

Attn: Colton Brown

Address: X70

City: State: Zip:

Phone #:

Fax #:

ANALYSIS REQUEST

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.	DATE	TIME	ANALYSIS REQUEST									
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :				Chloride	7pH	BTEX							
Hauwa78	SW01	C1	1	X		X				X	11/14/24	1550	X	X	X							
	SW02	C1	1	X		X				X	11/14/24	1507	X	X	X							
	SW03	C1	1	X		X				X	11/14/24	1479	X	X	X							
	SW04	C1	1	X		X				X	11/14/24	1421	X	X	X							

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Relinquished By: [Signature]

Date: 11-15-24

Received By: [Signature]

Relinquished By: [Signature]

Date: 8:00am

Received By: [Signature]

Delivered By: (Circle One)

Observed Temp. °C

Sample Condition

CHECKED BY: (Initials)

Turnaround Time:

Standard

☒

Bacteria (only)

Sample Condition

Observed Temp. °C

Sampler - UPS - Bus - Other:

Corrected Temp. °C

Cool Intact

Yes Yes

Thermometer ID #40

Correction Factor 0.6°C

☒

Cool Intact

Observed Temp. °C

Corrected Temp. °C

FORM 000-13-3 06/03/24

† Cardinal cannot accept verbal changes. Please email changes to [celey.keene@cardinallabsnm.com](mailto:celey.keene@cardinallabsnm.com)



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

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October 24, 2024

TRACY HILLARD

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: PLU 20 BRUSHY DRAW WEST BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 10/21/24 12:10.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, 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: 10/21/2024  
Reported: 10/24/2024  
Project Name: PLU 20 BRUSHY DRAW WEST BATTERY  
Project Number: 03C1558516  
Project Location: XTO 32.11167-103.907281

Sampling Date: 10/17/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: PH 01 0.5' (H246405-01)**

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	10/22/2024	ND	1.89	94.6	2.00	8.41	
Toluene*	<0.050	0.050	10/22/2024	ND	1.96	97.8	2.00	5.51	
Ethylbenzene*	<0.050	0.050	10/22/2024	ND	1.98	99.0	2.00	4.03	GC-NC
Total Xylenes*	<0.150	0.150	10/22/2024	ND	5.90	98.3	6.00	3.90	GC-NC
Total BTX	<0.300	0.300	10/22/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	336	16.0	10/22/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	27.1	10.0	10/22/2024	ND	221	111	200	14.5	
DRO >C10-C28*	3070	10.0	10/22/2024	ND	196	97.8	200	13.4	
EXT DRO >C28-C36	467	10.0	10/22/2024	ND					

Surrogate: 1-Chlorooctane 122 % 48.2-134

Surrogate: 1-Chlorooctadecane 127 % 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: 10/21/2024  
Reported: 10/24/2024  
Project Name: PLU 20 BRUSHY DRAW WEST BATTERY  
Project Number: 03C1558516  
Project Location: XTO 32.11167-103.907281

Sampling Date: 10/17/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: PH 01 1' (H246405-02)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/22/2024	ND	1.89	94.6	2.00	8.41	
Toluene*	<0.050	0.050	10/22/2024	ND	1.96	97.8	2.00	5.51	
Ethylbenzene*	<0.050	0.050	10/22/2024	ND	1.98	99.0	2.00	4.03	
Total Xylenes*	<0.150	0.150	10/22/2024	ND	5.90	98.3	6.00	3.90	
Total BTEX	<0.300	0.300	10/22/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	10/22/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/22/2024	ND	221	111	200	14.5	
DRO >C10-C28*	71.2	10.0	10/22/2024	ND	196	97.8	200	13.4	
EXT DRO >C28-C36	10.2	10.0	10/22/2024	ND					

Surrogate: 1-Chlorooctane 120 % 48.2-134

Surrogate: 1-Chlorooctadecane 125 % 49.1-148

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\*=Accredited Analyte

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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: 10/21/2024  
Reported: 10/24/2024  
Project Name: PLU 20 BRUSHY DRAW WEST BATTERY  
Project Number: 03C1558516  
Project Location: XTO 32.11167-103.907281

Sampling Date: 10/17/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: PH 02 0.5' (H246405-03)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/22/2024	ND	1.89	94.6	2.00	8.41		
Toluene*	<0.050	0.050	10/22/2024	ND	1.96	97.8	2.00	5.51		
Ethylbenzene*	<0.050	0.050	10/22/2024	ND	1.98	99.0	2.00	4.03		
Total Xylenes*	<0.150	0.150	10/22/2024	ND	5.90	98.3	6.00	3.90		
Total BTEX	<0.300	0.300	10/22/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	10/22/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/22/2024	ND	221	111	200	14.5	
DRO >C10-C28*	20.8	10.0	10/22/2024	ND	196	97.8	200	13.4	
EXT DRO >C28-C36	<10.0	10.0	10/22/2024	ND					

Surrogate: 1-Chlorooctane 119 % 48.2-134

Surrogate: 1-Chlorooctadecane 122 % 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: 10/21/2024  
Reported: 10/24/2024  
Project Name: PLU 20 BRUSHY DRAW WEST BATTERY  
Project Number: 03C1558516  
Project Location: XTO 32.11167-103.907281

Sampling Date: 10/17/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: PH 02 1' (H246405-04)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/22/2024	ND	1.89	94.6	2.00	8.41		
Toluene*	<0.050	0.050	10/22/2024	ND	1.96	97.8	2.00	5.51		
Ethylbenzene*	<0.050	0.050	10/22/2024	ND	1.98	99.0	2.00	4.03		
Total Xylenes*	<0.150	0.150	10/22/2024	ND	5.90	98.3	6.00	3.90		
Total BTEX	<0.300	0.300	10/22/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	10/22/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/22/2024	ND	226	113	200	11.4	
DRO >C10-C28*	<10.0	10.0	10/22/2024	ND	205	103	200	15.4	
EXT DRO >C28-C36	<10.0	10.0	10/22/2024	ND					

Surrogate: 1-Chlorooctane 95.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.1 % 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: 10/21/2024  
Reported: 10/24/2024  
Project Name: PLU 20 BRUSHY DRAW WEST BATTERY  
Project Number: 03C1558516  
Project Location: XTO 32.11167-103.907281

Sampling Date: 10/17/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: PH 03 0.5' (H246405-05)**

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	10/22/2024	ND	1.89	94.6	2.00	8.41	
Toluene*	<0.050	0.050	10/22/2024	ND	1.96	97.8	2.00	5.51	
Ethylbenzene*	<0.050	0.050	10/22/2024	ND	1.98	99.0	2.00	4.03	
Total Xylenes*	<0.150	0.150	10/22/2024	ND	5.90	98.3	6.00	3.90	
Total BTEX	<0.300	0.300	10/22/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	464	16.0	10/22/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/22/2024	ND	226	113	200	11.4	
DRO >C10-C28*	64.1	10.0	10/22/2024	ND	205	103	200	15.4	
EXT DRO >C28-C36	<10.0	10.0	10/22/2024	ND					

Surrogate: 1-Chlorooctane 96.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.7 % 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: 10/21/2024  
Reported: 10/24/2024  
Project Name: PLU 20 BRUSHY DRAW WEST BATTERY  
Project Number: 03C1558516  
Project Location: XTO 32.11167-103.907281

Sampling Date: 10/17/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: PH 03 1' (H246405-06)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/22/2024	ND	1.89	94.6	2.00	8.41		
Toluene*	<0.050	0.050	10/22/2024	ND	1.96	97.8	2.00	5.51		
Ethylbenzene*	<0.050	0.050	10/22/2024	ND	1.98	99.0	2.00	4.03		
Total Xylenes*	<0.150	0.150	10/22/2024	ND	5.90	98.3	6.00	3.90		
Total BTEX	<0.300	0.300	10/22/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	10/22/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/22/2024	ND	226	113	200	11.4	
DRO >C10-C28*	<10.0	10.0	10/22/2024	ND	205	103	200	15.4	
EXT DRO >C28-C36	<10.0	10.0	10/22/2024	ND					

Surrogate: 1-Chlorooctane 89.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 86.7 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

QR-04	The RPD for the BS/BSD was outside of historical limits.
GC-NC	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are reported as ND.
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 "C. D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager



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

Company Name: Ensolum, LLC

Project Manager: Tracy Hillard

Address: 3122 National Parks Hwy

City: Carlsbad

Phone #: 575-937-3906

Project #: 03C1558516

Project Name: PLU 20 Brushy Draw West Battery

Project Location: 32.1167, -103.907281

Sampler Name: Mario Sarkis

**BILL TO**

P.O. #:

Company: XTO Energy

Attn: Colton Brown

Address: 3104 E. Greene St.

City: Carlsbad

State: NM Zip: 88220

Phone #: 575-988-2390

Fax #:

**ANALYSIS REQUEST**

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	ANALYSIS REQUEST					
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :			BTEX	TPH	Chlorides			
	PH01	0.5	G1	✓	✓	✓	✓	✓	✓	✓	10/17/24	0932	✓	✓	✓			
	PH02	0.5	G1	✓	✓	✓	✓	✓	✓	✓	10/17/24	0935	✓	✓	✓			
	PH03	0.5	G1	✓	✓	✓	✓	✓	✓	✓	10/17/24	1003	✓	✓	✓			
	PH03	0.5	G1	✓	✓	✓	✓	✓	✓	✓	10/17/24	1005	✓	✓	✓			
	PH03	0.5	G1	✓	✓	✓	✓	✓	✓	✓	10/17/24	1105	✓	✓	✓			
	PH03	0.5	G1	✓	✓	✓	✓	✓	✓	✓	10/17/24	1107	✓	✓	✓			

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Relinquished By:

Date: 10-21-24  
Time: 1240  
Received By: *[Signature]*

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

Observed Temp. °C: 4.3  
Corrected Temp. °C: 3.7

Sample Condition: Cool Intact ☒ Yes ☐ No

CHECKED BY: (Initials)

Turnaround Time: Standard ☒ Rush ☐

Thermometer ID: #446-140

REMARKS: Incident #: nAPP2423455892

Cost Center: 2147581001

Bacteria (only) Sample Condition: Cool Intact ☐ Yes ☐ No

Corrected Temp. °C



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Energy, Minerals and Natural Resources

Oil Conservation Division

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Santa Fe, NM 87505

QUESTIONS

Action 404813

QUESTIONS

Operator:  XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:  5380
	Action Number:  404813
	Action Type:  [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2423455892
Incident Name	NAPP2423455892 PLU 20 BRUSHY DRAW WEST BATTERY @ 0
Incident Type	Oil Release
Incident Status	Remediation Closure Report Received

Location of Release Source	
Please answer all the questions in this group.	
Site Name	PLU 20 Brushy Draw West Battery
Date Release Discovered	08/21/2024
Surface Owner	Federal

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: Human Error   Transport   Crude Oil   Released: 26 BBL   Recovered: 15 BBL   Lost: 11 BBL.
Produced Water Released (bbls) Details	Not answered.
Is the concentration of chloride in the produced water >10,000 mg/l	No
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 404813

**QUESTIONS (continued)**

Operator:  XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:  5380
	Action Number:  404813
	Action Type:  [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**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	Yes
Reasons why this would be considered a submission for a notification of a major release	From paragraph A. "Major release" determine using: (1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

**Initial Response**

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

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

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

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

I hereby agree and sign off to the above statement	Name: Colton Brown Title: Environmental Advisor Email: colton.s.brown@exxonmobil.com Date: 11/19/2024
--	--

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QUESTIONS, Page 3

Action 404813

**QUESTIONS (continued)**

Operator:  XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:  5380
	Action Number:  404813
	Action Type:  [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**QUESTIONS**

<b>Site Characterization</b>	
<i>Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 100 and 500 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
<b>What is the minimum distance, between the closest lateral extents of the release and the following surface areas:</b>	
A continuously flowing watercourse or any other significant watercourse	Between 300 and 500 (ft.)
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 1 and 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 1 and 5 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Between 500 and 1000 (ft.)
Did the release impact areas not on an exploration, development, production, or storage site	No

<b>Remediation Plan</b>	
<i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
Requesting a remediation plan approval with this submission	Yes
<i>Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.</i>	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
<b>Soil Contamination Sampling:</b> (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	464
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	3564
GRO+DRO (EPA SW-846 Method 8015M)	3097
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	10/17/2024
On what date will (or did) the final sampling or liner inspection occur	11/14/2024
On what date will (or was) the remediation complete(d)	11/14/2024
What is the estimated surface area (in square feet) that will be reclaimed	4765
What is the estimated volume (in cubic yards) that will be reclaimed	350
What is the estimated surface area (in square feet) that will be remediated	4765
What is the estimated volume (in cubic yards) that will be remediated	350
<i>These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.</i>	
<i>The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.</i>	

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QUESTIONS, Page 4

Action 404813

**QUESTIONS (continued)**

Operator:  XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:  5380
	Action Number:  404813
	Action Type:  [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**QUESTIONS**

<b>Remediation Plan (continued)</b>	
<i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
<b>This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:</b>	
(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	HALFWAY DISPOSAL AND LANDFILL [FEEM0112334510]
<b>OR</b> which OCD approved well (API) will be used for <b>off-site</b> disposal	Not answered.
<b>OR</b> is the <b>off-site</b> disposal site, to be used, out-of-state	Not answered.
<b>OR</b> is the <b>off-site</b> disposal site, to be used, an NMED facility	Not answered.
(Ex Situ) Excavation and <b>on-site</b> remediation (i.e. On-Site Land Farms)	Not answered.
(In Situ) Soil Vapor Extraction	Not answered.
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	Not answered.
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	Not answered.
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	Not answered.
Ground Water Abatement pursuant to 19.15.30 NMAC	Not answered.
OTHER (Non-listed remedial process)	Not answered.
<i>Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.</i>	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: Colton Brown Title: Environmental Advisor Email: colton.s.brown@exxonmobil.com Date: 11/19/2024
<i>The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.</i>	

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QUESTIONS, Page 5  
  
Action 404813

QUESTIONS (continued)

Operator:  XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:  5380
	Action Number:  404813
	Action Type:  [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

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

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QUESTIONS, Page 6

Action 404813

**QUESTIONS (continued)**

Operator:  XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:  5380
	Action Number:  404813
	Action Type:  [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**QUESTIONS**

Sampling Event Information	
Last sampling notification (C-141N) recorded	400211
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	11/15/2024
What was the (estimated) number of samples that were to be gathered	40
What was the sampling surface area in square feet	5000

**Remediation Closure Request**

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

Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	4765
What was the total volume (cubic yards) remediated	350
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	4765
What was the total volume (in cubic yards) reclaimed	350
Summarize any additional remediation activities not included by answers (above)	"Delineation and excavation activities were conducted at the Site to address the August 21, 2024, release of crude oil. Laboratory analytical results for the confirmation soil samples, collected from the final excavation extent, indicated that all COCs were compliant with the Site Closure. Based on the soil sample analytical results, no further remediation was required. XTO will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions. Excavation of impacted soil has mitigated impacts at this Site. Depth to groundwater has been estimated to be greater than 100 feet bgs and no other sensitive receptors were identified near the release extent. XTO believes these remedial actions are protective of human health, the environment, and groundwater. As such, XTO respectfully requests closure for Incident Number nAPP2423455892. "

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

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

I hereby agree and sign off to the above statement	Name: Colton Brown Title: Environmental Advisor Email: colton.s.brown@exxonmobil.com Date: 11/19/2024
--	--



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QUESTIONS, Page 7  
  
Action 404813

QUESTIONS (continued)

Operator:  XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:  5380
	Action Number:  404813
	Action Type:  [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

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

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CONDITIONS

Action 404813

**CONDITIONS**

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:
	5380
	Action Number:
	404813
Action Type:	
[C-141] Remediation Closure Request C-141 (C-141-v-Closure)	

**CONDITIONS**

Created By	Condition	Condition Date
bhall	Remediation closure approved. The site must meet the reclamation and revegetation requirements of 19.15.29.13 NMAC when the site is no longer reasonably needed for subsequent drilling or production operations.	11/20/2024
bhall	A reclamation report will not be accepted until reclamation of the release area, including areas reasonably needed for production or drilling activities, is complete and meet the requirements of 19.15.29.13 NMAC. Areas not reasonably needed for production or drilling activities will still need to be reclaimed and revegetated as early as practicable.	11/20/2024
bhall	The reclamation report will need to include: Executive Summary of the reclamation activities; Scaled Site Map including sampling locations; Analytical results including, but not limited to, results showing that any remaining impacts meet the reclamation standards and results to prove the backfill is non-waste containing; At least one (1) representative 5-point composite sample will need to be collected from the backfill material that will be used for the reclamation of the top four feet of the excavation. The OCD reserves the right to request additional sampling if needed; pictures of the backfilled areas showing that the area is back, as nearly as practical, to the original condition or the final land use and maintain those areas to control dust and minimize erosion to the extent practical; pictures of the top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater; and a revegetation plan.	11/20/2024
bhall	A revegetation report will not be accepted until revegetation of the release area, including areas reasonably needed for production or drilling activities, is complete and meet the requirements of 19.15.29.13 NMAC. Areas not reasonably needed for production or drilling activities will still need to be reclaimed and revegetated as early as practicable.	11/20/2024
bhall	All revegetation activities will need to be documented and included in the revegetation report. The revegetation report will need to include: An executive summary of the revegetation activities including: Seed mix, Method of seeding, dates of when the release area was reseeded, information pertinent to inspections, information about any amendments added to the soil, information on how the vegetative cover established meets the life-form ratio of plus or minus fifty percent of pre-disturbance levels and a total percent plant cover of at least seventy percent of pre-disturbance levels, excluding noxious weeds per 19.15.29.13 D.(3) NMAC, and any additional information; a scaled Site Map including area that was revegetated in square feet; and pictures of the revegetated areas during reseeded activities, inspections, and final pictures when revegetation is achieved.	11/20/2024
bhall	Per 19.15.29.13 E. NMAC, if a reclamation and revegetation report has been submitted to the surface owner, it may be used if the requirements of the surface owner provide equal or better protection of freshwater, human health, and the environment. A copy of the approval of the reclamation and revegetation report from the surface owner and a copy of the approved reclamation and revegetation report will need to be submitted to the OCD via the Permitting website.	11/20/2024