



August 11, 2025

**New Mexico Oil Conservation Division**

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

**Re: Closure Request  
PLU 25 BD East Sat  
Incident Number nAPP2513529307  
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 delineation, excavation, and soil sampling activities at the PLU 25 BD East Sat (Site). The purpose of the excavation and sampling activities was to assess for the presence or absence of impacts to soil following a flow line failure resulting in the release of crude oil and produced water and vented natural gas. Based on field observations, field screening activities, and soil sample laboratory analytical results, XTO is submitting this *Closure Request*, describing delineation, excavation, and soil sampling activities that have occurred and requesting no further remediation for Incident Number nAPP2513529307.

## **SITE DESCRIPTION AND RELEASE SUMMARY**

The Site is located in Unit G, Section 25, Township 25 South, Range 30 East, in Eddy County, New Mexico (32.104768°, -103.830624°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On May 14, 2025, flow line corrosion resulted in the release of approximately 99 barrels (bbls) of produced water and 13 bbls of crude oil onto the surface of the pad. A vacuum truck was dispatched and approximately 100 bbls of fluids were recovered. Additionally, 112 thousand cubic yards (Mcf) of natural gas were vented. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) via Notification of Release (NOR), and an Initial C-141 Application (C-141) on May 15, 2025. The release was assigned Incident Number nAPP2513529307.

## **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.

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on nearby groundwater data from a soil boring drilled to investigate regional groundwater depth. On February 24, 2021, a soil boring permitted by New Mexico Office of the State Engineer (NMOSE) (C-4498) was completed approximately 0.64 miles southwest of the Site. Soil boring C-4498 was drilled to a depth of 109 feet bgs utilizing hollow stem auger drilling method. A field geologist logged and described soils continuously. No moisture or groundwater was encountered during drilling activities. The temporary well was left open for over 72 hours to allow for potential slow infill of groundwater. After the

XTO Energy, Inc  
Closure Request  
PLU 25 BD East Sat



72-hour waiting period without observing groundwater, it was confirmed that groundwater beneath the Site is greater than 109 feet bgs. The Well Record & Log is included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is an intermittent dry wash, located approximately 343 feet northeast of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Potential Site receptors are identified on Figure 1

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

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

## SITE ASSESSMENT AND DELINEATION ACTIVITIES

On May 14, 2025, Ensolum personnel visited the Site to evaluate the release extent based on information provided and visual observations. The release extent was mapped utilizing a handheld Global Positioning System (GPS) unit and is depicted on Figure 2. Photographic documentation was collected during the Site visit and a Photographic Log is included in Appendix B.

On May 21 and May 22, 2025, Ensolum personnel were at the Site to conduct delineation activities. Delineation soil samples SS01 through SS06 were collected from a depth of 0.5 feet bgs around the release extent. Delineation potholes PH01 through PH03 were advanced via heavy equipment to terminal depths ranging from 1-foot to 2 feet bgs within the release extent to assess the vertical extent of the release. Discrete soil samples were collected from the potholes at depths ranging from 0.5 feet to 2 feet bgs. Delineation soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride utilizing Hach® chloride QuanTab® test strips. Field screening results and observations for the potholes were logged on lithologic/soil sampling logs, which are included in Appendix C. The delineation soil sample locations were mapped utilizing a handheld GPS system and are depicted on Figure 2.

The delineation 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-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following Standard Method SM4500.

Laboratory analytical results for SS01 through SS06 indicated all COCs were in compliance with the Closure Criteria, successfully defining the lateral extent of the release. Laboratory analytical results for delineation soil samples PH01 through PH03, collected at 0.5 feet bgs, indicated chloride concentrations exceeded the Closure Criteria. Laboratory analytical results for the terminal depths collected from potholes PH01 through PH03 indicated all COCs were in compliance with the Closure Criteria.

XTO Energy, Inc  
Closure Request  
PLU 25 BD East Sat



## EXCAVATION AND CONFIRMATION SOIL SAMPLING ACTIVITIES

Between May 22 and July 25, 2025, Ensolum personnel were at the Site to oversee excavation activities and conduct confirmation soil sampling. Impacted soil was excavated from the release area as indicated by delineation soil sample field screenings and laboratory analytical results. Excavation activities were performed using heavy equipment and hydro-vacuum trucks. Following the removal of impacted soil, Ensolum personnel collected 5-point composite soil samples representing no more than 200 square feet from the sidewalls and floor of the excavation. 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. Confirmation soil samples FS01 through FS38 were collected from the floor of the excavation at depths ranging from 2 feet bgs to 3 feet bgs. Confirmation sidewall soil samples, SW01 through SW07, were collected from the sidewall of the excavation at depths ranging from ground surface to 3 feet bgs. The excavation extent and soil sample locations are depicted on Figure 3. Photographic documentation is included in Appendix B. The confirmation soil samples were collected, transported, and analyzed for the same COCs as described above and submitted to Cardinal.

The final excavation extent measured approximately 7,500 square feet. A total of approximately 700 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Halfway Disposal facility in Hobbs, New Mexico. Disposal manifests are available upon request. The final excavation extent will be backfilled with material purchased locally and recontoured to match pre-existing Site conditions.

## LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for all final confirmation soil samples indicated all COCs were in compliance with the Closure Criteria. Laboratory analytical results for excavation floor sample FS34 indicated chloride concentrations exceeded the Closure Criteria and was further excavated to 3.5 feet bgs. Laboratory analytical results for the subsequent soil sample, FS34A indicated all COCs were in compliance with the Closure Criteria. Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included in Appendix D.

## CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the May 2025 release of crude oil, produced water, and natural gas at the Site. Laboratory analytical results for all final confirmation soil samples indicated all COCs were compliant with the Closure Criteria. Based on laboratory analytical results, no further remediation was required. Excavation of the impacted soil has mitigated impacts at this Site. Depth to groundwater has been estimated to be greater than 100 feet bgs, though the data does not meet the NMOCD preferred requirements, and no 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 nAPP2513529307.

XTO Energy, Inc  
Closure Request  
PLU 25 BD East Sat



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

Sincerely,  
**Ensolum, LLC**

A handwritten signature in black ink that reads "Jesse Dorman".

Jesse Dorman  
Associate Geologist

A handwritten signature in black ink that reads "T Morrissey".

Tacoma Morrissey  
Associate Principal

cc: Kaylan Dirkx, XTO  
Colton Brown, XTO  
BLM

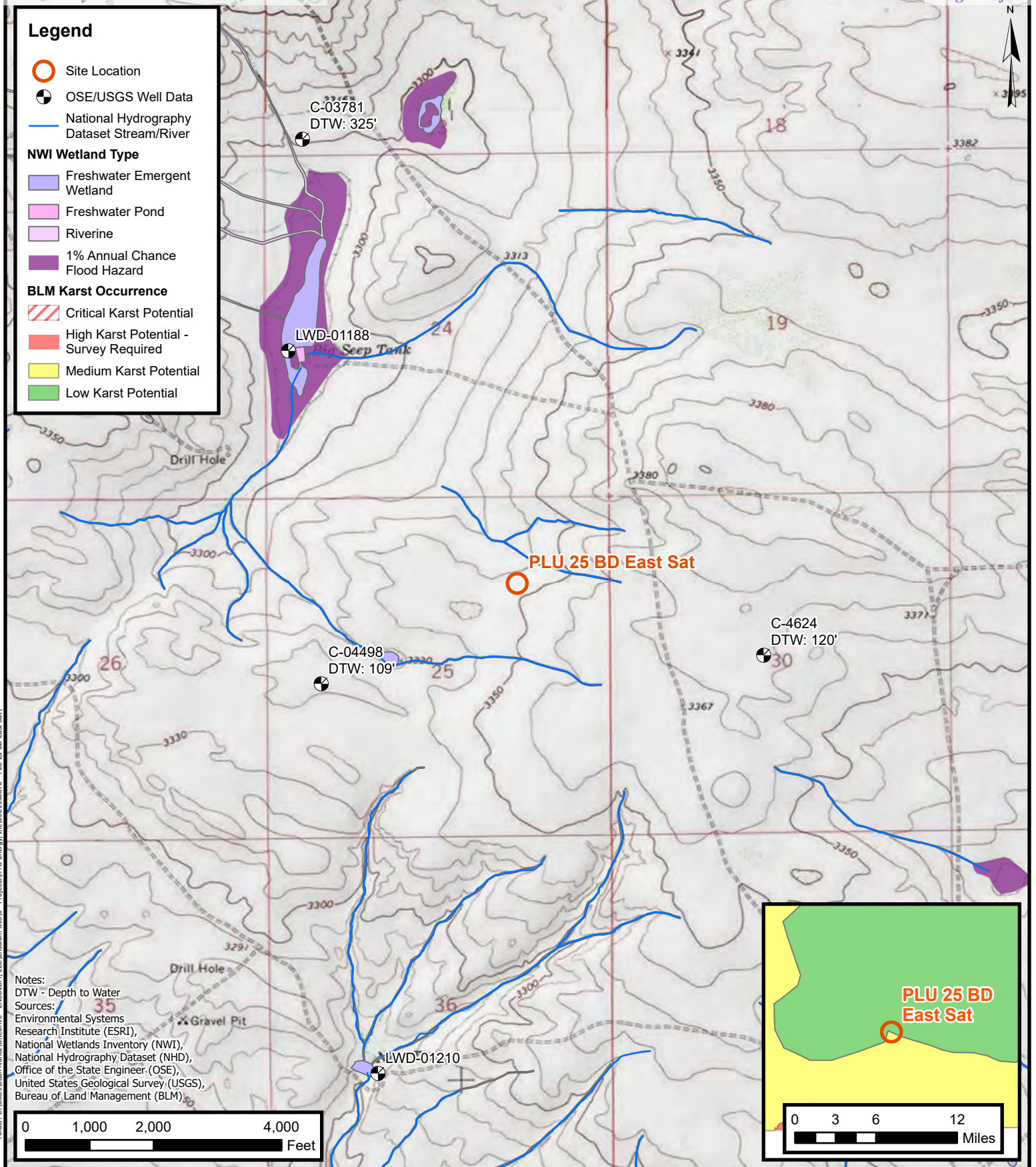
Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Figure 3	Confirmation 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

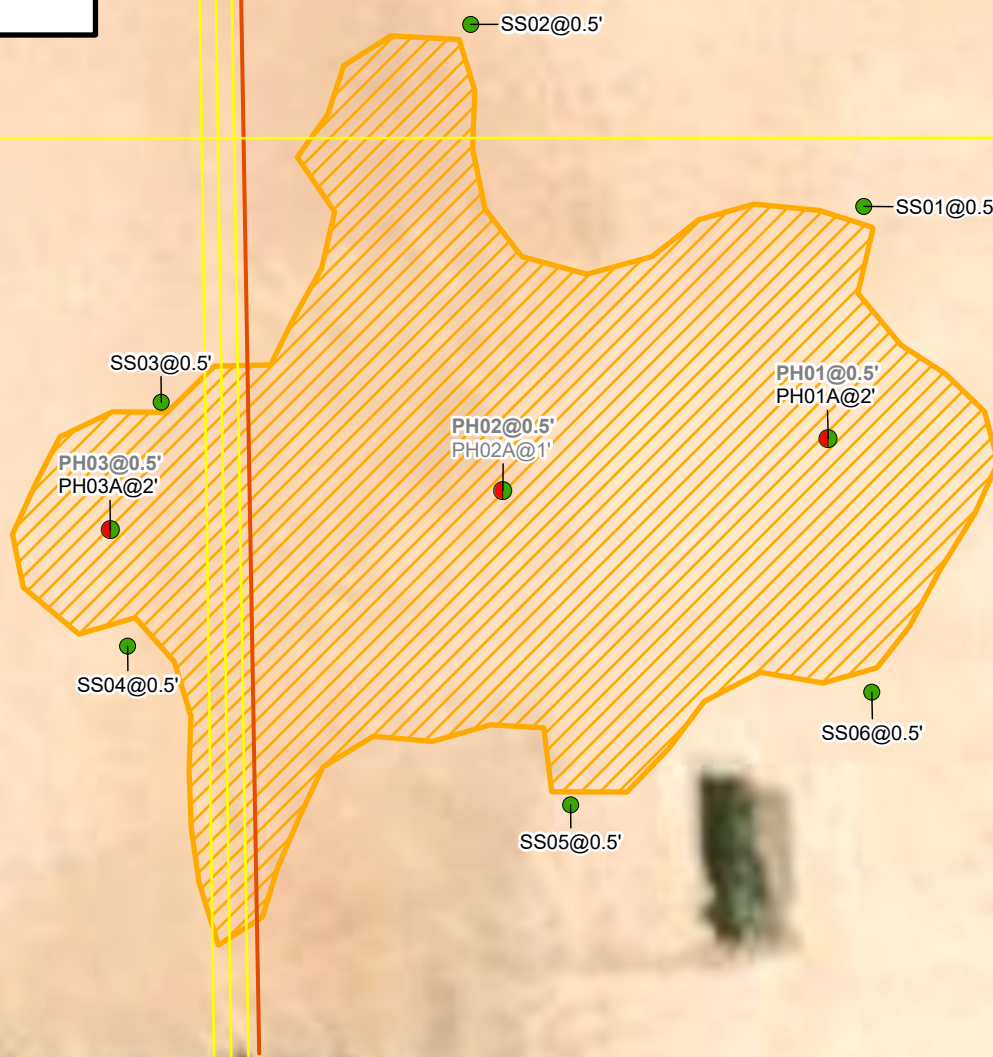
XTO Energy, Inc  
 PLU 25 BD East Sat  
 Incident Number: nAPP2513529307  
 Unit G, Section 25, T 25S, R 30E  
 Eddy County, New Mexico

FIGURE

1

**Legend**

- Delineation Soil Sample in Compliance with Closure Criteria
- Delineation Soil Sample with Concentrations Previously Exceeding Closure Criteria
- Electric Utility Line
- Oil and Gas Utility Line
- Release Extent

**Notes:**

Sample ID @ Depth Below Ground Surface.  
 Samples in bold indicate sample exceeded applicable Closure Criteria.  
 Grey text indicate soil sample was removed during excavation activities.

0 12.5 25 50  
 Feet

Sources: Environmental Systems Research Institute (ESRI)

**Delineation Soil Sample Locations**

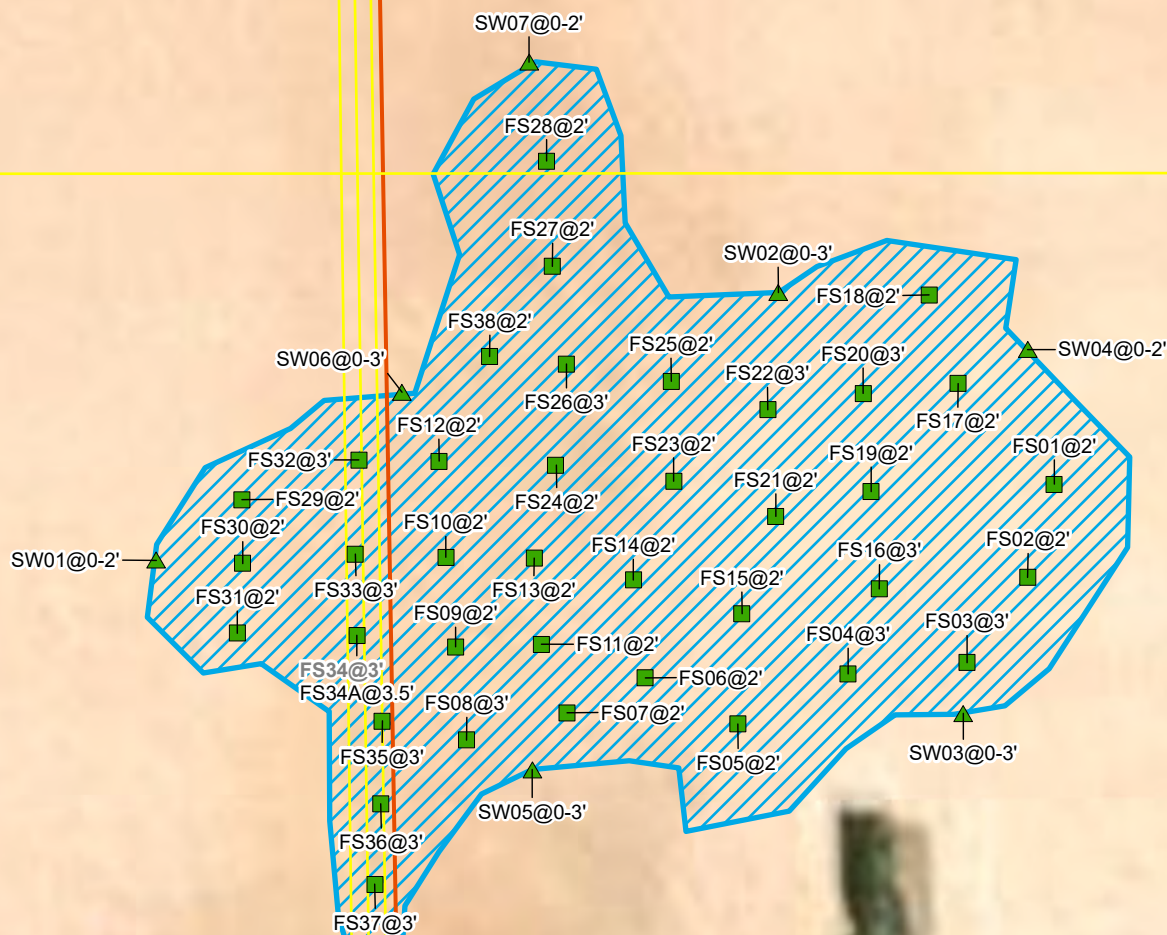
XTO Energy, Inc  
 PLU 25 BD East Sat  
 Incident Number: nAPP2513529307  
 Unit G, Section 25, T 25S, R 30E  
 Eddy County, New Mexico

**FIGURE****2**



**Legend**

- Excavation Floor Sample in Compliance with Closure Criteria
- ▲ Excavation Sidewall Sample in Compliance with Closure Criteria
- Electric Utility Line
- Oil and Gas Utility Line
- ▨ Excavation Extent



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

0 12.5 25 50  
 Feet

Sources: Environmental Systems Research Institute (ESRI)

## Confirmation Soil Sample Locations

XTO Energy, Inc  
 PLU 25 BD East Sat  
 Incident Number: nAPP2513529307  
 Unit G, Section 25, T 25S, R 30E  
 Eddy County, New Mexico

**FIGURE**

**3**







TABLES



**TABLE 1**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
**PLU 25 BD East Sat**  
**XTO Energy, Inc**  
**Eddy County, New Mexico**

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
Delineation Soil Samples										
SS01	05/22/2025	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
SS02	05/22/2025	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	288
SS03	05/22/2025	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
SS04	05/22/2025	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	256
SS05	05/22/2025	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
SS06	05/22/2025	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
PH01	05/21/2025	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	5,760
PH01A	05/21/2025	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112
PH02	05/21/2025	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,250
PH02A	05/21/2025	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	496
PH03	05/21/2025	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	5,080
PH03A	05/21/2025	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
Confirmation Soil Samples										
FS01	05/22/2025	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	128
FS02	05/22/2025	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
FS03	05/27/2025	3	<0.050	<0.300	<10.0	21.9	<10.0	21.9	21.9	320
FS04	05/27/2025	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	512
FS05	05/23/2025	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	352
FS06	05/23/2025	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
FS07	05/23/2025	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS08	05/27/2025	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
FS09	05/23/2025	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
FS10	05/27/2025	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	560
FS11	05/27/2025	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	240
FS12	05/29/2025	2	<0.050	<0.300	<10.0	13.1	<10.0	13.1	13.1	128
FS13	05/27/2025	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	272
FS14	05/28/2025	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112
FS15	05/27/2025	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	224
FS16	05/28/2025	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS17	05/28/2025	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112
FS18	05/28/2025	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
FS19	05/29/2025	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	272
FS20	05/29/2025	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0



**TABLE 1**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
**PLU 25 BD East Sat**  
**XTO Energy, Inc**  
**Eddy County, New Mexico**

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
FS21	05/29/2025	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
FS22	05/29/2025	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
FS23	05/29/2025	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112
FS24	05/29/2025	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	176
FS25	05/29/2025	2	<0.050	<0.300	<10.0	11.8	<10.0	11.8	11.8	144
FS26	06/16/2025	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS27	06/16/2025	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
FS28	06/16/2025	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112
FS29	06/16/2025	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
FS30	06/16/2025	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	272
FS31	06/16/2025	2	<0.050	<0.300	<10.0	67.5	<10.0	67.5	67.5	272
FS32	06/16/2025	3	<0.050	<0.300	<10.0	23.4	<10.0	23.4	23.4	480
FS33	06/16/2025	3	<0.050	<0.300	<10.0	83.0	<10.0	83.0	83.0	400
FS34	06/16/2025	3	<0.050	<0.300	<10.0	72.9	<10.0	72.9	72.9	720
FS34A	06/20/2025	3.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192
FS35	06/16/2025	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	208
FS36	06/16/2025	3	<0.050	<0.300	<10.0	30.8	<10.0	30.8	30.8	352
FS37	06/16/2025	3	<0.050	<0.300	<10.0	14.1	<10.0	14.1	14.1	160
FS38	06/16/2025	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SW01	05/23/2025	0-2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	288
SW02	06/16/2025	0-3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	208
SW03	06/16/2025	0-3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	128
SW04	07/25/2025	0-2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
SW05	07/25/2025	0-3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
SW06	07/25/2025	0-3	<0.050	<0.300	<10.0	68.3	14.0	68.3	82.3	160
SW07	07/25/2025	0-2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	208

## 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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# WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER


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

1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO.) POD1 (BH-01)		WELL TAG ID NO. n/a		OSE FILE NO(S). C-4498			
	WELL OWNER NAME(S) XTO Energy (Kyle Littrell)				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS 6401 Holiday Hill Dr.				CITY Midland	STATE TX	ZIP 79707	
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32°	MINUTES 6'	SECONDS 1.96" N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND			
		LONGITUDE -103°	50'	26.19" W	* DATUM REQUIRED: WGS 84			
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE NW SW NE Sec. 25 T25S R30E								
2. DRILLING & CASING INFORMATION	LICENSE NO. 1249		NAME OF LICENSED DRILLER Jackie D. Atkins			NAME OF WELL DRILLING COMPANY Atkins Engineering Associates, Inc.		
	DRILLING STARTED 02/24/2021	DRILLING ENDED 02/24/2021	DEPTH OF COMPLETED WELL (FT) temporary well material		BORE HOLE DEPTH (FT) 109	DEPTH WATER FIRST ENCOUNTERED (FT) n/a		
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input checked="" type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT) n/a		
	DRILLING FLUID: <input type="checkbox"/> AIR <input type="checkbox"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input checked="" type="checkbox"/> OTHER - SPECIFY: Hollow Stem Auger							
	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	FROM	TO						
	0	109	±6.5	Boring- HSA	--	--	--	--
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	FROM	TO						

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/30/17)

FILE NO. C- 4498	POD NO. 1	TRN NO. 682528
LOCATION 132 T25S R30E Sec 25	WELL TAG ID NO. NA	PAGE 1 OF 2

	DEPTH (feet bgl)		THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER- BEARING ZONES (gpm)	
	FROM	TO					
4. HYDROGEOLOGIC LOG OF WELL	0	34	34	Caliche, tan, no odor, no stain, gravel, dry	Y    ✓ N		
	34	40	6	sand/ caliche, tan, no odor, no stain, m-f grain, well sorted, dry	Y    ✓ N		
	40	56	16	sand, tan, no odor, no stain, m-f grain, well sorted, dry	Y    ✓ N		
	56	72	16	sandstone, low consolidation, tan, no odor, no stain, m-f grain, well sorted, dry	Y    ✓ N		
	72	79	7	sand, tan, no odor, no stain, m-f grain, well sorted, dry	Y    ✓ N		
	79	109	30	sandstone, low - medium consolidation, tan, no odor, m-f grained, well sorted, m	Y    ✓ N		
					Y    N		
					Y    N		
					Y    N		
					Y    N		
					Y    N		
					Y    N		
					Y    N		
					Y    N		
					Y    N		
					Y    N		
					Y    N		
					Y    N		
	METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: <input type="checkbox"/> PUMP <input type="checkbox"/> AIR LIFT <input type="checkbox"/> BAILER <input type="checkbox"/> OTHER - SPECIFY:					TOTAL ESTIMATED WELL YIELD (gpm):                      0.00	
	5. TEST; RIG SUPERVISION	WELL TEST	TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.				
MISCELLANEOUS INFORMATION: Temporary well materials removed and the soil boring backfilled using drill cuttings from total depth to ten feet below ground surface, then hydrated bentonite chips from ten feet below ground surface to surface. Logs adapted from WSP on-site geologist. <div style="text-align: right;">USE DIT MAR 11 2021 PM 4:26</div>							
PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE: Shane Eldridge							
6. SIGNATURE	THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:						
	 SIGNATURE OF DRILLER / PRINT SIGNEE NAME			Jackie D. Atkins DATE			

FOR OSE INTERNAL USE

WR-20 WELL RECORD &amp; LOG (Version 06/30/2017)

FILE NO. C-4498	POD NO. 1	TRN NO. 682528
LOCATION 132 T255 R30E Sec 25	WELL TAG ID NO. NA	PAGE 2 OF 2

John R. D Antonio, Jr., P.E.  
State Engineer



Roswell Office  
1900 WEST SECOND STREET  
ROSWELL, NM 88201

**STATE OF NEW MEXICO  
OFFICE OF THE STATE ENGINEER**

Trn Nbr: 682528  
File Nbr: C 04498  
Well File Nbr: C 04498 POD1

Mar. 11, 2021

TACOMA MORRISEY  
WSP USA  
3300 NORTH A STREET  
BLDG 1 #222  
MIDLAND, TX 79705

Greetings:

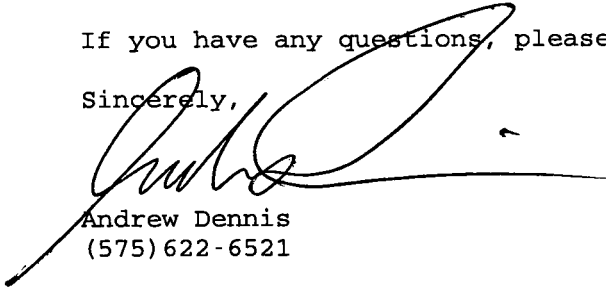
The above numbered permit was issued in your name on 12/01/2020.

The Well Record was received in this office on 03/11/2021, stating that it had been completed on 02/24/2021, and was a dry well. The well is to be plugged according to 19.27.4.30 NMAC.

Please note that another well can be drilled under this permit if the well is completed and the well log filed on or before 12/01/2021.

If you have any questions, please feel free to contact us.

Sincerely,

  
Andrew Dennis  
(575) 622-6521

drywell



## APPENDIX B

### Photographic Log

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**Photographic Log**  
 XTO Energy, Inc  
 PLU 25 BD East Sat  
 nAPP2513529307



Photograph: 1 Date: 5/14/2025  
 Description: Initial release pooling and staining  
 View: Southeast



Photograph: 2 Date: 5/21/2025  
 Description: Delineation activities; near SS02  
 View: East



Photograph: 3 Date: 5/22/2025  
 Description: Excavation activities; near SW04  
 View: Southwest



Photograph: 4 Date: 5/30/2025  
 Description: Excavation activities; near FS28  
 View: Southeast





**Photographic Log**  
XTO Energy, Inc  
PLU 25 BD East Sat  
nAPP2513529307

19°N (T) • 32.104653, -103.830709 ±3m ▲ 999m



Photograph: 5                      Date: 6/16/2025  
Description: Excavation activities; near SW07  
View: North



Photograph: 6                      Date: 6/20/2025  
Description: Excavation activities; near FS34A  
View: Southwest

176°S (T) • 32.10485, -103.830767 ±3m ▲ 1002m



Photograph: 7                      Date: 7/25/2025  
Description: Final excavation extent; near FS32  
View: South

128°SE (T) • 32.104892, -103.830754 ±3m ▲ 1002m




Photograph: 8                      Date: 7/25/2025  
Description: Final excavation extent; near FS26  
View: Southeast




## APPENDIX C


### Lithologic Soil Sampling Logs

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 <b>ENSOLUM</b>		Sample Name: PH01		Date: 5/21/25				
		Site Name: PLU 25 BD East Sat						
		Incident Number: nAPP2513529307						
		Job Number: 03C1558676						
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								
Coordinates: 32.104796, -103.830512			Logged By: Trevor Wargo		Method: Backhoe			
			Hole Diameter: 24"		Total Depth: 2ft			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factors included.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
D	6,787	0.7	Y	PH01	0.5	0	CCHE	(0-2'), Caliche, tan, sandy, silt to gravel sized, non-cohesive
D	6,787	0.3	N			1		
D	240.8	0.7	N	PH01A	2	2		
Total Depth @ 2ft bgs								



 <b>ENSOLUM</b>		Sample Name: PH02		Date: 5/21/25				
		Site Name: PLU 25 BD East Sat						
		Incident Number: nAPP2513529307						
		Job Number: 03C1558676						
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								
Coordinates: 32.104779, -103.830649			Logged By: Trevor Wargo		Method: Backhoe			
			Hole Diameter: 24"		Total Depth: 1ft			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factors included.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
D	1,058	1.0	Y	PH02	0.5	0	CCHE	(0-1'), Caliche, tan, sandy, silt to gravel sized, non-cohesive
D	397	0.2	N	PH02A	1	1		
Total Depth @ 1ft bgs								

 <b>ENSOLUM</b>		Sample Name: PH03		Date: 5/21/25				
		Site Name: PLU 25 BD East Sat						
		Incident Number: nAPP2513529307						
		Job Number: 03C1558676						
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								
Coordinates: 32.104766, -103.830814			Logged By: Trevor Wargo		Method: Backhoe			
			Hole Diameter: 24"		Total Depth: 2ft			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factors included.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
D	4,468	0.5	N	PH03	0.5	0		(0-2'), Caliche, tan, sandy, silt to gravel sized, non-cohesive
D	969	0.5	N			1		
D	241	0.2	N	PH03A	2	2		
Total Depth @ 2ft bgs								



## APPENDIX D

### Laboratory Analytical Reports & Chain of Custody Documentation

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

---

May 23, 2025

TRACY HILLARD  
ENSOLUM, LLC  
705 W WADLEY AVE.  
MIDLAND, TX 79705

RE: PLU 25 BD EAST SATELLITE - SPILLS

Enclosed are the results of analyses for samples received by the laboratory on 05/22/25 14:00.

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 "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene  
Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 05/22/2025  
 Reported: 05/23/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 05/22/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: SS 01 0.5 (H253084-01)**

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	05/22/2025	ND	2.14	107	2.00	2.46	
Toluene*	<0.050	0.050	05/22/2025	ND	2.24	112	2.00	2.58	
Ethylbenzene*	<0.050	0.050	05/22/2025	ND	2.04	102	2.00	2.12	
Total Xylenes*	<0.150	0.150	05/22/2025	ND	6.05	101	6.00	1.45	
Total BTEX	<0.300	0.300	05/22/2025	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	64.0	16.0	05/23/2025	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/22/2025	ND	222	111	200	3.69	
DRO >C10-C28*	<10.0	10.0	05/22/2025	ND	218	109	200	5.07	
EXT DRO >C28-C36	<10.0	10.0	05/22/2025	ND					

Surrogate: 1-Chlorooctane 82.8 % 44.4-145

Surrogate: 1-Chlorooctadecane 80.0 % 40.6-153

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 05/22/2025  
 Reported: 05/23/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 05/22/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: SS 02 0.5 (H253084-02)**

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	05/22/2025	ND	2.14	107	2.00	2.46		
Toluene*	<0.050	0.050	05/22/2025	ND	2.24	112	2.00	2.58		
Ethylbenzene*	<0.050	0.050	05/22/2025	ND	2.04	102	2.00	2.12		
Total Xylenes*	<0.150	0.150	05/22/2025	ND	6.05	101	6.00	1.45		
Total BTEx	<0.300	0.300	05/22/2025	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	288	16.0	05/23/2025	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/22/2025	ND	222	111	200	3.69	
DRO >C10-C28*	<10.0	10.0	05/22/2025	ND	218	109	200	5.07	
EXT DRO >C28-C36	<10.0	10.0	05/22/2025	ND					

Surrogate: 1-Chlorooctane 86.2 % 44.4-145

Surrogate: 1-Chlorooctadecane 81.7 % 40.6-153

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 05/22/2025  
 Reported: 05/23/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 05/22/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: SS 03 0.5 (H253084-03)**

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/22/2025	ND	2.14	107	2.00	2.46		
Toluene*	<0.050	0.050	05/22/2025	ND	2.24	112	2.00	2.58		
Ethylbenzene*	<0.050	0.050	05/22/2025	ND	2.04	102	2.00	2.12		
Total Xylenes*	<0.150	0.150	05/22/2025	ND	6.05	101	6.00	1.45		
Total BTX	<0.300	0.300	05/22/2025	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	05/23/2025	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/22/2025	ND	222	111	200	3.69	
DRO >C10-C28*	<10.0	10.0	05/22/2025	ND	218	109	200	5.07	
EXT DRO >C28-C36	<10.0	10.0	05/22/2025	ND					

Surrogate: 1-Chlorooctane 82.9 % 44.4-145

Surrogate: 1-Chlorooctadecane 79.1 % 40.6-153

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 05/22/2025  
 Reported: 05/23/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 05/22/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: SS 04 0.5 (H253084-04)**

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	05/22/2025	ND	2.14	107	2.00	2.46		
Toluene*	<0.050	0.050	05/22/2025	ND	2.24	112	2.00	2.58		
Ethylbenzene*	<0.050	0.050	05/22/2025	ND	2.04	102	2.00	2.12		
Total Xylenes*	<0.150	0.150	05/22/2025	ND	6.05	101	6.00	1.45		
Total BTEX	<0.300	0.300	05/22/2025	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	256	16.0	05/23/2025	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/22/2025	ND	222	111	200	3.69	
DRO >C10-C28*	<10.0	10.0	05/22/2025	ND	218	109	200	5.07	
EXT DRO >C28-C36	<10.0	10.0	05/22/2025	ND					

Surrogate: 1-Chlorooctane 90.3 % 44.4-145

Surrogate: 1-Chlorooctadecane 87.2 % 40.6-153

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 05/22/2025  
 Reported: 05/23/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 05/22/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: SS 05 0.5 (H253084-05)**

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	05/22/2025	ND	2.14	107	2.00	2.46		
Toluene*	<0.050	0.050	05/22/2025	ND	2.24	112	2.00	2.58		
Ethylbenzene*	<0.050	0.050	05/22/2025	ND	2.04	102	2.00	2.12		
Total Xylenes*	<0.150	0.150	05/22/2025	ND	6.05	101	6.00	1.45		
Total BTEx	<0.300	0.300	05/22/2025	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	05/23/2025	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/22/2025	ND	222	111	200	3.69	
DRO >C10-C28*	<10.0	10.0	05/22/2025	ND	218	109	200	5.07	
EXT DRO >C28-C36	<10.0	10.0	05/22/2025	ND					

Surrogate: 1-Chlorooctane 85.3 % 44.4-145

Surrogate: 1-Chlorooctadecane 82.4 % 40.6-153

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 05/22/2025  
 Reported: 05/23/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 05/22/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: SS 06 0.5 (H253084-06)**

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	05/22/2025	ND	2.14	107	2.00	2.46		
Toluene*	<0.050	0.050	05/22/2025	ND	2.24	112	2.00	2.58		
Ethylbenzene*	<0.050	0.050	05/22/2025	ND	2.04	102	2.00	2.12		
Total Xylenes*	<0.150	0.150	05/22/2025	ND	6.05	101	6.00	1.45		
Total BTEX	<0.300	0.300	05/22/2025	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	64.0	16.0	05/23/2025	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/22/2025	ND	222	111	200	3.69	
DRO >C10-C28*	<10.0	10.0	05/22/2025	ND	218	109	200	5.07	
EXT DRO >C28-C36	<10.0	10.0	05/22/2025	ND					

Surrogate: 1-Chlorooctane 83.7 % 44.4-145

Surrogate: 1-Chlorooctadecane 80.8 % 40.6-153

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





---

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---

### Notes and Definitions

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

---

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A handwritten signature in black ink, appearing to read "Celey D. Keene", is written over a horizontal line.

---

Celey D. Keene, Lab Director/Quality Manager



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

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



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

---

May 23, 2025

TRACY HILLARD  
ENSOLUM, LLC  
705 W WADLEY AVE.  
MIDLAND, TX 79705

RE: PLU 25 BD EAST SATELLITE - SPILLS

Enclosed are the results of analyses for samples received by the laboratory on 05/22/25 14:00.

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 "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene  
Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	05/22/2025	Sampling Date:	05/21/2025
Reported:	05/23/2025	Sampling Type:	Soil
Project Name:	PLU 25 BD EAST SATELLITE - SPILLS	Sampling Condition:	Cool & Intact
Project Number:	03C1558676	Sample Received By:	Shalyn Rodriguez
Project Location:	32.10433, -103.83038		

**Sample ID: PH 01 0.5 (H253085-01)**

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	05/22/2025	ND	2.05	103	2.00	2.67		
Toluene*	<0.050	0.050	05/22/2025	ND	2.17	109	2.00	3.14		
Ethylbenzene*	<0.050	0.050	05/22/2025	ND	2.15	108	2.00	3.30		
Total Xylenes*	<0.150	0.150	05/22/2025	ND	6.62	110	6.00	2.97		
Total BTEX	<0.300	0.300	05/22/2025	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5760	16.0	05/23/2025	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	05/22/2025	ND	222	111	200	3.69	
DRO >C10-C28*	<10.0	10.0	05/22/2025	ND	218	109	200	5.07	
EXT DRO >C28-C36	<10.0	10.0	05/22/2025	ND					

Surrogate: 1-Chlorooctane 93.4 % 44.4-145

Surrogate: 1-Chlorooctadecane 92.3 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 05/22/2025  
 Reported: 05/23/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: 32.10433, -103.83038

Sampling Date: 05/21/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: PH 01 A 2 (H253085-02)**

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/22/2025	ND	2.05	103	2.00	2.67		
Toluene*	<0.050	0.050	05/22/2025	ND	2.17	109	2.00	3.14		
Ethylbenzene*	<0.050	0.050	05/22/2025	ND	2.15	108	2.00	3.30		
Total Xylenes*	<0.150	0.150	05/22/2025	ND	6.62	110	6.00	2.97		
Total BTX	<0.300	0.300	05/22/2025	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	05/23/2025	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	05/22/2025	ND	222	111	200	3.69	
DRO >C10-C28*	<10.0	10.0	05/22/2025	ND	218	109	200	5.07	
EXT DRO >C28-C36	<10.0	10.0	05/22/2025	ND					

Surrogate: 1-Chlorooctane 90.5 % 44.4-145

Surrogate: 1-Chlorooctadecane 88.9 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 05/22/2025  
 Reported: 05/23/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: 32.10433, -103.83038

Sampling Date: 05/21/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: PH 02 0.5 (H253085-03)**

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	05/22/2025	ND	2.05	103	2.00	2.67	
Toluene*	<0.050	0.050	05/22/2025	ND	2.17	109	2.00	3.14	
Ethylbenzene*	<0.050	0.050	05/22/2025	ND	2.15	108	2.00	3.30	
Total Xylenes*	<0.150	0.150	05/22/2025	ND	6.62	110	6.00	2.97	
Total BTEX	<0.300	0.300	05/22/2025	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	1250	16.0	05/23/2025	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	05/22/2025	ND	222	111	200	3.69	
DRO >C10-C28*	<10.0	10.0	05/22/2025	ND	218	109	200	5.07	
EXT DRO >C28-C36	<10.0	10.0	05/22/2025	ND					

Surrogate: 1-Chlorooctane 92.7 % 44.4-145

Surrogate: 1-Chlorooctadecane 91.1 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 05/22/2025  
 Reported: 05/23/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: 32.10433, -103.83038

Sampling Date: 05/21/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: PH 02 A 1 (H253085-04)**

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/22/2025	ND	2.05	103	2.00	2.67		
Toluene*	<0.050	0.050	05/22/2025	ND	2.17	109	2.00	3.14		
Ethylbenzene*	<0.050	0.050	05/22/2025	ND	2.15	108	2.00	3.30		
Total Xylenes*	<0.150	0.150	05/22/2025	ND	6.62	110	6.00	2.97		
Total BTX	<0.300	0.300	05/22/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	496	16.0	05/23/2025	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	05/22/2025	ND	218	109	200	0.126	
DRO >C10-C28*	<10.0	10.0	05/22/2025	ND	206	103	200	0.988	
EXT DRO >C28-C36	<10.0	10.0	05/22/2025	ND					

Surrogate: 1-Chlorooctane 88.9 % 44.4-145

Surrogate: 1-Chlorooctadecane 87.7 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 05/22/2025  
 Reported: 05/23/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: 32.10433, -103.83038

Sampling Date: 05/21/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: PH 03 0.5 (H253085-05)**

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	05/22/2025	ND	2.05	103	2.00	2.67	
Toluene*	<0.050	0.050	05/22/2025	ND	2.17	109	2.00	3.14	
Ethylbenzene*	<0.050	0.050	05/22/2025	ND	2.15	108	2.00	3.30	
Total Xylenes*	<0.150	0.150	05/22/2025	ND	6.62	110	6.00	2.97	
Total BTEX	<0.300	0.300	05/22/2025	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	5080	16.0	05/23/2025	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	05/22/2025	ND	218	109	200	0.126	
DRO >C10-C28*	<10.0	10.0	05/22/2025	ND	206	103	200	0.988	
EXT DRO >C28-C36	<10.0	10.0	05/22/2025	ND					

Surrogate: 1-Chlorooctane 83.9 % 44.4-145

Surrogate: 1-Chlorooctadecane 81.6 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 05/22/2025  
 Reported: 05/23/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: 32.10433, -103.83038

Sampling Date: 05/21/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: PH 03 A 2 (H253085-06)**

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/22/2025	ND	2.05	103	2.00	2.67		
Toluene*	<0.050	0.050	05/22/2025	ND	2.17	109	2.00	3.14		
Ethylbenzene*	<0.050	0.050	05/22/2025	ND	2.15	108	2.00	3.30		
Total Xylenes*	<0.150	0.150	05/22/2025	ND	6.62	110	6.00	2.97		
Total BTX	<0.300	0.300	05/22/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	05/23/2025	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	05/22/2025	ND	218	109	200	0.126	
DRO >C10-C28*	<10.0	10.0	05/22/2025	ND	206	103	200	0.988	
EXT DRO >C28-C36	<10.0	10.0	05/22/2025	ND					

Surrogate: 1-Chlorooctane 86.8 % 44.4-145

Surrogate: 1-Chlorooctadecane 83.0 % 40.6-153

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



---

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---

### Notes and Definitions

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

---

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\*=Accredited Analyte

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

---

Celey D. Keene, Lab Director/Quality Manager





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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC

BILL TO

ANALYSIS REQUEST

Project Manager: Tracy Hillard

P.O. #: Company: XTO Energy, Inc

Address: 601 N Marientfeld Street, Suite 400

Attn: Colton Brown

City: Midland State: TX Zip: 79701

Address: 3104 E Greene St

Phone #: (575) 937-3906 Fax #:

City: Carlsbad State: NM Zip: 88220

Project #: 0321558676 Project Owner: XTO Energy

Project Name: PL02580 East Satellite - SPILLS

Project Location: 32.10433-103.83038

Phone #:

Sample Name: Trevor Wargo

Fax #:

FOR LAB USE ONLY

Lab I.D. Sample I.D.

Depth (feet)

(G)RAB OR (C)OMP.

# CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE

TIME

TPH 8015

BTEX 8021

Chloride 4500

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Relinquished By:

Date: 8-23-25

Received By:

Verbal Result: ☐ Yes ☐ No Add'l Phone #:

Relinquished By: George Wargo

Date: 8-23-25

Received By: Stoddard

REMARKS: Incident Number: 119851002

Delivered By: (Circle One)

Observed Temp.: °C

Sample Condition

Checked By: (Initials)

Turnaround Time

Standard

Rush

Bacteria (only)

Cool Intact

Observed Temp.: °C

Sampler - UPS - Bus - Other:

Corrected Temp.: °C

Yes ☐ No ☐

Yes ☐ No ☐

Yes ☐ No ☐

Thermometer ID

Correction Factor

Yes ☐ No ☐

Yes ☐ No ☐

Corrected Temp.: °C

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





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

May 28, 2025

TRACY HILLARD

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: PLU 25 BD EAST SATELLITE - SPILLS

Enclosed are the results of analyses for samples received by the laboratory on 05/27/25 13:52.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C25-00101. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 05/27/2025  
 Reported: 05/28/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 05/22/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS 01 2' (H253146-01)**

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	05/27/2025	ND	2.05	103	2.00	8.93	
Toluene*	<0.050	0.050	05/27/2025	ND	2.10	105	2.00	7.52	
Ethylbenzene*	<0.050	0.050	05/27/2025	ND	2.05	102	2.00	7.29	
Total Xylenes*	<0.150	0.150	05/27/2025	ND	6.04	101	6.00	7.31	
Total BTX	<0.300	0.300	05/27/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.1 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	05/28/2025	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	05/27/2025	ND	236	118	200	0.513	
DRO >C10-C28*	<10.0	10.0	05/27/2025	ND	233	116	200	0.503	
EXT DRO >C28-C36	<10.0	10.0	05/27/2025	ND					

Surrogate: 1-Chlorooctane 77.7 % 44.4-145

Surrogate: 1-Chlorooctadecane 76.6 % 40.6-153

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 05/27/2025  
 Reported: 05/28/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 05/22/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS 02 2' (H253146-02)**

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/27/2025	ND	2.05	103	2.00	8.93		
Toluene*	<0.050	0.050	05/27/2025	ND	2.10	105	2.00	7.52		
Ethylbenzene*	<0.050	0.050	05/27/2025	ND	2.05	102	2.00	7.29		
Total Xylenes*	<0.150	0.150	05/27/2025	ND	6.04	101	6.00	7.31		
Total BTX	<0.300	0.300	05/27/2025	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: KH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	05/28/2025	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	05/27/2025	ND	236	118	200	0.513	
DRO >C10-C28*	<10.0	10.0	05/27/2025	ND	233	116	200	0.503	
EXT DRO >C28-C36	<10.0	10.0	05/27/2025	ND					

Surrogate: 1-Chlorooctane 86.8 % 44.4-145

Surrogate: 1-Chlorooctadecane 85.6 % 40.6-153

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 05/27/2025  
 Reported: 05/28/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 05/23/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS 05 2' (H253146-03)**

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	05/27/2025	ND	2.05	103	2.00	8.93		
Toluene*	<0.050	0.050	05/27/2025	ND	2.10	105	2.00	7.52		
Ethylbenzene*	<0.050	0.050	05/27/2025	ND	2.05	102	2.00	7.29		
Total Xylenes*	<0.150	0.150	05/27/2025	ND	6.04	101	6.00	7.31		
Total BTEX	<0.300	0.300	05/27/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.7 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	352	16.0	05/28/2025	ND	480	120	400	18.2		

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	05/27/2025	ND	236	118	200	0.513	
DRO >C10-C28*	<10.0	10.0	05/27/2025	ND	233	116	200	0.503	
EXT DRO >C28-C36	<10.0	10.0	05/27/2025	ND					

Surrogate: 1-Chlorooctane 91.2 % 44.4-145

Surrogate: 1-Chlorooctadecane 89.8 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 05/27/2025  
 Reported: 05/28/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 05/23/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS 06 2' (H253146-04)**

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	05/27/2025	ND	2.05	103	2.00	8.93		
Toluene*	<0.050	0.050	05/27/2025	ND	2.10	105	2.00	7.52		
Ethylbenzene*	<0.050	0.050	05/27/2025	ND	2.05	102	2.00	7.29		
Total Xylenes*	<0.150	0.150	05/27/2025	ND	6.04	101	6.00	7.31		
Total BTEX	<0.300	0.300	05/27/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.0 % 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	48.0	16.0	05/28/2025	ND	480	120	400	18.2		

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	05/27/2025	ND	236	118	200	0.513	
DRO >C10-C28*	<10.0	10.0	05/27/2025	ND	233	116	200	0.503	
EXT DRO >C28-C36	<10.0	10.0	05/27/2025	ND					

Surrogate: 1-Chlorooctane 91.6 % 44.4-145

Surrogate: 1-Chlorooctadecane 90.8 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 05/27/2025  
 Reported: 05/28/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 05/23/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW 01 0.5-2' (H253146-05)**

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/27/2025	ND	2.05	103	2.00	8.93		
Toluene*	<0.050	0.050	05/27/2025	ND	2.10	105	2.00	7.52		
Ethylbenzene*	<0.050	0.050	05/27/2025	ND	2.05	102	2.00	7.29		
Total Xylenes*	<0.150	0.150	05/27/2025	ND	6.04	101	6.00	7.31		
Total BTX	<0.300	0.300	05/27/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.9 % 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	288	16.0	05/28/2025	ND	480	120	400	18.2		

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	05/27/2025	ND	236	118	200	0.513	
DRO >C10-C28*	<10.0	10.0	05/27/2025	ND	233	116	200	0.503	
EXT DRO >C28-C36	<10.0	10.0	05/27/2025	ND					

Surrogate: 1-Chlorooctane 91.3 % 44.4-145

Surrogate: 1-Chlorooctadecane 89.4 % 40.6-153

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 05/27/2025  
 Reported: 05/28/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 05/23/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS 07 2' (H253146-06)**

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	05/27/2025	ND	2.05	103	2.00	8.93	
Toluene*	<0.050	0.050	05/27/2025	ND	2.10	105	2.00	7.52	
Ethylbenzene*	<0.050	0.050	05/27/2025	ND	2.05	102	2.00	7.29	
Total Xylenes*	<0.150	0.150	05/27/2025	ND	6.04	101	6.00	7.31	
Total BTEX	<0.300	0.300	05/27/2025	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	32.0	16.0	05/28/2025	ND	480	120	400	18.2	

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	05/27/2025	ND	236	118	200	0.513	
DRO >C10-C28*	<10.0	10.0	05/27/2025	ND	233	116	200	0.503	
EXT DRO >C28-C36	<10.0	10.0	05/27/2025	ND					

Surrogate: 1-Chlorooctane 97.7 % 44.4-145

Surrogate: 1-Chlorooctadecane 96.4 % 40.6-153

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 05/27/2025  
 Reported: 05/28/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 05/23/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS 09 2' (H253146-07)**

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	05/27/2025	ND	2.05	103	2.00	8.93	
Toluene*	<0.050	0.050	05/27/2025	ND	2.10	105	2.00	7.52	
Ethylbenzene*	<0.050	0.050	05/27/2025	ND	2.05	102	2.00	7.29	
Total Xylenes*	<0.150	0.150	05/27/2025	ND	6.04	101	6.00	7.31	
Total BTEX	<0.300	0.300	05/27/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.3 % 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	05/28/2025	ND	480	120	400	18.2		

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	05/27/2025	ND	236	118	200	0.513	
DRO >C10-C28*	<10.0	10.0	05/27/2025	ND	233	116	200	0.503	
EXT DRO >C28-C36	<10.0	10.0	05/27/2025	ND					

Surrogate: 1-Chlorooctane 92.2 % 44.4-145

Surrogate: 1-Chlorooctadecane 92.1 % 40.6-153

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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---

### Notes and Definitions

A-01	ending cvv failed high biased all samples below mdl
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

Cardinal Laboratories

\*=Accredited Analyte

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

---

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC		<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>									
Project Manager: Tracy Hillard		P.O. #:											
Address: 601 N Marlenfeld Street, Suite 400		Company: XTO Energy, Inc											
City: Midland		Attn: Colton Brown											
State: TX Zip: 79701		Address: 3104 E Greene St											
Phone #: (575) 937-3906 Fax #:		City: Carlsbad											
Project #: 03C1558676 Project Owner: XTO Energy		State: NM Zip: 88220											
Project Name: PLU 25 BD East Satellite - SPILLS		Phone #:											
Project Location: 32.10433 - 103.83038		Fax #:											
Sampler Name: Trevor Harbo													
FOR LAB USE ONLY													
Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX			PRESERV.	SAMPLING				
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :
#BS3146	FS 01	2	C I	1									
1	FS 02	2	C I	1									
2	FS 05	2	C I	1									
3	FS 06	2	C I	1									
4	SU 01	0.5-2											
5	FS 07	2											
6	FS 07	2											
7	FS 07	2											
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Relinquished By: Trevor Harbo		Date: 8-27-25		Received By: [Signature]		Time: 1:35 PM		Date: 8-27-25		Time: 1:35 PM		REMARKS: Incident Number: 11A092513529307 Cost Center: 219851001 GFCM: 48605000	
Relinquished By:		Date:		Received By:		Time:		Date:		Time:			
Delivered By: (Circle One)		Observed Temp. °C: 0.8		Sample Condition: Cool Intact		CHECKED BY: (Initials)		Turnaround Time: 14 hrs		Standard: RUSH		Bacteria (only) Sample Condition: Cool Intact	
Sampler - UPS - Bus - Other:		Corrected Temp. °C: 1.1		Cool Intact		YES		Thermometer ID #13		Corrected Temp. °C: 1.1		Corrected Temp. °C:	

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



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

May 30, 2025

TRACY HILLARD

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: PLU 25 BD EAST SATELLITE - SPILLS

Enclosed are the results of analyses for samples received by the laboratory on 05/29/25 13:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C25-00101. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 05/29/2025  
 Reported: 05/30/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 05/27/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS 10 2' (H253210-01)**

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	05/29/2025	ND	1.90	94.8	2.00	1.81	
Toluene*	<0.050	0.050	05/29/2025	ND	1.98	99.1	2.00	1.70	
Ethylbenzene*	<0.050	0.050	05/29/2025	ND	1.96	98.1	2.00	1.32	
Total Xylenes*	<0.150	0.150	05/29/2025	ND	5.80	96.7	6.00	1.26	
Total BTX	<0.300	0.300	05/29/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.4 % 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	560	16.0	05/30/2025	ND	448	112	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	05/29/2025	ND	202	101	200	4.32	
DRO >C10-C28*	<10.0	10.0	05/29/2025	ND	190	95.0	200	2.06	
EXT DRO >C28-C36	<10.0	10.0	05/29/2025	ND					

Surrogate: 1-Chlorooctane 115 % 44.4-145

Surrogate: 1-Chlorooctadecane 113 % 40.6-153

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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, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 05/29/2025  
 Reported: 05/30/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 05/27/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS 11 2' (H253210-02)**

BTX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/29/2025	ND	1.90	94.8	2.00	1.81	
Toluene*	<0.050	0.050	05/29/2025	ND	1.98	99.1	2.00	1.70	
Ethylbenzene*	<0.050	0.050	05/29/2025	ND	1.96	98.1	2.00	1.32	
Total Xylenes*	<0.150	0.150	05/29/2025	ND	5.80	96.7	6.00	1.26	
Total BTX	<0.300	0.300	05/29/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.5 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	05/30/2025	ND	448	112	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	05/29/2025	ND	202	101	200	4.32	
DRO >C10-C28*	<10.0	10.0	05/29/2025	ND	190	95.0	200	2.06	
EXT DRO >C28-C36	<10.0	10.0	05/29/2025	ND					

Surrogate: 1-Chlorooctane 115 % 44.4-145

Surrogate: 1-Chlorooctadecane 115 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 05/29/2025  
 Reported: 05/30/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 05/27/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS 08 3' (H253210-03)**

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	05/29/2025	ND	1.90	94.8	2.00	1.81		
Toluene*	<0.050	0.050	05/29/2025	ND	1.98	99.1	2.00	1.70		
Ethylbenzene*	<0.050	0.050	05/29/2025	ND	1.96	98.1	2.00	1.32		
Total Xylenes*	<0.150	0.150	05/29/2025	ND	5.80	96.7	6.00	1.26		
Total BTEX	<0.300	0.300	05/29/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.3 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	05/30/2025	ND	448	112	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	05/29/2025	ND	202	101	200	4.32	
DRO >C10-C28*	<10.0	10.0	05/29/2025	ND	190	95.0	200	2.06	
EXT DRO >C28-C36	<10.0	10.0	05/29/2025	ND					

Surrogate: 1-Chlorooctane 117 % 44.4-145

Surrogate: 1-Chlorooctadecane 116 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 05/29/2025  
 Reported: 05/30/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 05/27/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS 04 3' (H253210-04)**

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/29/2025	ND	1.82	91.1	2.00	2.32		
Toluene*	<0.050	0.050	05/29/2025	ND	1.89	94.3	2.00	4.16		
Ethylbenzene*	<0.050	0.050	05/29/2025	ND	1.86	93.1	2.00	2.01		
Total Xylenes*	<0.150	0.150	05/29/2025	ND	5.67	94.5	6.00	2.83		
Total BTX	<0.300	0.300	05/29/2025	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	512	16.0	05/30/2025	ND	448	112	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	05/29/2025	ND	202	101	200	4.32	
DRO >C10-C28*	<10.0	10.0	05/29/2025	ND	190	95.0	200	2.06	
EXT DRO >C28-C36	<10.0	10.0	05/29/2025	ND					

Surrogate: 1-Chlorooctane 109 % 44.4-145

Surrogate: 1-Chlorooctadecane 109 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 05/29/2025  
 Reported: 05/30/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 05/27/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS 03 3' (H253210-05)**

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/29/2025	ND	1.82	91.1	2.00	2.32		
Toluene*	<0.050	0.050	05/29/2025	ND	1.89	94.3	2.00	4.16		
Ethylbenzene*	<0.050	0.050	05/29/2025	ND	1.86	93.1	2.00	2.01		
Total Xylenes*	<0.150	0.150	05/29/2025	ND	5.67	94.5	6.00	2.83		
Total BTX	<0.300	0.300	05/29/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	320	16.0	05/30/2025	ND	448	112	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	05/29/2025	ND	202	101	200	4.32	
DRO >C10-C28*	21.9	10.0	05/29/2025	ND	190	95.0	200	2.06	
EXT DRO >C28-C36	<10.0	10.0	05/29/2025	ND					

Surrogate: 1-Chlorooctane 105 % 44.4-145

Surrogate: 1-Chlorooctadecane 106 % 40.6-153

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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, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 05/29/2025  
 Reported: 05/30/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 05/27/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS 13 2' (H253210-06)**

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/29/2025	ND	1.82	91.1	2.00	2.32		
Toluene*	<0.050	0.050	05/29/2025	ND	1.89	94.3	2.00	4.16		
Ethylbenzene*	<0.050	0.050	05/29/2025	ND	1.86	93.1	2.00	2.01		
Total Xylenes*	<0.150	0.150	05/29/2025	ND	5.67	94.5	6.00	2.83		
Total BTX	<0.300	0.300	05/29/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	05/30/2025	ND	448	112	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/29/2025	ND	202	101	200	4.32	
DRO >C10-C28*	<10.0	10.0	05/29/2025	ND	190	95.0	200	2.06	
EXT DRO >C28-C36	<10.0	10.0	05/29/2025	ND					

Surrogate: 1-Chlorooctane 117 % 44.4-145

Surrogate: 1-Chlorooctadecane 118 % 40.6-153

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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, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 05/29/2025  
 Reported: 05/30/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 05/27/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS 15 2' (H253210-07)**

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	05/29/2025	ND	1.82	91.1	2.00	2.32		
Toluene*	<0.050	0.050	05/29/2025	ND	1.89	94.3	2.00	4.16		
Ethylbenzene*	<0.050	0.050	05/29/2025	ND	1.86	93.1	2.00	2.01		
Total Xylenes*	<0.150	0.150	05/29/2025	ND	5.67	94.5	6.00	2.83		
Total BTEX	<0.300	0.300	05/29/2025	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	224	16.0	05/30/2025	ND	448	112	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/29/2025	ND	202	101	200	4.32	
DRO >C10-C28*	<10.0	10.0	05/29/2025	ND	190	95.0	200	2.06	
EXT DRO >C28-C36	<10.0	10.0	05/29/2025	ND					

Surrogate: 1-Chlorooctane 119 % 44.4-145

Surrogate: 1-Chlorooctadecane 120 % 40.6-153

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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### Notes and Definitions

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

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Cardinal Laboratories

\*=Accredited Analyte

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

---

Celey D. Keene, Lab Director/Quality Manager



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

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC

Project Manager: Tracy Hillard

Address: 601 N Marientfeld Street, Suite 400

City: Midland

State: TX Zip: 79701

Phone #: (575) 437-3908 Fax #:

Project #: 03C2558676 Project Owner: XTO Energy

Project Name: PLU 25 DDEast Sahelite - SPILLS

Project Location: 32.10433 - 103.63038

Sampler Name: Trevor Wargo

## BILL TO

P.O. #:

Company: XTO Energy, Inc

Attn: Colton Brown

Address: 3104 E Greene St

City: Carlsbad

State: NM Zip: 88220

Phone #:

Fax #:

## ANALYSIS REQUEST

FOR LAB USE ONLY

Lab I.D. Sample I.D.

Depth (feet)

(G)RAB OR (C)OMP.

# CONTAINERS

MATRIX

PRESERV

SAMPLING

GROUNDWATER  
WASTEWATER  
SOIL  
OIL  
SLUDGE  
OTHER :  
ACID/BASE :  
ICE / COOL  
OTHER :

DATE TIME

TPH 8015  
BTEX 8021  
Chloride 4500

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Relinquished By:

Date: 8-29-25 Received By:

Verbal Result: ☐ Yes ☐ No Add'l Phone #:

Relinquished By:

Date: 8-29-25 Received By:

Verbal Result: ☐ Yes ☐ No Add'l Phone #:

Turnaround Time: Standard

Thermometer ID #13 #14B

Corrected Temp. -0.3C

Bacteria (only) Sample Condition

Observed Temp. °C

Corrected Temp. °C

Cost Center: 214851001

GFCM: 48605000

Incident Number: 1482513529307

Cost Center: 214851001

GFCM: 48605000

Incident Number: 1482513529307

Cost Center: 214851001

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Cost Center: 214851001

GFCM: 48605000

Incident Number: 1482513529307

Cost Center: 214851001



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

May 30, 2025

TRACY HILLARD

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: PLU 25 BD EAST SATELLITE - SPILLS

Enclosed are the results of analyses for samples received by the laboratory on 05/29/25 13:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C25-00101. 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 "Coley D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 05/29/2025  
 Reported: 05/30/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 05/28/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS 14 2 (H253211-01)**

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	05/29/2025	ND	1.82	91.1	2.00	2.32	
Toluene*	<0.050	0.050	05/29/2025	ND	1.89	94.3	2.00	4.16	
Ethylbenzene*	<0.050	0.050	05/29/2025	ND	1.86	93.1	2.00	2.01	
Total Xylenes*	<0.150	0.150	05/29/2025	ND	5.67	94.5	6.00	2.83	
Total BTX	<0.300	0.300	05/29/2025	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	112	16.0	05/30/2025	ND	448	112	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/29/2025	ND	179	89.7	200	1.87	
DRO >C10-C28*	<10.0	10.0	05/29/2025	ND	173	86.7	200	0.196	
EXT DRO >C28-C36	<10.0	10.0	05/29/2025	ND					

Surrogate: 1-Chlorooctane 110 % 44.4-145

Surrogate: 1-Chlorooctadecane 118 % 40.6-153

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 05/29/2025  
 Reported: 05/30/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 05/28/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS 16 3 (H253211-02)**

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	05/29/2025	ND	1.82	91.1	2.00	2.32		
Toluene*	<0.050	0.050	05/29/2025	ND	1.89	94.3	2.00	4.16		
Ethylbenzene*	<0.050	0.050	05/29/2025	ND	1.86	93.1	2.00	2.01		
Total Xylenes*	<0.150	0.150	05/29/2025	ND	5.67	94.5	6.00	2.83		
Total BTEX	<0.300	0.300	05/29/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	05/30/2025	ND	448	112	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/29/2025	ND	179	89.7	200	1.87	
DRO >C10-C28*	<10.0	10.0	05/29/2025	ND	173	86.7	200	0.196	
EXT DRO >C28-C36	<10.0	10.0	05/29/2025	ND					

Surrogate: 1-Chlorooctane 105 % 44.4-145

Surrogate: 1-Chlorooctadecane 114 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 05/29/2025  
 Reported: 05/30/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 05/28/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS 17 2 (H253211-03)**

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	05/29/2025	ND	1.82	91.1	2.00	2.32		
Toluene*	<0.050	0.050	05/29/2025	ND	1.89	94.3	2.00	4.16		
Ethylbenzene*	<0.050	0.050	05/29/2025	ND	1.86	93.1	2.00	2.01		
Total Xylenes*	<0.150	0.150	05/29/2025	ND	5.67	94.5	6.00	2.83		
Total BTEX	<0.300	0.300	05/29/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	05/30/2025	ND	448	112	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/29/2025	ND	179	89.7	200	1.87	
DRO >C10-C28*	<10.0	10.0	05/29/2025	ND	173	86.7	200	0.196	
EXT DRO >C28-C36	<10.0	10.0	05/29/2025	ND					

Surrogate: 1-Chlorooctane 108 % 44.4-145

Surrogate: 1-Chlorooctadecane 114 % 40.6-153

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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, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 05/29/2025  
 Reported: 05/30/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 05/28/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS 18 2 (H253211-04)**

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	05/29/2025	ND	1.82	91.1	2.00	2.32		
Toluene*	<0.050	0.050	05/29/2025	ND	1.89	94.3	2.00	4.16		
Ethylbenzene*	<0.050	0.050	05/29/2025	ND	1.86	93.1	2.00	2.01		
Total Xylenes*	<0.150	0.150	05/29/2025	ND	5.67	94.5	6.00	2.83		
Total BTEx	<0.300	0.300	05/29/2025	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	05/30/2025	ND	448	112	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/30/2025	ND	181	90.4	200	2.92	
DRO >C10-C28*	<10.0	10.0	05/30/2025	ND	199	99.7	200	1.63	
EXT DRO >C28-C36	<10.0	10.0	05/30/2025	ND					

Surrogate: 1-Chlorooctane 101 % 44.4-145

Surrogate: 1-Chlorooctadecane 101 % 40.6-153

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



---

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---

### Notes and Definitions

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

---

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

---

Celey D. Keene, Lab Director/Quality Manager



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

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC

Project Manager: Tracy Hillard

Address: 601 N Marientfield Street, Suite 400

City: Midland

State: TX Zip: 79701

Phone #: (575) 937-3406 Fax #:

Project #: 03C1558676 Project Owner: XTO Energy

Project Name: PLV 25 AD East Satellite - SPILLS

Project Location: 32.10433, -103.83038

Sampler Name: Trevor Pargo

FOR LAB USE ONLY

Lab I.D. Sample I.D.

Depth (feet)

(G)RAB OR (C)OMP.

# CONTAINERS

MATRIX

PRESERV.

SAMPLING

HS3211

1 FS 14  
2 FS 16  
3 FS 17  
4 FS 18

2 2 2

C 1 1 1

GROUNDWATER  
WASTEWATER  
SOIL  
OIL  
SLUDGE  
OTHER:

ACID/BASE:  
ICE / COOL  
OTHER:

DATE

TIME

TPH 8015

BTEX 8021

Chloride 4500

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

Relinquished By: Trevor Murray  
Date: 8/29/25 Received By: [Signature]  
Time: 1:34 PM Received By: [Signature]

Delivered By: (Circle One)  
Sampler - UPS - Bus - Other: Corrected Temp. °C

Observed Temp. °C  
Corrected Temp. °C

Sample Condition  
Cool Intact  
Yes  
No

Checked By: (Initials)  
20

Turnaround Time: Standard  
Thermometer ID #13  
Correction Factor: 0.1°C

Bacteria (only) Sample Condition  
Cool Intact  
Yes  
No

Observed Temp. °C  
Corrected Temp. °C

Remarks: Incident Number: 21495133 529307  
Cost Center: 214951001  
GFCM: 48605000

Verbal Result: Yes No Add'l Phone #:  
All Results are emailed. Please provide Email address:  
BBeill@ensolum.com, TThomson@ensolum.com,  
THillard@ensolum.com, KThomson@ensolum.com

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



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

June 03, 2025

TRACY HILLARD

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: PLU 25 BD EAST SATELLITE - SPILLS

Enclosed are the results of analyses for samples received by the laboratory on 06/02/25 11:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C25-00101. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 06/02/2025  
 Reported: 06/03/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 05/29/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS 19 2 (H253260-01)**

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	06/02/2025	ND	1.84	91.9	2.00	3.58	
Toluene*	<0.050	0.050	06/02/2025	ND	1.92	96.0	2.00	4.38	
Ethylbenzene*	<0.050	0.050	06/02/2025	ND	1.92	96.0	2.00	4.04	
Total Xylenes*	<0.150	0.150	06/02/2025	ND	5.95	99.2	6.00	3.96	
Total BTX	<0.300	0.300	06/02/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	06/03/2025	ND	480	120	400	3.39	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2025	ND	207	104	200	1.30	
DRO >C10-C28*	<10.0	10.0	06/02/2025	ND	205	103	200	0.662	
EXT DRO >C28-C36	<10.0	10.0	06/02/2025	ND					

Surrogate: 1-Chlorooctane 100 % 44.4-145

Surrogate: 1-Chlorooctadecane 103 % 40.6-153

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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, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 06/02/2025  
 Reported: 06/03/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 05/29/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS 20 3 (H253260-02)**

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/02/2025	ND	1.84	91.9	2.00	3.58		
Toluene*	<0.050	0.050	06/02/2025	ND	1.92	96.0	2.00	4.38		
Ethylbenzene*	<0.050	0.050	06/02/2025	ND	1.92	96.0	2.00	4.04		
Total Xylenes*	<0.150	0.150	06/02/2025	ND	5.95	99.2	6.00	3.96		
Total BTX	<0.300	0.300	06/02/2025	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/03/2025	ND	480	120	400	3.39		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2025	ND	207	104	200	1.30	
DRO >C10-C28*	<10.0	10.0	06/02/2025	ND	205	103	200	0.662	
EXT DRO >C28-C36	<10.0	10.0	06/02/2025	ND					

Surrogate: 1-Chlorooctane 94.1 % 44.4-145

Surrogate: 1-Chlorooctadecane 94.6 % 40.6-153

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 06/02/2025  
 Reported: 06/03/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 05/29/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS 21 2 (H253260-03)**

BTX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/02/2025	ND	1.84	91.9	2.00	3.58	
Toluene*	<0.050	0.050	06/02/2025	ND	1.92	96.0	2.00	4.38	
Ethylbenzene*	<0.050	0.050	06/02/2025	ND	1.92	96.0	2.00	4.04	
Total Xylenes*	<0.150	0.150	06/02/2025	ND	5.95	99.2	6.00	3.96	
Total BTX	<0.300	0.300	06/02/2025	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	06/03/2025	ND	480	120	400	3.39	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2025	ND	207	104	200	1.30	
DRO >C10-C28*	<10.0	10.0	06/02/2025	ND	205	103	200	0.662	
EXT DRO >C28-C36	<10.0	10.0	06/02/2025	ND					

Surrogate: 1-Chlorooctane 101 % 44.4-145

Surrogate: 1-Chlorooctadecane 101 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 06/02/2025  
 Reported: 06/03/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 05/29/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS 22 3 (H253260-04)**

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	06/02/2025	ND	1.84	91.9	2.00	3.58		
Toluene*	<0.050	0.050	06/02/2025	ND	1.92	96.0	2.00	4.38		
Ethylbenzene*	<0.050	0.050	06/02/2025	ND	1.92	96.0	2.00	4.04		
Total Xylenes*	<0.150	0.150	06/02/2025	ND	5.95	99.2	6.00	3.96		
Total BTEx	<0.300	0.300	06/02/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/03/2025	ND	480	120	400	3.39		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2025	ND	207	104	200	1.30	
DRO >C10-C28*	<10.0	10.0	06/02/2025	ND	205	103	200	0.662	
EXT DRO >C28-C36	<10.0	10.0	06/02/2025	ND					

Surrogate: 1-Chlorooctane 99.5 % 44.4-145

Surrogate: 1-Chlorooctadecane 99.0 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 06/02/2025  
 Reported: 06/03/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 05/29/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS 23 2 (H253260-05)**

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/02/2025	ND	1.84	91.9	2.00	3.58		
Toluene*	<0.050	0.050	06/02/2025	ND	1.92	96.0	2.00	4.38		
Ethylbenzene*	<0.050	0.050	06/02/2025	ND	1.92	96.0	2.00	4.04		
Total Xylenes*	<0.150	0.150	06/02/2025	ND	5.95	99.2	6.00	3.96		
Total BTX	<0.300	0.300	06/02/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	06/03/2025	ND	480	120	400	3.39		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2025	ND	207	104	200	1.30	
DRO >C10-C28*	<10.0	10.0	06/02/2025	ND	205	103	200	0.662	
EXT DRO >C28-C36	<10.0	10.0	06/02/2025	ND					

Surrogate: 1-Chlorooctane 104 % 44.4-145

Surrogate: 1-Chlorooctadecane 103 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 06/02/2025  
 Reported: 06/03/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 05/29/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS 24 2 (H253260-06)**

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/02/2025	ND	1.84	91.9	2.00	3.58		
Toluene*	<0.050	0.050	06/02/2025	ND	1.92	96.0	2.00	4.38		
Ethylbenzene*	<0.050	0.050	06/02/2025	ND	1.92	96.0	2.00	4.04		
Total Xylenes*	<0.150	0.150	06/02/2025	ND	5.95	99.2	6.00	3.96		
Total BTX	<0.300	0.300	06/02/2025	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	176	16.0	06/03/2025	ND	480	120	400	3.39		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2025	ND	207	104	200	1.30	
DRO >C10-C28*	<10.0	10.0	06/02/2025	ND	205	103	200	0.662	
EXT DRO >C28-C36	<10.0	10.0	06/02/2025	ND					

Surrogate: 1-Chlorooctane 103 % 44.4-145

Surrogate: 1-Chlorooctadecane 104 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 06/02/2025  
 Reported: 06/03/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 05/29/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS 12 2 (H253260-07)**

BTX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/02/2025	ND	1.84	91.9	2.00	3.58	
Toluene*	<0.050	0.050	06/02/2025	ND	1.92	96.0	2.00	4.38	
Ethylbenzene*	<0.050	0.050	06/02/2025	ND	1.92	96.0	2.00	4.04	
Total Xylenes*	<0.150	0.150	06/02/2025	ND	5.95	99.2	6.00	3.96	
Total BTX	<0.300	0.300	06/02/2025	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	06/03/2025	ND	480	120	400	3.39	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2025	ND	207	104	200	1.30	
DRO >C10-C28*	13.1	10.0	06/02/2025	ND	205	103	200	0.662	
EXT DRO >C28-C36	<10.0	10.0	06/02/2025	ND					

Surrogate: 1-Chlorooctane 101 % 44.4-145

Surrogate: 1-Chlorooctadecane 103 % 40.6-153

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 06/02/2025  
 Reported: 06/03/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 05/29/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS 25 2 (H253260-08)**

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	06/02/2025	ND	1.84	91.9	2.00	3.58		
Toluene*	<0.050	0.050	06/02/2025	ND	1.92	96.0	2.00	4.38		
Ethylbenzene*	<0.050	0.050	06/02/2025	ND	1.92	96.0	2.00	4.04		
Total Xylenes*	<0.150	0.150	06/02/2025	ND	5.95	99.2	6.00	3.96		
Total BTEx	<0.300	0.300	06/02/2025	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	06/03/2025	ND	480	120	400	3.39	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2025	ND	207	104	200	1.30	
DRO >C10-C28*	11.8	10.0	06/02/2025	ND	205	103	200	0.662	
EXT DRO >C28-C36	<10.0	10.0	06/02/2025	ND					

Surrogate: 1-Chlorooctane 95.6 % 44.4-145

Surrogate: 1-Chlorooctadecane 97.7 % 40.6-153

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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---

### Notes and Definitions

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

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A handwritten signature in cursive script, appearing to read "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager



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

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

<b>Company Name:</b> Ensolum, LLC				<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>				
<b>Project Manager:</b> Tracy Hillard				<b>P.O. #:</b>								
<b>Address:</b> 601 N Marientfeld Street, Suite 400				<b>Company:</b> XTO Energy, Inc								
<b>City:</b> Midland				<b>Attn:</b> Colton Brown								
<b>State:</b> TX <b>Zip:</b> 79701				<b>Address:</b> 3104 E Greene St								
<b>Phone #:</b> (575) 937-5106 <b>Fax #:</b>				<b>City:</b> Carlsbad								
<b>Project #:</b> 03C1558676 <b>Project Owner:</b> XTO Energy				<b>State:</b> NM <b>Zip:</b> 88220								
<b>Project Location:</b> PLU 25 UO East Satellite - SPILLS				<b>Phone #:</b>								
<b>Sample Name:</b> Revor Margo				<b>Fax #:</b>								
<small>FOR LAB USE ONLY</small>												
Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX		PRESERV	SAMPLING				
					GROUNDWATER	WASTEWATER						
					SOIL	OIL						
					SLUDGE	OTHER :						
					ACID/BASE:	ICE / COOL						
					OTHER :							
					DATE	TIME						
HAS3340	FS 19	2	C	1	8/29/25	9:19			TPH 8015			
	FS 20	3				11:27			BTEX 8021			
	FS 21	3			9/4/25	11:29			Chloride 4500			
	FS 22	3				9:56						
	FS 23	2				9:59						
	FS 24	2				10:31						
	FS 12	2				10:35						
	FS 25	2										

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<b>Relinquished By:</b> Steven Wager		<b>Date:</b> 8-23-25	<b>Received By:</b> [Signature]
<b>Time:</b> 1:50		<b>REMARKS:</b>	
<b>Date:</b>		<b>Incident Number:</b> APP# 2513524307	
<b>Time:</b>		<b>Cost Center:</b> 224852001	
<b>GFCM:</b> 48605000			

<b>Turnaround Time:</b> Standard <input type="checkbox"/> Rush <input checked="" type="checkbox"/>		<b>Bacteria (only) Sample Condition</b>	
<b>Thermometer ID #:</b> 13 #14B	<b>Corrected Temp.: °C</b> 10.3°C	<b>Cool Intact:</b> Yes <input type="checkbox"/> No <input type="checkbox"/>	<b>Observed Temp.: °C</b>
<b>Correction Factor:</b> -0.3°C		<b>Corrected Temp.: °C</b>	

\* Cardinal cannot accept verbal changes. Please print name and title at bottom of page.



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

June 18, 2025

TRACY HILLARD

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: PLU 25 BD EAST SATELLITE - SPILLS

Enclosed are the results of analyses for samples received by the laboratory on 06/17/25 13:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C25-00101. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 06/17/2025  
 Reported: 06/18/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 06/16/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: FS 26 3' (H253597-01)**

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	06/17/2025	ND	1.94	96.8	2.00	8.29	QM-07	
Toluene*	<0.050	0.050	06/17/2025	ND	2.02	101	2.00	7.74		
Ethylbenzene*	<0.050	0.050	06/17/2025	ND	2.00	100	2.00	8.17	QM-07	
Total Xylenes*	<0.150	0.150	06/17/2025	ND	5.92	98.7	6.00	8.24	QM-07	
Total BTEX	<0.300	0.300	06/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.5 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/18/2025	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	06/17/2025	ND	196	97.9	200	1.42	
DRO >C10-C28*	<10.0	10.0	06/17/2025	ND	186	93.1	200	0.278	
EXT DRO >C28-C36	<10.0	10.0	06/17/2025	ND					

Surrogate: 1-Chlorooctane 83.7 % 44.4-145

Surrogate: 1-Chlorooctadecane 81.4 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 06/17/2025  
 Reported: 06/18/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 06/16/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: FS 27 2' (H253597-02)**

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	06/17/2025	ND	1.94	96.8	2.00	8.29		
Toluene*	<0.050	0.050	06/17/2025	ND	2.02	101	2.00	7.74		
Ethylbenzene*	<0.050	0.050	06/17/2025	ND	2.00	100	2.00	8.17		
Total Xylenes*	<0.150	0.150	06/17/2025	ND	5.92	98.7	6.00	8.24		
Total BTEx	<0.300	0.300	06/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.0 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	06/18/2025	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	06/17/2025	ND	196	97.9	200	1.42	
DRO >C10-C28*	<10.0	10.0	06/17/2025	ND	186	93.1	200	0.278	
EXT DRO >C28-C36	<10.0	10.0	06/17/2025	ND					

Surrogate: 1-Chlorooctane 79.5 % 44.4-145

Surrogate: 1-Chlorooctadecane 76.8 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 06/17/2025  
 Reported: 06/18/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 06/16/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: FS 28 2' (H253597-03)**

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	06/17/2025	ND	1.94	96.8	2.00	8.29		
Toluene*	<0.050	0.050	06/17/2025	ND	2.02	101	2.00	7.74		
Ethylbenzene*	<0.050	0.050	06/17/2025	ND	2.00	100	2.00	8.17		
Total Xylenes*	<0.150	0.150	06/17/2025	ND	5.92	98.7	6.00	8.24		
Total BTEx	<0.300	0.300	06/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.1 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	06/18/2025	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	06/17/2025	ND	196	97.9	200	1.42	
DRO >C10-C28*	<10.0	10.0	06/17/2025	ND	186	93.1	200	0.278	
EXT DRO >C28-C36	<10.0	10.0	06/17/2025	ND					

Surrogate: 1-Chlorooctane 77.2 % 44.4-145

Surrogate: 1-Chlorooctadecane 73.4 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 06/17/2025  
 Reported: 06/18/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 06/16/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: FS 29 2' (H253597-04)**

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	06/17/2025	ND	1.94	96.8	2.00	8.29		
Toluene*	<0.050	0.050	06/17/2025	ND	2.02	101	2.00	7.74		
Ethylbenzene*	<0.050	0.050	06/17/2025	ND	2.00	100	2.00	8.17		
Total Xylenes*	<0.150	0.150	06/17/2025	ND	5.92	98.7	6.00	8.24		
Total BTEx	<0.300	0.300	06/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.0 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	06/18/2025	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	06/17/2025	ND	196	97.9	200	1.42	
DRO >C10-C28*	<10.0	10.0	06/17/2025	ND	186	93.1	200	0.278	
EXT DRO >C28-C36	<10.0	10.0	06/17/2025	ND					

Surrogate: 1-Chlorooctane 77.9 % 44.4-145

Surrogate: 1-Chlorooctadecane 73.6 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 06/17/2025  
 Reported: 06/18/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 06/16/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: FS 30 2' (H253597-05)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2025	ND	1.94	96.8	2.00	8.29		
Toluene*	<0.050	0.050	06/17/2025	ND	2.02	101	2.00	7.74		
Ethylbenzene*	<0.050	0.050	06/17/2025	ND	2.00	100	2.00	8.17		
Total Xylenes*	<0.150	0.150	06/17/2025	ND	5.92	98.7	6.00	8.24		
Total BTEX	<0.300	0.300	06/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.8 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	272	16.0	06/18/2025	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	06/17/2025	ND	196	97.9	200	1.42	
DRO >C10-C28*	<10.0	10.0	06/17/2025	ND	186	93.1	200	0.278	
EXT DRO >C28-C36	<10.0	10.0	06/17/2025	ND					

Surrogate: 1-Chlorooctane 78.3 % 44.4-145

Surrogate: 1-Chlorooctadecane 75.8 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 06/17/2025  
 Reported: 06/18/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 06/16/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: FS 31 2' (H253597-06)**

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	06/17/2025	ND	1.94	96.8	2.00	8.29		
Toluene*	<0.050	0.050	06/17/2025	ND	2.02	101	2.00	7.74		
Ethylbenzene*	<0.050	0.050	06/17/2025	ND	2.00	100	2.00	8.17		
Total Xylenes*	<0.150	0.150	06/17/2025	ND	5.92	98.7	6.00	8.24		
Total BTEX	<0.300	0.300	06/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.8 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	272	16.0	06/18/2025	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	06/17/2025	ND	196	97.9	200	1.42	
DRO >C10-C28*	67.5	10.0	06/17/2025	ND	186	93.1	200	0.278	
EXT DRO >C28-C36	<10.0	10.0	06/17/2025	ND					

Surrogate: 1-Chlorooctane 71.2 % 44.4-145

Surrogate: 1-Chlorooctadecane 70.8 % 40.6-153

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 06/17/2025  
 Reported: 06/18/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 06/16/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: SW 02 0-3' (H253597-07)**

BTX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/17/2025	ND	1.94	96.8	2.00	8.29	
Toluene*	<0.050	0.050	06/17/2025	ND	2.02	101	2.00	7.74	
Ethylbenzene*	<0.050	0.050	06/17/2025	ND	2.00	100	2.00	8.17	
Total Xylenes*	<0.150	0.150	06/17/2025	ND	5.92	98.7	6.00	8.24	
Total BTX	<0.300	0.300	06/17/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.3 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	208	16.0	06/18/2025	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	06/17/2025	ND	196	97.9	200	1.42	
DRO >C10-C28*	<10.0	10.0	06/17/2025	ND	186	93.1	200	0.278	
EXT DRO >C28-C36	<10.0	10.0	06/17/2025	ND					

Surrogate: 1-Chlorooctane 79.4 % 44.4-145

Surrogate: 1-Chlorooctadecane 75.2 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 06/17/2025  
 Reported: 06/18/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 06/16/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: SW 03 0-3' (H253597-08)**

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	06/17/2025	ND	1.94	96.8	2.00	8.29		
Toluene*	<0.050	0.050	06/17/2025	ND	2.02	101	2.00	7.74		
Ethylbenzene*	<0.050	0.050	06/17/2025	ND	2.00	100	2.00	8.17		
Total Xylenes*	<0.150	0.150	06/17/2025	ND	5.92	98.7	6.00	8.24		
Total BTEX	<0.300	0.300	06/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.7 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	06/18/2025	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	06/18/2025	ND	196	97.9	200	1.42	
DRO >C10-C28*	<10.0	10.0	06/18/2025	ND	186	93.1	200	0.278	
EXT DRO >C28-C36	<10.0	10.0	06/18/2025	ND					

Surrogate: 1-Chlorooctane 71.6 % 44.4-145

Surrogate: 1-Chlorooctadecane 68.0 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 06/17/2025  
 Reported: 06/18/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 06/16/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: FS 32 3' (H253597-09)**

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	06/17/2025	ND	1.94	96.8	2.00	8.29		
Toluene*	<0.050	0.050	06/17/2025	ND	2.02	101	2.00	7.74		
Ethylbenzene*	<0.050	0.050	06/17/2025	ND	2.00	100	2.00	8.17		
Total Xylenes*	<0.150	0.150	06/17/2025	ND	5.92	98.7	6.00	8.24		
Total BTEx	<0.300	0.300	06/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.3 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	480	16.0	06/18/2025	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	06/18/2025	ND	196	97.9	200	1.42	
DRO >C10-C28*	23.4	10.0	06/18/2025	ND	186	93.1	200	0.278	
EXT DRO >C28-C36	<10.0	10.0	06/18/2025	ND					

Surrogate: 1-Chlorooctane 74.4 % 44.4-145

Surrogate: 1-Chlorooctadecane 72.0 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 06/17/2025  
 Reported: 06/18/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 06/16/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: FS 33 3' (H253597-10)**

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	06/17/2025	ND	1.94	96.8	2.00	8.29		
Toluene*	<0.050	0.050	06/17/2025	ND	2.02	101	2.00	7.74		
Ethylbenzene*	<0.050	0.050	06/17/2025	ND	2.00	100	2.00	8.17		
Total Xylenes*	<0.150	0.150	06/17/2025	ND	5.92	98.7	6.00	8.24		
Total BTEx	<0.300	0.300	06/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 93.8 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	400	16.0	06/18/2025	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	06/18/2025	ND	196	97.9	200	1.42	
DRO >C10-C28*	83.0	10.0	06/18/2025	ND	186	93.1	200	0.278	
EXT DRO >C28-C36	<10.0	10.0	06/18/2025	ND					

Surrogate: 1-Chlorooctane 73.6 % 44.4-145

Surrogate: 1-Chlorooctadecane 72.4 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 06/17/2025  
 Reported: 06/18/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 06/16/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: FS 34 3' (H253597-11)**

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	06/17/2025	ND	1.94	96.8	2.00	8.29		
Toluene*	<0.050	0.050	06/17/2025	ND	2.02	101	2.00	7.74		
Ethylbenzene*	<0.050	0.050	06/17/2025	ND	2.00	100	2.00	8.17		
Total Xylenes*	<0.150	0.150	06/17/2025	ND	5.92	98.7	6.00	8.24		
Total BTEx	<0.300	0.300	06/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 93.7 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	720	16.0	06/18/2025	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	06/17/2025	ND	187	93.3	200	0.975	
DRO >C10-C28*	72.9	10.0	06/17/2025	ND	176	87.9	200	0.928	
EXT DRO >C28-C36	<10.0	10.0	06/17/2025	ND					

Surrogate: 1-Chlorooctane 72.0 % 44.4-145

Surrogate: 1-Chlorooctadecane 75.2 % 40.6-153

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**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 06/17/2025  
 Reported: 06/18/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 06/16/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: FS 35 3' (H253597-12)**

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	06/17/2025	ND	1.94	96.8	2.00	8.29		
Toluene*	<0.050	0.050	06/17/2025	ND	2.02	101	2.00	7.74		
Ethylbenzene*	<0.050	0.050	06/17/2025	ND	2.00	100	2.00	8.17		
Total Xylenes*	<0.150	0.150	06/17/2025	ND	5.92	98.7	6.00	8.24		
Total BTEX	<0.300	0.300	06/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.2 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	208	16.0	06/18/2025	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	06/17/2025	ND	187	93.3	200	0.975	
DRO >C10-C28*	<10.0	10.0	06/17/2025	ND	176	87.9	200	0.928	
EXT DRO >C28-C36	<10.0	10.0	06/17/2025	ND					

Surrogate: 1-Chlorooctane 70.4 % 44.4-145

Surrogate: 1-Chlorooctadecane 69.7 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 06/17/2025  
 Reported: 06/18/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 06/16/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: FS 36 3' (H253597-13)**

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	06/17/2025	ND	1.94	96.8	2.00	8.29		
Toluene*	<0.050	0.050	06/17/2025	ND	2.02	101	2.00	7.74		
Ethylbenzene*	<0.050	0.050	06/17/2025	ND	2.00	100	2.00	8.17		
Total Xylenes*	<0.150	0.150	06/17/2025	ND	5.92	98.7	6.00	8.24		
Total BTEX	<0.300	0.300	06/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.1 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	352	16.0	06/18/2025	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	06/17/2025	ND	187	93.3	200	0.975	
DRO >C10-C28*	30.8	10.0	06/17/2025	ND	176	87.9	200	0.928	
EXT DRO >C28-C36	<10.0	10.0	06/17/2025	ND					

Surrogate: 1-Chlorooctane 72.5 % 44.4-145

Surrogate: 1-Chlorooctadecane 72.3 % 40.6-153

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**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 06/17/2025  
 Reported: 06/18/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 06/16/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: FS 37 3' (H253597-14)**

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	06/17/2025	ND	1.94	96.8	2.00	8.29		
Toluene*	<0.050	0.050	06/17/2025	ND	2.02	101	2.00	7.74		
Ethylbenzene*	<0.050	0.050	06/17/2025	ND	2.00	100	2.00	8.17		
Total Xylenes*	<0.150	0.150	06/17/2025	ND	5.92	98.7	6.00	8.24		
Total BTEX	<0.300	0.300	06/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.7 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	06/18/2025	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	06/17/2025	ND	187	93.3	200	0.975	
DRO >C10-C28*	14.1	10.0	06/17/2025	ND	176	87.9	200	0.928	
EXT DRO >C28-C36	<10.0	10.0	06/17/2025	ND					

Surrogate: 1-Chlorooctane 72.2 % 44.4-145

Surrogate: 1-Chlorooctadecane 73.0 % 40.6-153

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**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 06/17/2025  
 Reported: 06/18/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 06/16/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: FS 38 2' (H253597-15)**

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	06/17/2025	ND	1.94	96.8	2.00	8.29		
Toluene*	<0.050	0.050	06/17/2025	ND	2.02	101	2.00	7.74		
Ethylbenzene*	<0.050	0.050	06/17/2025	ND	2.00	100	2.00	8.17		
Total Xylenes*	<0.150	0.150	06/17/2025	ND	5.92	98.7	6.00	8.24		
Total BTEX	<0.300	0.300	06/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.5 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	06/18/2025	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/17/2025	ND	187	93.3	200	0.975	
DRO >C10-C28*	<10.0	10.0	06/17/2025	ND	176	87.9	200	0.928	
EXT DRO >C28-C36	<10.0	10.0	06/17/2025	ND					

Surrogate: 1-Chlorooctane 66.9 % 44.4-145

Surrogate: 1-Chlorooctadecane 67.0 % 40.6-153

Cardinal Laboratories

\*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



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---

### Notes and Definitions

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

---

Cardinal Laboratories

\*=Accredited Analyte

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

---

Celey D. Keene, Lab Director/Quality Manager



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

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

1-2

Company Name: Ensolum, LLC

Project Manager: Tracy Hillard

Address: 601 N Marientfield Street, Suite 400

City: Midland

State: TX Zip: 79701

Phone #:

Fax #:

Project #: 03C1558676

Project Owner: XTO Energy

Project Name: PLU 2580 East Satellite

- SPILLS

Project Location: 32.10433, -103.83038

Sampler Name:

Trevor Hargis

FOR LAB USE ONLY

## BILL TO

## ANALYSIS REQUEST

P.O. #:

Company: XTO Energy, Inc

Attn: Colton Brown

Address: 3104 E Greene St

City: Carlsbad

State: NM Zip: 88220

Phone #:

Fax #:

Lab I.D. Sample I.D.

Depth (feet)

(G)RAB OR (C)OMP.

# CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE

TIME

TPH 8015

BTEX 8021

Chloride 4500

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Relinquished By:

Time: 1:35

Date: 8/12/2025

Received By:

Time: 1:35

Date: 8/12/2025

Verbal Result: ☐ Yes ☐ No

Add'l Phone #:

Cost Center: 214851002

GFCM: 48605000

Incident Number: 214851002

Cost Center: 214851002

GFCM: 48605000

Incident Number: 214851002

Cost Center: 214851002

GFCM: 48605000

Incident Number: 214851002

Relinquished By:

Date: 8/12/2025

Received By:

Time: 1:35

Date: 8/12/2025

Verbal Result: ☐ Yes ☐ No

Add'l Phone #:

Cost Center: 214851002

GFCM: 48605000

Incident Number: 214851002

Cost Center: 214851002

GFCM: 48605000

Incident Number: 214851002

Cost Center: 214851002

GFCM: 48605000

Incident Number: 214851002

Delivered By: (Circle One)

Observed Temp. °C

Sample Condition

CHECKED BY:

Turnaround Time:

Standard

Rush

Bacteria (only)

Sample Condition

Observed Temp. °C

Corrected Temp. °C

Corrected Temp. °C

Corrected Temp. °C

Corrected Temp. °C

Corrected Temp. °C

Corrected Temp. °C

FORM 006 R 3.2 10/01/21

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



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2-2



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

June 25, 2025

TRACY HILLARD

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: PLU 25 BD EAST SATELLITE - SPILL

Enclosed are the results of analyses for samples received by the laboratory on 06/23/25 12:18.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C25-00101. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 06/23/2025  
Reported: 06/25/2025  
Project Name: PLU 25 BD EAST SATELLITE - SPILL  
Project Number: 03C1558676  
Project Location: XTO 32.10433, -103.83038

Sampling Date: 06/20/2025  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: FS 34 A 3.5 (H253744-01)**

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	06/24/2025	ND	1.88	93.8	2.00	5.89		
Toluene*	<0.050	0.050	06/24/2025	ND	1.96	97.8	2.00	5.84		
Ethylbenzene*	<0.050	0.050	06/24/2025	ND	1.95	97.4	2.00	5.68		
Total Xylenes*	<0.150	0.150	06/24/2025	ND	5.76	96.0	6.00	5.86		
Total BTX	<0.300	0.300	06/24/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.6 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	192	16.0	06/24/2025	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	06/24/2025	ND	228	114	200	4.24	
DRO >C10-C28*	<10.0	10.0	06/24/2025	ND	216	108	200	6.85	
EXT DRO >C28-C36	<10.0	10.0	06/24/2025	ND					

Surrogate: 1-Chlorooctane 101 % 44.4-145

Surrogate: 1-Chlorooctadecane 105 % 40.6-153

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



---

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---

### Notes and Definitions

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

---

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

---

Caley D. Keene, Lab Director/Quality Manager





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

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



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

July 28, 2025

TRACY HILLARD

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: PLU 25 BD EAST SATELLITE - SPILLS

Enclosed are the results of analyses for samples received by the laboratory on 07/25/25 15:39.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C25-00101. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 07/25/2025  
 Reported: 07/28/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 07/25/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: SW 04 0-2 (H254555-01)**

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/25/2025	ND	1.96	98.1	2.00	1.15		
Toluene*	<0.050	0.050	07/25/2025	ND	1.93	96.4	2.00	1.73		
Ethylbenzene*	<0.050	0.050	07/25/2025	ND	2.02	101	2.00	2.67		
Total Xylenes*	<0.150	0.150	07/25/2025	ND	6.39	107	6.00	2.62		
Total BTX	<0.300	0.300	07/25/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	07/28/2025	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	07/26/2025	ND	198	99.2	200	1.91	
DRO >C10-C28*	<10.0	10.0	07/26/2025	ND	222	111	200	3.96	
EXT DRO >C28-C36	<10.0	10.0	07/26/2025	ND					

Surrogate: 1-Chlorooctane 87.6 % 44.4-145

Surrogate: 1-Chlorooctadecane 85.6 % 40.6-153

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 07/25/2025  
 Reported: 07/28/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 07/25/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: SW 05 0-3 (H254555-02)**

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/25/2025	ND	1.96	98.1	2.00	1.15		
Toluene*	<0.050	0.050	07/25/2025	ND	1.93	96.4	2.00	1.73		
Ethylbenzene*	<0.050	0.050	07/25/2025	ND	2.02	101	2.00	2.67		
Total Xylenes*	<0.150	0.150	07/25/2025	ND	6.39	107	6.00	2.62		
Total BTX	<0.300	0.300	07/25/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	07/28/2025	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	07/26/2025	ND	198	99.2	200	1.91	
DRO >C10-C28*	<10.0	10.0	07/26/2025	ND	222	111	200	3.96	
EXT DRO >C28-C36	<10.0	10.0	07/26/2025	ND					

Surrogate: 1-Chlorooctane 88.8 % 44.4-145

Surrogate: 1-Chlorooctadecane 85.5 % 40.6-153

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 07/25/2025  
 Reported: 07/28/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 07/25/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: SW 06 0-3 (H254555-03)**

BTX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/25/2025	ND	1.96	98.1	2.00	1.15	
Toluene*	<0.050	0.050	07/25/2025	ND	1.93	96.4	2.00	1.73	
Ethylbenzene*	<0.050	0.050	07/25/2025	ND	2.02	101	2.00	2.67	
Total Xylenes*	<0.150	0.150	07/25/2025	ND	6.39	107	6.00	2.62	
Total BTX	<0.300	0.300	07/25/2025	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: KH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	07/28/2025	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	07/26/2025	ND	198	99.2	200	1.91	
DRO >C10-C28*	68.3	10.0	07/26/2025	ND	222	111	200	3.96	
EXT DRO >C28-C36	14.0	10.0	07/26/2025	ND					

Surrogate: 1-Chlorooctane 84.4 % 44.4-145

Surrogate: 1-Chlorooctadecane 82.7 % 40.6-153

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

ENSOLUM, LLC  
 TRACY HILLARD  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 07/25/2025  
 Reported: 07/28/2025  
 Project Name: PLU 25 BD EAST SATELLITE - SPILLS  
 Project Number: 03C1558676  
 Project Location: XTO 32.10433, -103.83038

Sampling Date: 07/25/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: SW 07 0-2 (H254555-04)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/26/2025	ND	1.96	98.1	2.00	1.15		
Toluene*	<0.050	0.050	07/26/2025	ND	1.93	96.4	2.00	1.73		
Ethylbenzene*	<0.050	0.050	07/26/2025	ND	2.02	101	2.00	2.67		
Total Xylenes*	<0.150	0.150	07/26/2025	ND	6.39	107	6.00	2.62		
Total BTEX	<0.300	0.300	07/26/2025	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	208	16.0	07/28/2025	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	07/26/2025	ND	198	99.2	200	1.91	
DRO >C10-C28*	<10.0	10.0	07/26/2025	ND	222	111	200	3.96	
EXT DRO >C28-C36	<10.0	10.0	07/26/2025	ND					

Surrogate: 1-Chlorooctane 94.7 % 44.4-145

Surrogate: 1-Chlorooctadecane 90.7 % 40.6-153

Cardinal Laboratories

\*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager





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

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### Notes and Definitions

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

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Cardinal Laboratories

\*=Accredited Analyte

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

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

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Celey D. Keene, Lab Director/Quality Manager

**BILL TO**

## ANALYSIS REQUEST

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

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

QUESTIONS

Action 495034

**QUESTIONS**

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 495034
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**QUESTIONS**

<b>Prerequisites</b>	
Incident ID (n#)	nAPP2513529307
Incident Name	NAPP2513529307 PLU 25 BD EAST SAT @ FAPP2126355953
Incident Type	Release Other
Incident Status	Remediation Closure Report Received
Incident Facility	[fAPP2126355953] PLU 25 BRUSHY DRAW BTY

**Location of Release Source***Please answer all the questions in this group.*

Site Name	PLU 25 BD EAST SAT
Date Release Discovered	05/14/2025
Surface Owner	Federal

**Incident Details***Please answer all the questions in this group.*

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

**Nature and Volume of Release***Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.*

Crude Oil Released (bbls) Details	Cause: Corrosion   Flow Line - Production   Crude Oil   Released: 13 BBL   Recovered: 12 BBL   Lost: 1 BBL.
Produced Water Released (bbls) Details	Cause: Corrosion   Flow Line - Production   Produced Water   Released: 99 BBL   Recovered: 88 BBL   Lost: 11 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Cause: Corrosion   Flow Line - Production   Natural Gas Vented   Released: 112 MCF   Recovered: 0 MCF   Lost: 112 MCF.
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 495034

**QUESTIONS (continued)**

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 495034
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**QUESTIONS**

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

**Initial Response**

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

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

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

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

I hereby agree and sign off to the above statement	Name: Colton Brown Title: Environmental Advisor Email: colton.s.brown@exxonmobil.com Date: 08/12/2025
--	--

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QUESTIONS, Page 3

Action 495034

**QUESTIONS (continued)**

Operator:  XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:  5380
	Action Number:  495034
	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 1000 (ft.) and ½ (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 ½ and 1 (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 1000 (ft.) and ½ (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Between 1 and 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Between ½ and 1 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

<b>Remediation Plan</b>	
<i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
Requesting a remediation plan approval with this submission	Yes
<i>Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.</i>	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
<b>Soil Contamination Sampling:</b> (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	560
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	82.3
GRO+DRO (EPA SW-846 Method 8015M)	68.3
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	05/14/2025
On what date will (or did) the final sampling or liner inspection occur	07/25/2025
On what date will (or was) the remediation complete(d)	07/25/2025
What is the estimated surface area (in square feet) that will be reclaimed	7500
What is the estimated volume (in cubic yards) that will be reclaimed	700
What is the estimated surface area (in square feet) that will be remediated	7500
What is the estimated volume (in cubic yards) that will be remediated	700
<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 495034

**QUESTIONS (continued)**

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	Action Type:  [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**QUESTIONS**

<b>Remediation Plan (continued)</b>	
<i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
<b>This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:</b>	
<i>(Select all answers below that apply.)</i>	
(Ex Situ) Excavation and <b>off-site</b> disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for <b>off-site</b> disposal	fEEM0112334510 HALFWAY DISPOSAL AND LANDFILL
<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: 08/12/2025
<i>The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.</i>	



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QUESTIONS, Page 5

Action 495034

QUESTIONS (continued)

Operator:  XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:  5380
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	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 495034

**QUESTIONS (continued)**

Operator:  XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:
	5380
	Action Number:
	495034
Action Type:	
[C-141] Remediation Closure Request C-141 (C-141-v-Closure)	

**QUESTIONS**

Sampling Event Information	
Last sampling notification (C-141N) recorded	486011
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	07/25/2025
What was the (estimated) number of samples that were to be gathered	5
What was the sampling surface area in square feet	1000

Remediation Closure Request	
<i>Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.</i>	
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	7500
What was the total volume (cubic yards) remediated	700
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	7500
What was the total volume (in cubic yards) reclaimed	700
Summarize any additional remediation activities not included by answers (above)	Site assessment and excavation activities were conducted at the Site to address the May 2025 release of crude oil, produced water, and natural gas at the Site. Laboratory analytical results for all final confirmation soil samples indicated all COCs were compliant with Closure Criteria. Based on laboratory analytical results, no further remediation was required. Excavation of the impacted soil has mitigated impacts at this Site. Depth to groundwater has been estimated to be greater than 100 feet bgs and no 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 nAPP2513529307.
<i>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>	
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: 08/12/2025

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QUESTIONS, Page 7  
  
Action 495034

QUESTIONS (continued)

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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 495034

CONDITIONS

Operator:  XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:  5380
	Action Number:  495034
	Action Type:  [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
scott.rodgers	This Remediation Closure Report is approved. Areas reasonably needed for production or subsequent drilling operations will need to be reclaimed and revegetated as soon as they are no longer reasonably needed. A report for reclamation and revegetation will need to be submitted and approved prior to this incident receiving the final status of "Restoration Complete".	9/25/2025