ENSOLUM

November 7, 2024

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

Re: Deferral Request
PLU 28 Big Sinks West Battery
Incident Number nAPP2422260664
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared this *Deferral Request* to document assessment, delineation, excavation and soil sampling activities at the PLU 28 Big Sinks West Battery (Site). The purpose of the assessment and soil sampling activities was to assess the presence or absence of impacts to soil following a produced water and crude oil release. Based on field observations, field screening activities, and soil sample laboratory analytical results, XTO is submitting this *Deferral Request*, describing Site assessment, delineation, and excavation activities that have occurred and requesting deferral of final remediation for Incident Number nAPP2422260664 until the Site is reconstructed, and/or the well pad is abandoned.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in in Unit F, Section 28, Township 25 South, Range 31 East, in Eddy County, New Mexico (32.10425°, -103.78592°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On August 9, 2024, corrosion of a tester spool resulted in the release of approximately 1 barrel (bbls) of crude oil and 6 bbls of produced water onto the well pad near production equipment and aboveground pipelines. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; 2 bbls of released produced water were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) via Notification of Release (NOR) on August 9, 2024, and submitted an Initial Release C-141 Application (C-141) on August 12, 2024. The release was assigned Incident Number nAPP2422260664.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

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

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on a soil boring drilled to investigate regional groundwater depth. In March 2021, a soil boring

permitted by New Mexico Office of the State Engineer (C-4500) was completed approximately 0.17 miles southeast of the Site utilizing hollow stem auger drilling method. Soil boring C-4500 was drilled to a depth of 110 feet bgs. A field geologist logged and described soils continuously. No moisture or groundwater was encountered during drilling activities. The temporary well was left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period without observing groundwater, it was confirmed that groundwater beneath the Site is greater than 110 feet bgs. The borehole was properly abandoned with drill cuttings and hydrated bentonite chips. The Well Record & Logs are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is a seasonal dry wash, located approximately 736 feet south 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 potentially unstable geology (medium potential karst designation area). Site receptors are identified on Figure 1.

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

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

DELINEATION AND EXCAVATION ACTIVITIES

On August 19, 2024, Ensolum personnel visited the Site to evaluate the release extent based on information provided on the C-141 and visual observations. Four delineation soil samples (SS01 through SS04) were collected at a depth of 0.5 feet bgs within and around the release extent to assess presence or absence of impacted soil. The release extent and delineation soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted in Figure 2. Photographic documentation was completed during the Site visit and a photographic log is included in Appendix B.

On October 31, 2024, Ensolum personnel returned to the Site to oversee delineation and excavation activities. Seven additional delineation soil samples were collected at the depth of 0.5 feet bgs around the release extent to assess the lateral extent of the release. Two potholes (PH01 and PH02) were advanced via backhoe within the release extent to assess the vertical extent of the release. Delineation soil samples were collected at depths ranging from 0.5 feet bgs to 4 feet bgs. The 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 were logged on lithologic/soil sampling logs, which are included in Appendix C. The delineation soil sample locations are depicted on Figure 2.

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

Waste-containing soil was subsequently excavated from the release area near production equipment and surface pipelines as indicated by visible staining and field screening activities. Excavation activities were performed utilizing a backhoe and a transport vehicle. To direct soil removal, Ensolum personnel field screened soil for VOCs and chloride.

Following removal of impacted soil to the maximum extent possible, Ensolum personnel collected 5-point composite soil samples representing no more than 200 square feet from the sidewalls and floor of the excavation. The 5-point composite soil samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Excavation soil samples FS01 through FS03 were collected from the floor of the excavation at a depth of 3 feet bgs. Excavation sidewall soil samples SW01 and SW02 were collected from the sidewalls of the excavation at depths ranging from ground surface to 3 feet bgs. The soil samples were collected, handled, and analyzed following the same procedures described above at Cardinal in Hobbs, New Mexico. The excavation extent and excavation soil sample locations are depicted in Figure 3.

The final excavation extent measured approximately 584 square feet. A total of approximately 65 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Landfill Facility in Hobbs, New Mexico.

The release occurred on the well pad near production equipment and surface pipelines. XTO safety policy restricts soil disturbing activities within a 2-foot radius of any on-site production equipment. The estimated area of remaining impacted soil measures approximately 646 square feet and, assuming a 3-foot depth based on the delineation soil sample PH02, a total of approximately 72 cubic yards of TPH - impacted soil remains in place. The estimated area of remaining impacted soil and delineation soil sample locations are presented on Figure 4.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for delineation soil samples SS01, SS02, and SS05 through SS11 collected at 0.5 feet bgs indicated all COC concentrations were compliant with Site Closure Criteria, successfully defining the lateral extent of the release. Delineation soil samples SS03 and SS04, collected at 0.5 feet bgs within the release extent, indicated TPH concentrations exceeded Site Closure Criteria. Delineation soil samples collected from 0.5 feet and 1 feet bgs in PH01 and PH02 indicated TPH concentrations exceeded Site Closure Criteria. The samples collected from the terminal depths of PH01 and PH02 (4 feet and 3 feet respectively) indicated all COCs were compliant with Site Closure Criteria, successfully defining the vertical extent of the release.

Laboratory analytical results for all excavation confirmation soil samples, FS01 through FS03 and SW01 and SW02, were in compliance with Site Closure Criteria. Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included in Appendix D.

DEFFERAL REQUEST

XTO is requesting deferral of final remediation due to the presence of active production equipment and aboveground pipelines preventing full removal of impacted soil. The impacted soil is limited to the area between active production equipment, where remediation would require a major facility deconstruction. The impacted soil remaining in place is delineated vertically by delineation soil sample PH01D at 3 feet bgs. The soil is laterally delineated by delineation soil samples SS01, SS02, SS05, and SS08 through SS11.

XTO does not believe deferment will result in imminent risk to human health, the environment, or groundwater. The impacted soil remaining in place is limited in lateral and vertical extent.

Based on the presence of active production equipment within the release area and the complete lateral and vertical delineation of impacted soil remaining in place, XTO requests deferral of final remediation for Incident Number nAPP2422260664 until final reclamation of the well pad or major construction, whichever comes first.

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

Sincerely,
Ensolum, LLC

Tracy Hillard
Project Engineer

Ashley Ager, PG, MS
Program Director

cc: Colton Brown, XTO
Kaylan Dirkx, XTO
Bureau of Land Management

Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Figure 4	Requested Deferral Area
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

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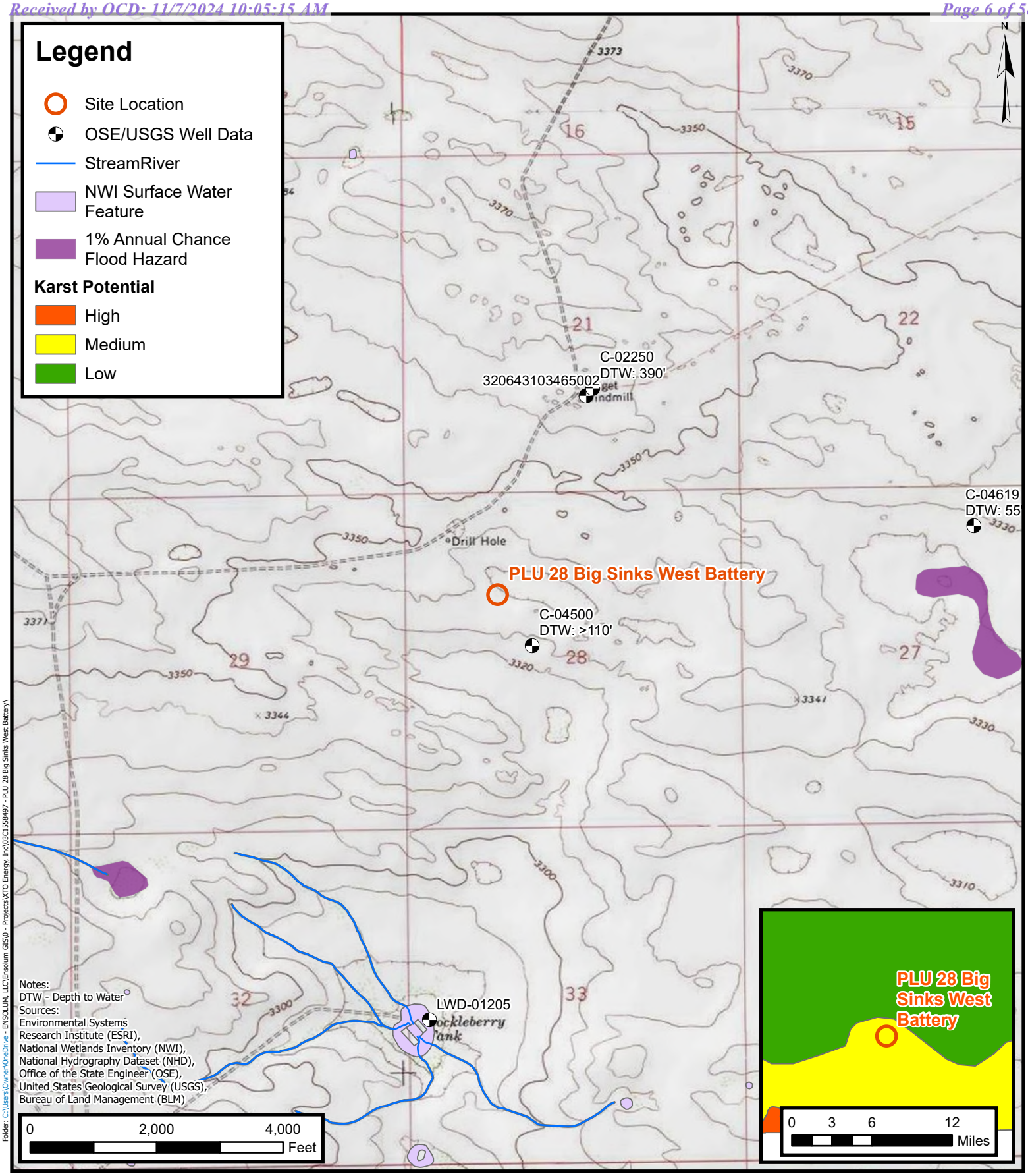
FIGURES



Folder: C:\Users\Owner\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\XTO Energy, Inc\03C1558497 - PLU 28 Big Sinks West Battery\

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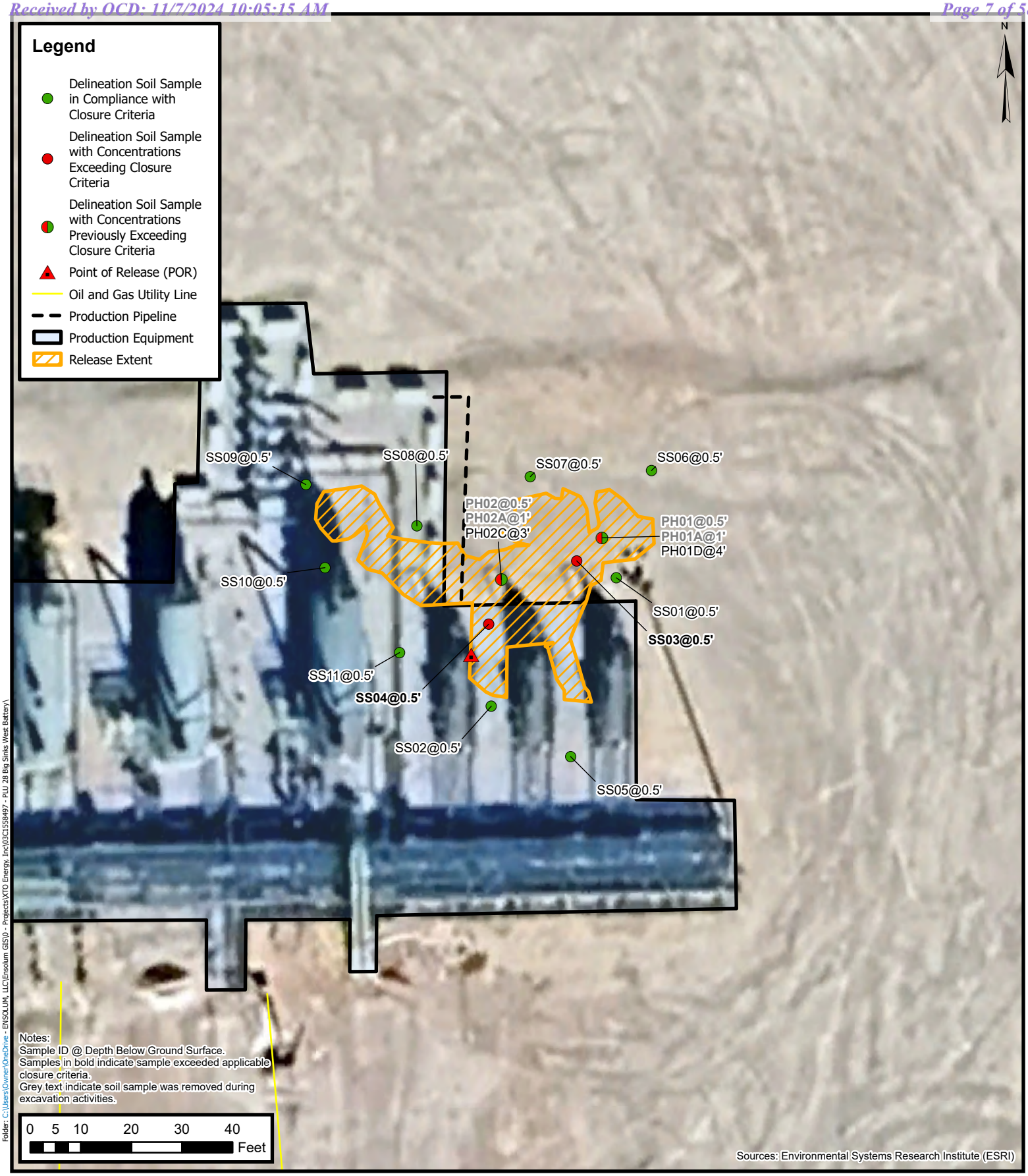
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

XTO Energy, Inc
PLU 28 Big Sinks West Battery
Incident Number: nAPP2422260664
Unit F, Sec 28, T 25S, R 31E
Eddy County, New Mexico

FIGURE 1



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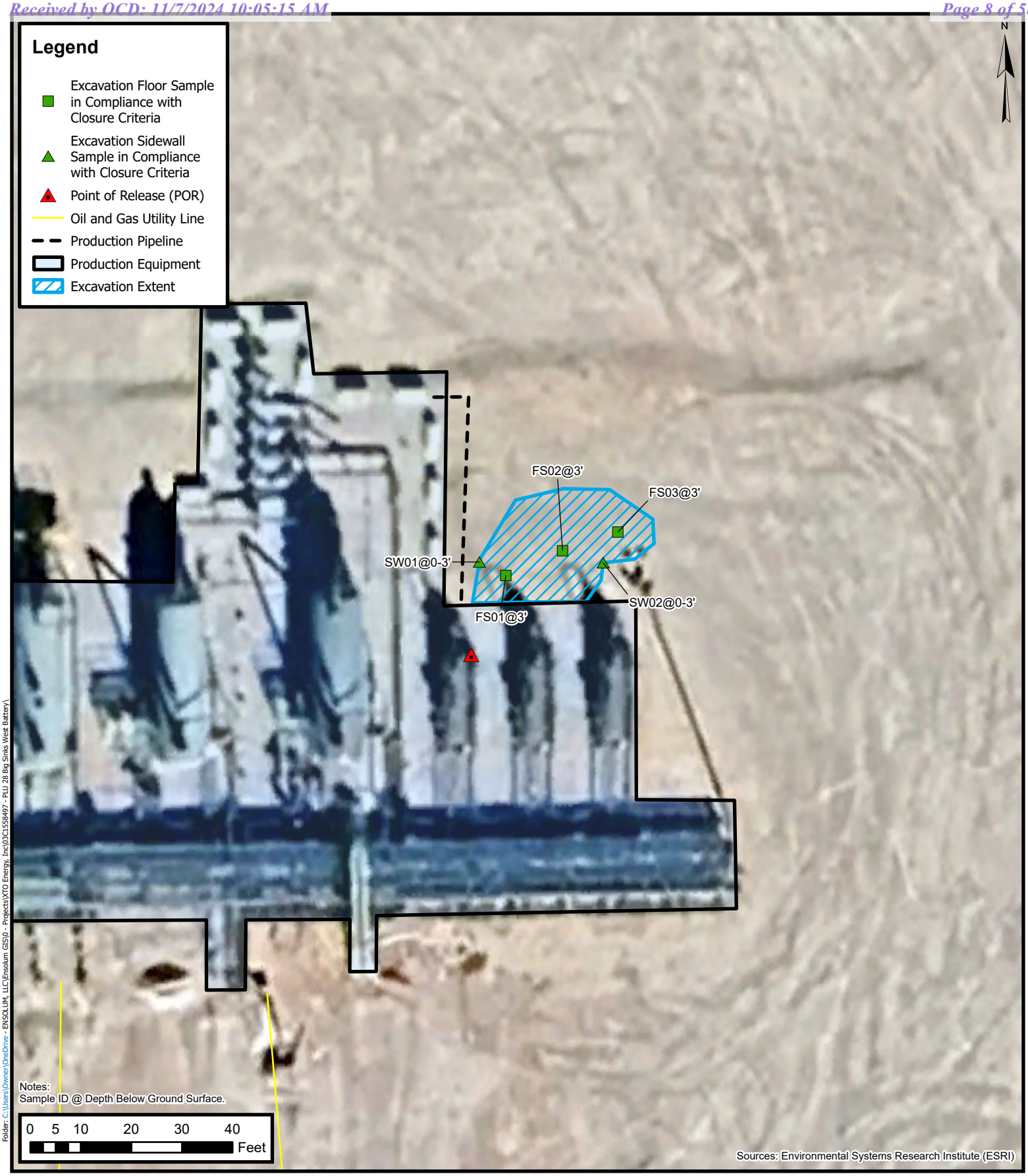
Delineation Soil Sample Locations

XTO Energy, Inc
PLU 28 Big Sinks West Battery
Incident Number: nAPP2422260664
Unit F, Sec 28, T 25S, R 31E
Eddy County, New Mexico

FIGURE 2



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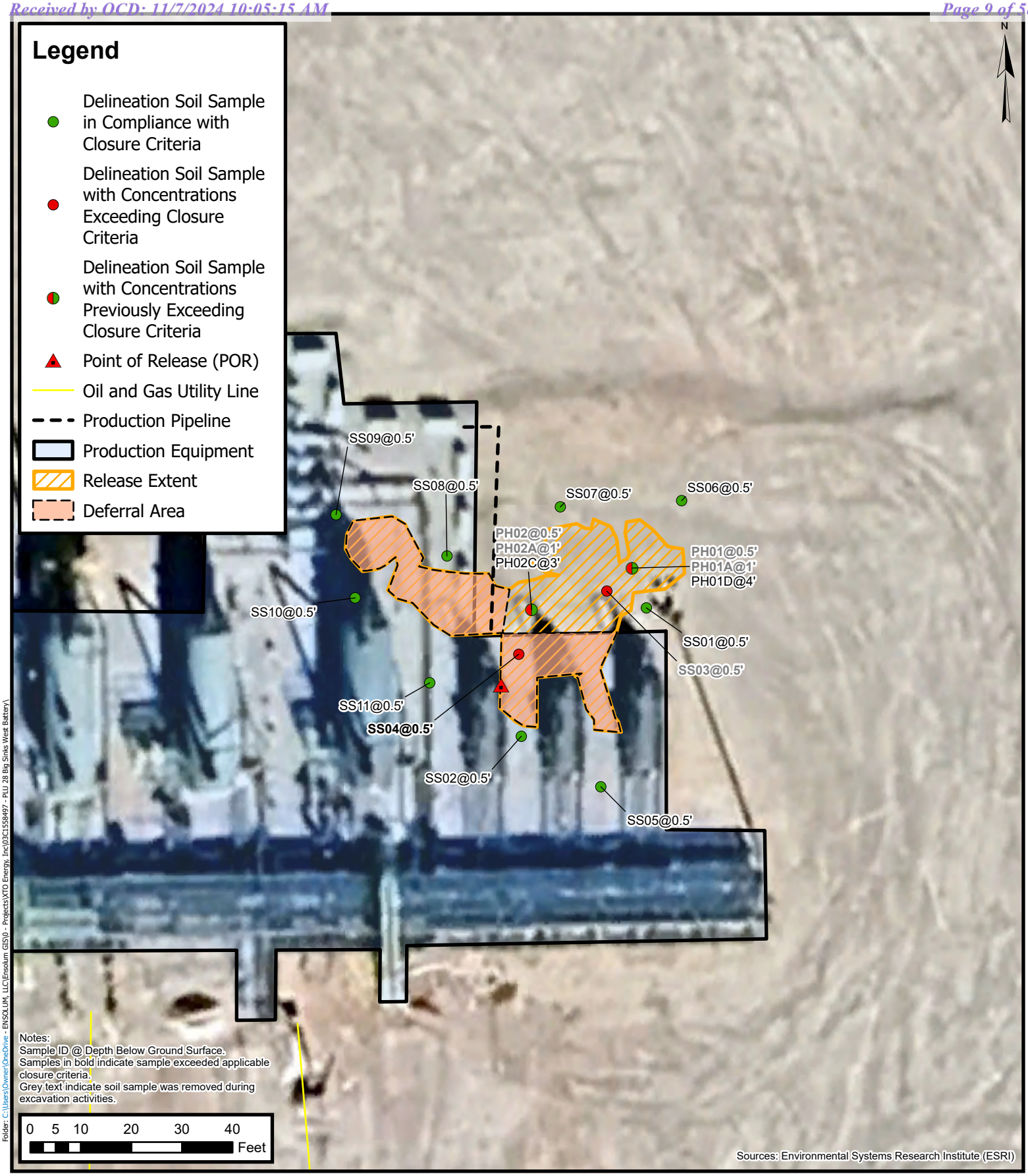
Excavation Soil Sample Locations

XTO Energy, Inc
PLU 28 Big Sinks West Battery
Incident Number: nAPP2422260664
Unit F, Sec 28, T 25S, R 31E
Eddy County, New Mexico

FIGURE 3



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Environmental, Engineering and Hydrogeologic Consultants

Requested Deferral Area

XTO Energy, Inc
PLU 28 Big Sinks West Battery
Incident Number: nAPP2422260664
Unit F, Sec 28, T 25S, R 31E
Eddy County, New Mexico

FIGURE 4

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
PLU 28 BIG SINKS WEST BATTERY
XTO Energy, Inc.
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
Delineation Soil Samples										
SS01	8/19/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
SS02	8/19/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
~~SS03~~	~~8/19/2024~~	~~0.5~~	~~<0.050~~	~~<0.300~~	~~<10.0~~	~~85.2~~	~~20.1~~	~~85.2~~	~~**105**~~	~~32.0~~
SS04	8/19/2024	0.5	<0.050	<0.300	<10.0	123	31.2	123	**154**	<16.0
SS05	10/31/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS06	10/31/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
SS07	10/31/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144
SS08	10/31/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
SS09	10/31/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SS10	10/31/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	160
SS11	10/31/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
~~PH01~~	~~10/31/2024~~	~~0.5~~	~~<1.00~~	~~**111**~~	~~1,900~~	~~5,760~~	~~491~~	~~**7,660**~~	~~**8,151**~~	~~368~~
~~PH01A~~	~~10/31/2024~~	~~1~~	~~<1.00~~	~~**85.2**~~	~~1,760~~	~~6,270~~	~~589~~	~~**8,030**~~	~~**8,619**~~	~~480~~
PH01D	10/31/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
~~PH02~~	~~10/31/2024~~	~~0.5~~	~~<0.050~~	~~<0.300~~	~~29.9~~	~~1,780~~	~~183~~	~~**1,810**~~	~~**1,993**~~	~~**3,360**~~
~~PH02A~~	~~10/31/2024~~	~~1~~	~~<0.050~~	~~<0.300~~	~~<10.0~~	~~117~~	~~<10.0~~	~~117~~	~~**117**~~	~~**1,390**~~
PH02C	10/31/2024	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
Excavation Soil Samples										
FS01	10/31/2024	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
FS02	10/31/2024	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS03	10/31/2024	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW01	10/31/2024	0-3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
SW02	10/31/2024	0-3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0

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

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APPENDIX A

Referenced Well Records

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
POD1 (BH-01)	n/a	C-4500

WELL OWNER NAME(S)	PHONE (OPTIONAL)
XTO Energy (Kyle Littrell)	

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
6401 Holiday Hill Dr.	Midland	TX	79707

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32	6	6.96	N
	LONGITUDE	103	47	6.75	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

SE NW Sec. 28 T25S R31E

2. DRILLING & CASING INFORMATION

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
1249	Jackie D. Atkins	Atkins Engineering Associates, Inc.

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
03/24/2021	03/24/2021	temporary well material	110	n/a

COMPLETED WELL IS: ☐ ARTESIAN ☑ DRY HOLE ☐ SHALLOW (UNCONFINED) — STATIC WATER LEVEL IN COMPLETED WELL (FT): n/a

DRILLING FLUID: ☐ AIR ☐ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ☐ ROTARY ☐ HAMMER ☐ CABLE TOOL ☑ OTHER – SPECIFY: Hollow Stem Auger

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	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)
0	110	±6.5	Boring- HSA	--	--	--	--

OSE DIT MAY 9 2021 RECEIVED

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/30/17)

FILE NO.	C-4500	POD NO.	1	TRN NO.	682534
LOCATION	Exp 25S.31E.28.144			WELL TAG ID NO.	—

PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	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)
0	1	1	Caliche, no odor, no stain, tan, light-brown	Y ✓ N	
1	3	2	Sand, no odor, no stain, m-f, well sorted, brown, trace silt, low consolidation	Y ✓ N	
3	7	4	Sandy clay, no odor, no stain, m-f, brown, well sorted, low plasticity, cohesive	Y ✓ N	
7	23	16	Caliche,tan, light brown sand, m-f grained, poorly sorted, low consolidation	Y ✓ N	
23	110	87	sand, brown, no odor, no stain, fine grained, well sorted, low consolidation	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	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☐ PUMP ☐ AIR LIFT ☐ BAILER ☐ 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: PLU 28 BS 126H, 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.

RECEIVED OSE NOV 5 2021 PM4:00

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:

Jack Atkins — Jackie D. Atkins — 05/05/2021

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/30/2017)

FILE NO. C-4500	POD NO. 1	TRN NO. 682534
LOCATION	WELL TAG ID NO.	PAGE 2 OF 2

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APPENDIX B

Photographic Log

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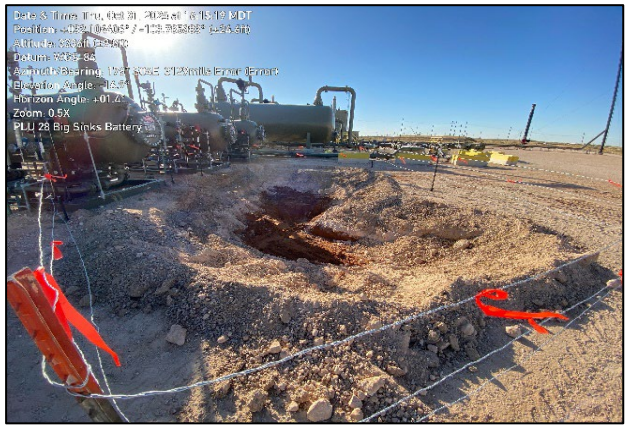
Photographic Log
XTO Energy, Inc
PLU 28 Big Sinks West Battery
nAPP2422260664

Photograph: 1 Date: 8/19/2024
Description: Soil staining in release footprint
View: Southwest

Photograph: 2 Date: 10/31/2024
Description: Delineation activities
View: South



Photograph: 3 Date: 10/31/2024
Description: Final excavation extent
View: West

Photograph: 4 Date: 10/31/2024
Description: Final excavation extent
View: East

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APPENDIX C

Lithologic Soil Sampling Logs

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	Sample Name: PH01	Date: 10/31/2024
	Site Name: PLU 28 Big Sinks West Battery	
	Incident Number: NAPP2422260664	
	Job Number: 03C1558497	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Sherele Brooks	Method: Trackhoe
Coordinates: 32.104421, -103.785949	Hole Diameter: 3'	Total Depth: 4'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A 40% correction factor is included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	CCHE	(0-0.5') CALICHE, tan, poorly graded
10%	370	907.8	Y	PH01	0.5		SW	(0.5-3') SAND, brown/tan, well graded, with gravel
10%	286	845.4	Y	PH01A	1	1		
0%	<168	114.7	Y			2	SW	(@2') some orange hue sand with clay and gravel
0%	<168	22.3	N			3	SC	(3-4') SAND, red, poorly graded, with clay
0%	<168	8.4	N	PH01D	4	4		

Total Depth 4' bgs

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	Sample Name: PH02	Date: 10/31/2024
	Site Name: PLU 28 Big Sinks West Battery	
	Incident Number: NAPP2422260664	
	Job Number: 03C1558497	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Sherele Brooks	Method: Trackhoe
Coordinates: 32.104398, -103.786014	Hole Diameter: 3'	Total Depth: 3'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A 40% correction factor is included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	CCHE	(0-0.5') CALICHE, tan, poorly graded
10%	3,590	857	Y	PH02	0.5		SW	(0.5-3') SAND, brown/tan, well graded, with gravel
10%	1,400	54.7	Y	PH02A	1	1		
0%	<168	10.0	N			2	SW	(@2') some orange hue sand with clay and gravel
0%	<168	1.7	N	PH02C	3	3	SC	(3') SAND, red, poorly graded, with clay

Total Depth 3' bgs

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APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

CARDINAL Laboratories

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

August 22, 2024

TRACY HILLARD

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: PLU 28 BIG SINKS WEST BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 08/19/24 16:33.

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

Cardinal Laboratories is accreditated 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,

Mike Snyder For Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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:	08/19/2024	Sampling Date:	08/19/2024
Reported:	08/22/2024	Sampling Type:	Soil
Project Name:	PLU 28 BIG SINKS WEST BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558497	Sample Received By:	Tamara Oldaker
Project Location:	32.20425, -103.78592		

Sample ID: SS 01 0.5' (H245031-01)

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	08/21/2024	ND	2.16	108	2.00	7.02	
Toluene*	<0.050	0.050	08/21/2024	ND	2.27	114	2.00	8.26	
Ethylbenzene*	<0.050	0.050	08/21/2024	ND	2.32	116	2.00	8.21	
Total Xylenes*	<0.150	0.150	08/21/2024	ND	6.93	115	6.00	8.39	
Total BTEX	<0.300	0.300	08/21/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *113 %* *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	**64.0**	16.0	08/21/2024	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/21/2024	ND	214	107	200	1.72	
DRO >C10-C28*	<10.0	10.0	08/21/2024	ND	209	105	200	2.31	
EXT DRO >C28-C36	<10.0	10.0	08/21/2024	ND					

Surrogate: 1-Chlorooctane *80.5 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *91.9 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

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

CARDINAL Laboratories

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:	08/19/2024	Sampling Date:	08/19/2024
Reported:	08/22/2024	Sampling Type:	Soil
Project Name:	PLU 28 BIG SINKS WEST BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558497	Sample Received By:	Tamara Oldaker
Project Location:	32.20425, -103.78592		

Sample ID: SS 02 0.5' (H245031-02)

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	08/21/2024	ND	2.16	108	2.00	7.02	
Toluene*	<0.050	0.050	08/21/2024	ND	2.27	114	2.00	8.26	
Ethylbenzene*	<0.050	0.050	08/21/2024	ND	2.32	116	2.00	8.21	
Total Xylenes*	<0.150	0.150	08/21/2024	ND	6.93	115	6.00	8.39	
Total BTEX	<0.300	0.300	08/21/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *112 %* *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	<16.0	16.0	08/21/2024	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/21/2024	ND	214	107	200	1.72	
DRO >C10-C28*	<10.0	10.0	08/21/2024	ND	209	105	200	2.31	
EXT DRO >C28-C36	<10.0	10.0	08/21/2024	ND					

Surrogate: 1-Chlorooctane *79.8 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *93.7 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

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

CARDINAL Laboratories

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:	08/19/2024	Sampling Date:	08/19/2024
Reported:	08/22/2024	Sampling Type:	Soil
Project Name:	PLU 28 BIG SINKS WEST BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558497	Sample Received By:	Tamara Oldaker
Project Location:	32.20425, -103.78592		

Sample ID: SS 03 0.5' (H245031-03)

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	08/21/2024	ND	2.16	108	2.00	7.02	
Toluene*	<0.050	0.050	08/21/2024	ND	2.27	114	2.00	8.26	
Ethylbenzene*	<0.050	0.050	08/21/2024	ND	2.32	116	2.00	8.21	
Total Xylenes*	<0.150	0.150	08/21/2024	ND	6.93	115	6.00	8.39	
Total BTEX	<0.300	0.300	08/21/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *111 %* *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	08/21/2024	ND	432	108	400	0.00	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/21/2024	ND	214	107	200	1.72	
DRO >C10-C28*	**85.2**	10.0	08/21/2024	ND	209	105	200	2.31	
EXT DRO >C28-C36	**20.1**	10.0	08/21/2024	ND					

Surrogate: 1-Chlorooctane *91.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *110 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

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

CARDINAL Laboratories

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:	08/19/2024	Sampling Date:	08/19/2024
Reported:	08/22/2024	Sampling Type:	Soil
Project Name:	PLU 28 BIG SINKS WEST BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558497	Sample Received By:	Tamara Oldaker
Project Location:	32.20425, -103.78592		

Sample ID: SS 04 0.5' (H245031-04)

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	08/21/2024	ND	2.16	108	2.00	7.02	
Toluene*	<0.050	0.050	08/21/2024	ND	2.27	114	2.00	8.26	
Ethylbenzene*	<0.050	0.050	08/21/2024	ND	2.32	116	2.00	8.21	
Total Xylenes*	<0.150	0.150	08/21/2024	ND	6.93	115	6.00	8.39	
Total BTEX	<0.300	0.300	08/21/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *113 %* *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	<16.0	16.0	08/21/2024	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/21/2024	ND	214	107	200	1.72	
DRO >C10-C28*	**123**	10.0	08/21/2024	ND	209	105	200	2.31	
EXT DRO >C28-C36	**31.2**	10.0	08/21/2024	ND					

Surrogate: 1-Chlorooctane *92.3 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *110 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

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

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories *=Accredited Analyte

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

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Ensolum, LLC
Project Manager:	Tracy Hillard
Address:	601 N. Marienfeld St. STE 400
City:	Midland State: TX Zip: 79701
Phone #:	575-937-3906 Fax #:
Project #:	03C1558497 Project Owner:
Project Name:	PLU 28 Big Sinks West Battery
Project Location:	32.10425, -103.78592
Sampler Name:	M. O'Dell

BILL TO

P.O. #:	
Company:	XTO Energy
Attn:	Amy Ruth
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.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	Chlorides	TPH	BTEX
H245031																		
1	SS01	0.5'	G	1			X					X		8/19/24	10:00	X	X	X
2	SS02														10:05			
3	SS03														10:10			
4	SS04														10:15			

MD

Relinquished By:	Date: 8/19/24	Received By:	
	Time: 16:33		
Relinquished By:	Date:	Received By:	
	Time:		

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

All Results are emailed. Please provide Email address:

~~BJennings@ensolum.com~~ tmorrissey@ensolum.com, bbeillie@ensolum.com, thillard@ensolum.com

REMARKS: Incident #: nAPP2422260664

Cost center: 219186100

Delivered By: (Circle One)	Observed Temp. °C 1.6	Sample Condition: Cool Yes, Intact Yes	CHECKED BY: (Initials)	Turnaround Time: ☑ Standard ☐ Rush
Sampler - UPS - Bus - Other:	Corrected Temp. °C 1.0	☐ No ☐ No		Thermometer ID #140 (#113) Correction Factor -0.5°C -0.6°C

Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No, Intact ☐ Yes ☐ No, Observed Temp. °C, Corrected Temp. °C

FORM-006 R 3.2 10/07/21

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

CARDINAL Laboratories

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

November 04, 2024

TRACY HILLARD

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: PLU 28 BS WEST BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 11/01/24 12:00.

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.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	11/01/2024	Sampling Date:	10/31/2024
Reported:	11/04/2024	Sampling Type:	Soil
Project Name:	PLU 28 BS WEST BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558497	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: FS 01 3' (H246676-01)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/02/2024	ND	1.94	97.1	2.00	2.01	
Toluene*	<0.050	0.050	11/02/2024	ND	2.01	101	2.00	1.70	
Ethylbenzene*	<0.050	0.050	11/02/2024	ND	2.02	101	2.00	1.23	
Total Xylenes*	<0.150	0.150	11/02/2024	ND	6.03	100	6.00	1.18	
Total BTEX	<0.300	0.300	11/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *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	**48.0**	16.0	11/02/2024	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	11/01/2024	ND	213	107	200	2.87	
DRO >C10-C28*	<10.0	10.0	11/01/2024	ND	217	109	200	1.01	
EXT DRO >C28-C36	<10.0	10.0	11/01/2024	ND					

Surrogate: 1-Chlorooctane *102 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *99.0 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	11/01/2024	Sampling Date:	10/31/2024
Reported:	11/04/2024	Sampling Type:	Soil
Project Name:	PLU 28 BS WEST BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558497	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: FS 02 3' (H246676-02)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/02/2024	ND	1.94	97.1	2.00	2.01	
Toluene*	<0.050	0.050	11/02/2024	ND	2.01	101	2.00	1.70	
Ethylbenzene*	<0.050	0.050	11/02/2024	ND	2.02	101	2.00	1.23	
Total Xylenes*	<0.150	0.150	11/02/2024	ND	6.03	100	6.00	1.18	
Total BTEX	<0.300	0.300	11/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *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	11/02/2024	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	11/01/2024	ND	213	107	200	2.87	
DRO >C10-C28*	<10.0	10.0	11/01/2024	ND	217	109	200	1.01	
EXT DRO >C28-C36	<10.0	10.0	11/01/2024	ND					

Surrogate: 1-Chlorooctane *94.1 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *93.2 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	11/01/2024	Sampling Date:	10/31/2024
Reported:	11/04/2024	Sampling Type:	Soil
Project Name:	PLU 28 BS WEST BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558497	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: FS 03 3' (H246676-03)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/02/2024	ND	1.94	97.1	2.00	2.01	
Toluene*	<0.050	0.050	11/02/2024	ND	2.01	101	2.00	1.70	
Ethylbenzene*	<0.050	0.050	11/02/2024	ND	2.02	101	2.00	1.23	
Total Xylenes*	<0.150	0.150	11/02/2024	ND	6.03	100	6.00	1.18	
Total BTEX	<0.300	0.300	11/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *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	11/02/2024	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	11/01/2024	ND	213	107	200	2.87	
DRO >C10-C28*	<10.0	10.0	11/01/2024	ND	217	109	200	1.01	
EXT DRO >C28-C36	<10.0	10.0	11/01/2024	ND					

Surrogate: 1-Chlorooctane *95.6 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *92.9 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	11/01/2024	Sampling Date:	10/31/2024
Reported:	11/04/2024	Sampling Type:	Soil
Project Name:	PLU 28 BS WEST BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558497	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: SW 01 0-3' (H246676-04)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/02/2024	ND	1.94	97.1	2.00	2.01	
Toluene*	<0.050	0.050	11/02/2024	ND	2.01	101	2.00	1.70	
Ethylbenzene*	<0.050	0.050	11/02/2024	ND	2.02	101	2.00	1.23	
Total Xylenes*	<0.150	0.150	11/02/2024	ND	6.03	100	6.00	1.18	
Total BTEX	<0.300	0.300	11/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *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	**64.0**	16.0	11/02/2024	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	11/01/2024	ND	213	107	200	2.87	
DRO >C10-C28*	<10.0	10.0	11/01/2024	ND	217	109	200	1.01	
EXT DRO >C28-C36	<10.0	10.0	11/01/2024	ND					

Surrogate: 1-Chlorooctane *91.1 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *91.5 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	11/01/2024	Sampling Date:	10/31/2024
Reported:	11/04/2024	Sampling Type:	Soil
Project Name:	PLU 28 BS WEST BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558497	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: SW 02 0-3' (H246676-05)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/02/2024	ND	1.94	97.1	2.00	2.01	
Toluene*	<0.050	0.050	11/02/2024	ND	2.01	101	2.00	1.70	
Ethylbenzene*	<0.050	0.050	11/02/2024	ND	2.02	101	2.00	1.23	
Total Xylenes*	<0.150	0.150	11/02/2024	ND	6.03	100	6.00	1.18	
Total BTEX	<0.300	0.300	11/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *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	**80.0**	16.0	11/02/2024	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	11/01/2024	ND	213	107	200	2.87	
DRO >C10-C28*	<10.0	10.0	11/01/2024	ND	217	109	200	1.01	
EXT DRO >C28-C36	<10.0	10.0	11/01/2024	ND					

Surrogate: 1-Chlorooctane *96.3 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *93.3 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	11/01/2024	Sampling Date:	10/31/2024
Reported:	11/04/2024	Sampling Type:	Soil
Project Name:	PLU 28 BS WEST BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558497	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: SS 05 0.5' (H246676-06)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/02/2024	ND	1.94	97.1	2.00	2.01	
Toluene*	<0.050	0.050	11/02/2024	ND	2.01	101	2.00	1.70	
Ethylbenzene*	<0.050	0.050	11/02/2024	ND	2.02	101	2.00	1.23	
Total Xylenes*	<0.150	0.150	11/02/2024	ND	6.03	100	6.00	1.18	
Total BTEX	<0.300	0.300	11/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *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	11/02/2024	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	11/01/2024	ND	213	107	200	2.87	
DRO >C10-C28*	<10.0	10.0	11/01/2024	ND	217	109	200	1.01	
EXT DRO >C28-C36	<10.0	10.0	11/01/2024	ND					

Surrogate: 1-Chlorooctane *95.3 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *90.9 %* *49.1-148*

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CARDINAL Laboratories

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

Analytical Results For:

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

Received:	11/01/2024	Sampling Date:	10/31/2024
Reported:	11/04/2024	Sampling Type:	Soil
Project Name:	PLU 28 BS WEST BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558497	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: SS 07 0.5' (H246676-07)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/02/2024	ND	1.94	97.1	2.00	2.01	
Toluene*	<0.050	0.050	11/02/2024	ND	2.01	101	2.00	1.70	
Ethylbenzene*	<0.050	0.050	11/02/2024	ND	2.02	101	2.00	1.23	
Total Xylenes*	<0.150	0.150	11/02/2024	ND	6.03	100	6.00	1.18	
Total BTEX	<0.300	0.300	11/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *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	**144**	16.0	11/02/2024	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	11/02/2024	ND	213	107	200	2.87	
DRO >C10-C28*	<10.0	10.0	11/02/2024	ND	217	109	200	1.01	
EXT DRO >C28-C36	<10.0	10.0	11/02/2024	ND					

Surrogate: 1-Chlorooctane *91.1 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *85.3 %* *49.1-148*

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CARDINAL Laboratories

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

Analytical Results For:

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

Received:	11/01/2024	Sampling Date:	10/31/2024
Reported:	11/04/2024	Sampling Type:	Soil
Project Name:	PLU 28 BS WEST BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558497	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: SS 08 0.5' (H246676-08)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/02/2024	ND	1.94	97.1	2.00	2.01	
Toluene*	<0.050	0.050	11/02/2024	ND	2.01	101	2.00	1.70	
Ethylbenzene*	<0.050	0.050	11/02/2024	ND	2.02	101	2.00	1.23	
Total Xylenes*	<0.150	0.150	11/02/2024	ND	6.03	100	6.00	1.18	
Total BTEX	<0.300	0.300	11/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *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	**80.0**	16.0	11/02/2024	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	11/02/2024	ND	213	107	200	2.87	
DRO >C10-C28*	<10.0	10.0	11/02/2024	ND	217	109	200	1.01	
EXT DRO >C28-C36	<10.0	10.0	11/02/2024	ND					

Surrogate: 1-Chlorooctane *91.3 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *87.9 %* *49.1-148*

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

Analytical Results For:

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

Received:	11/01/2024	Sampling Date:	10/31/2024
Reported:	11/04/2024	Sampling Type:	Soil
Project Name:	PLU 28 BS WEST BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558497	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: SS 09 0.5' (H246676-09)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/02/2024	ND	2.12	106	2.00	4.62	
Toluene*	<0.050	0.050	11/02/2024	ND	2.06	103	2.00	5.05	
Ethylbenzene*	<0.050	0.050	11/02/2024	ND	2.07	104	2.00	5.61	
Total Xylenes*	<0.150	0.150	11/02/2024	ND	6.18	103	6.00	6.01	
Total BTEX	<0.300	0.300	11/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.9 %* *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	**16.0**	16.0	11/02/2024	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	11/02/2024	ND	213	107	200	2.87	
DRO >C10-C28*	<10.0	10.0	11/02/2024	ND	217	109	200	1.01	
EXT DRO >C28-C36	<10.0	10.0	11/02/2024	ND					

Surrogate: 1-Chlorooctane *88.1 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *83.3 %* *49.1-148*

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Analytical Results For:

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

Received:	11/01/2024	Sampling Date:	10/31/2024
Reported:	11/04/2024	Sampling Type:	Soil
Project Name:	PLU 28 BS WEST BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558497	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: SS 10 0.5' (H246676-10)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/02/2024	ND	2.12	106	2.00	4.62	
Toluene*	<0.050	0.050	11/02/2024	ND	2.06	103	2.00	5.05	
Ethylbenzene*	<0.050	0.050	11/02/2024	ND	2.07	104	2.00	5.61	
Total Xylenes*	<0.150	0.150	11/02/2024	ND	6.18	103	6.00	6.01	
Total BTEX	<0.300	0.300	11/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.8 %* *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	**160**	16.0	11/02/2024	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	11/02/2024	ND	213	107	200	2.87	
DRO >C10-C28*	<10.0	10.0	11/02/2024	ND	217	109	200	1.01	
EXT DRO >C28-C36	<10.0	10.0	11/02/2024	ND					

Surrogate: 1-Chlorooctane *91.4 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *87.5 %* *49.1-148*

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Analytical Results For:

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

Received:	11/01/2024	Sampling Date:	10/31/2024
Reported:	11/04/2024	Sampling Type:	Soil
Project Name:	PLU 28 BS WEST BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558497	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: SS 11 0.5' (H246676-11)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/02/2024	ND	2.12	106	2.00	4.62	
Toluene*	<0.050	0.050	11/02/2024	ND	2.06	103	2.00	5.05	
Ethylbenzene*	<0.050	0.050	11/02/2024	ND	2.07	104	2.00	5.61	
Total Xylenes*	<0.150	0.150	11/02/2024	ND	6.18	103	6.00	6.01	
Total BTEX	<0.300	0.300	11/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.0 %* *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	**48.0**	16.0	11/02/2024	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	11/02/2024	ND	213	107	200	2.87	
DRO >C10-C28*	<10.0	10.0	11/02/2024	ND	217	109	200	1.01	
EXT DRO >C28-C36	<10.0	10.0	11/02/2024	ND					

Surrogate: 1-Chlorooctane *93.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *89.7 %* *49.1-148*

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CARDINAL Laboratories

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

Analytical Results For:

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

Received:	11/01/2024	Sampling Date:	10/31/2024
Reported:	11/04/2024	Sampling Type:	Soil
Project Name:	PLU 28 BS WEST BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558497	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: SS 06 0.5' (H246676-12)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/02/2024	ND	2.12	106	2.00	4.62	
Toluene*	<0.050	0.050	11/02/2024	ND	2.06	103	2.00	5.05	
Ethylbenzene*	<0.050	0.050	11/02/2024	ND	2.07	104	2.00	5.61	
Total Xylenes*	<0.150	0.150	11/02/2024	ND	6.18	103	6.00	6.01	
Total BTEX	<0.300	0.300	11/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.6 %* *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	**96.0**	16.0	11/02/2024	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	11/01/2024	ND	198	99.1	200	3.45	
DRO >C10-C28*	<10.0	10.0	11/01/2024	ND	200	100	200	6.95	
EXT DRO >C28-C36	<10.0	10.0	11/01/2024	ND					

Surrogate: 1-Chlorooctane *87.4 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *64.3 %* *49.1-148*

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CARDINAL Laboratories

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

Analytical Results For:

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

Received:	11/01/2024	Sampling Date:	10/31/2024
Reported:	11/04/2024	Sampling Type:	Soil
Project Name:	PLU 28 BS WEST BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558497	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: PH 01 0.5' (H246676-13)

BTEX 8021B mg/kg Analyzed By: JH S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<1.00	1.00	11/02/2024	ND	2.12	106	2.00	4.62	
Toluene*	**6.11**	1.00	11/02/2024	ND	2.06	103	2.00	5.05	GC-NC1
Ethylbenzene*	**5.94**	1.00	11/02/2024	ND	2.07	104	2.00	5.61	GC-NC1
Total Xylenes*	**99.1**	3.00	11/02/2024	ND	6.18	103	6.00	6.01	
Total BTEX	**111**	6.00	11/02/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID *153 %* *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	**368**	16.0	11/02/2024	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**1900**	10.0	11/01/2024	ND	198	99.1	200	3.45	
DRO >C10-C28*	**5760**	10.0	11/01/2024	ND	200	100	200	6.95	
EXT DRO >C28-C36	**491**	10.0	11/01/2024	ND					

Surrogate: 1-Chlorooctane *163 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *114 %* *49.1-148*

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Analytical Results For:

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

Received:	11/01/2024	Sampling Date:	10/31/2024
Reported:	11/04/2024	Sampling Type:	Soil
Project Name:	PLU 28 BS WEST BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558497	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: PH 01A 1' (H246676-14)

BTEX 8021B mg/kg Analyzed By: JH S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<1.00	1.00	11/02/2024	ND	2.12	106	2.00	4.62	
Toluene*	**4.60**	1.00	11/02/2024	ND	2.06	103	2.00	5.05	GC-NC1
Ethylbenzene*	**3.93**	1.00	11/02/2024	ND	2.07	104	2.00	5.61	GC-NC1
Total Xylenes*	**76.7**	3.00	11/02/2024	ND	6.18	103	6.00	6.01	
Total BTEX	**85.2**	6.00	11/02/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID *147 %* *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	**480**	16.0	11/02/2024	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**1760**	10.0	11/01/2024	ND	198	99.1	200	3.45	
DRO >C10-C28*	**6270**	10.0	11/01/2024	ND	200	100	200	6.95	
EXT DRO >C28-C36	**589**	10.0	11/01/2024	ND					

Surrogate: 1-Chlorooctane *164 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *123 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	11/01/2024	Sampling Date:	10/31/2024
Reported:	11/04/2024	Sampling Type:	Soil
Project Name:	PLU 28 BS WEST BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558497	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: PH 01D 4' (H246676-15)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/02/2024	ND	2.12	106	2.00	4.62	
Toluene*	<0.050	0.050	11/02/2024	ND	2.06	103	2.00	5.05	
Ethylbenzene*	<0.050	0.050	11/02/2024	ND	2.07	104	2.00	5.61	
Total Xylenes*	<0.150	0.150	11/02/2024	ND	6.18	103	6.00	6.01	
Total BTEX	<0.300	0.300	11/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *100 %* *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	**16.0**	16.0	11/02/2024	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	11/01/2024	ND	198	99.1	200	3.45	
DRO >C10-C28*	<10.0	10.0	11/01/2024	ND	200	100	200	6.95	
EXT DRO >C28-C36	<10.0	10.0	11/01/2024	ND					

Surrogate: 1-Chlorooctane *102 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *88.5 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	11/01/2024	Sampling Date:	10/31/2024
Reported:	11/04/2024	Sampling Type:	Soil
Project Name:	PLU 28 BS WEST BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558497	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: PH 02 0.5' (H246676-16)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/02/2024	ND	2.12	106	2.00	4.62	
Toluene*	<0.050	0.050	11/02/2024	ND	2.06	103	2.00	5.05	
Ethylbenzene*	<0.050	0.050	11/02/2024	ND	2.07	104	2.00	5.61	
Total Xylenes*	**0.245**	0.150	11/02/2024	ND	6.18	103	6.00	6.01	
Total BTEX	<0.300	0.300	11/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *116 %* *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	**3360**	16.0	11/02/2024	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*	**29.9**	10.0	11/01/2024	ND	198	99.1	200	3.45	
DRO >C10-C28*	**1780**	10.0	11/01/2024	ND	200	100	200	6.95	
EXT DRO >C28-C36	**183**	10.0	11/01/2024	ND					

Surrogate: 1-Chlorooctane *109 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *109 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	11/01/2024	Sampling Date:	10/31/2024
Reported:	11/04/2024	Sampling Type:	Soil
Project Name:	PLU 28 BS WEST BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558497	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: PH 02A 1' (H246676-17)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/02/2024	ND	2.12	106	2.00	4.62	
Toluene*	<0.050	0.050	11/02/2024	ND	2.06	103	2.00	5.05	
Ethylbenzene*	<0.050	0.050	11/02/2024	ND	2.07	104	2.00	5.61	
Total Xylenes*	<0.150	0.150	11/02/2024	ND	6.18	103	6.00	6.01	
Total BTEX	<0.300	0.300	11/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *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	**1390**	16.0	11/02/2024	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	11/01/2024	ND	198	99.1	200	3.45	
DRO >C10-C28*	**117**	10.0	11/01/2024	ND	200	100	200	6.95	
EXT DRO >C28-C36	<10.0	10.0	11/01/2024	ND					

Surrogate: 1-Chlorooctane *98.9 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *88.5 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	11/01/2024	Sampling Date:	10/31/2024
Reported:	11/04/2024	Sampling Type:	Soil
Project Name:	PLU 28 BS WEST BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558497	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: PH 02C 3' (H246676-18)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/02/2024	ND	2.12	106	2.00	4.62	
Toluene*	<0.050	0.050	11/02/2024	ND	2.06	103	2.00	5.05	
Ethylbenzene*	<0.050	0.050	11/02/2024	ND	2.07	104	2.00	5.61	
Total Xylenes*	<0.150	0.150	11/02/2024	ND	6.18	103	6.00	6.01	
Total BTEX	<0.300	0.300	11/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.3 %* *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	**64.0**	16.0	11/02/2024	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	11/01/2024	ND	198	99.1	200	3.45	
DRO >C10-C28*	<10.0	10.0	11/01/2024	ND	200	100	200	6.95	
EXT DRO >C28-C36	<10.0	10.0	11/01/2024	ND					

Surrogate: 1-Chlorooctane *105 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *91.9 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
GC-NC1	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are biased high with interfering compounds.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

1 of 4

CARDINAL Laboratories

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: 3122 National Parks Hwy
City: Carlsbad State: NM Zip: 88220
Phone #: 575-937-3906 Fax #:
Project #: 03C1558497 Project Owner:
Project Name: PLU 28 BS West Battery
Project Location:
Sampler Name: Sherele Brooks

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: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	Benzene	BTEX	TPH	Chloride
H246676		BS 10/31/24										✓							
1	FS01	3	C	1			X					X		10/31/24	14:05	X	X	X	X
2	FS02	1	1	1			1					1		1	14:50	1	1	1	1
3	FS03	1	1	1			1					1		1	14:55	1	1	1	1
4	SW01	0-3'	1	1			1					1		1	15:00	1	1	1	1
5	SW02	1	1	1			1					1		1	15:05	1	1	1	1

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Relinquished By: Sherele Brooks Date: 10/31/24 Time: 17:46
Received By:
Relinquished By: Date: 11-1-24 Time: 1200
Received By: Tamara Oldaker

Verbal Result: ☐ Yes ☐ No Add'l Phone #:
All Results are emailed. Please provide Email address: thillard@ensolum.com, kthomason@ensolum.com
REMARKS:

Delivered By: (Circle One) Sampler - UPS - Bus - Other:
Observed Temp. °C 5.7 Corrected Temp. °C 5.1
Sample Condition: Cool ☑ Yes ☐ No Intact ☑ Yes ☐ No
CHECKED BY: (Initials) TO

Turnaround Time: Standard ☐ Rush ☒ 24 hr
Thermometer ID #113 #140 Correction Factor -0.5°C 10.11/1/24
Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No Observed Temp. °C Corrected Temp. °C

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

FORM-006 R 3.2 10/07/21

CARDINAL Laboratories

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**
Project Manager: Tracy Hillard	P.O. #:
Address: 3122 National Parks Hwy	Company: XTO Energy Inc
City: Carlsbad State: NM Zip: 88220	Attn: Colton Brown
Phone #: 575-937-3906 Fax #:	Address: 3104 E Greene St.
Project #: 03C1558497 Project Owner:	City: Carlsbad
Project Name: PLU 28 BS West Battery	State: NM Zip: 88220
Project Location:	Phone #:
Sampler Name: Sherele Brooks	Fax #:

FOR LAB USE ONLY					MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST											
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	Benzene	BTEX	TPH	Chloride								
H244676	SB 10/31/24																										
6	X SS05	0.5'	G	1			X					X		10/31/24	12:45	X	X	X	X								
7	SS07	"	"	"			"					"		"	12:50	"	"	"	"								
8	SS08	"	"	"			"					"		"	12:52	"	"	"	"								
9	SS09	"	"	"			"					"		"	12:56	"	"	"	"								
10	SS10	"	"	"			"					"		"	12:58	"	"	"	"								
11	SS11	"	"	"			"					"		"	12:59	"	"	"	"								
12	SS06	"	"	"			"					"		"	13:58	"	"	"	"								

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Relinquished By: Sherele Brooks	Date: 10/31/24 Time: 17:46	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: 11-1-24 Time: 1200	Received By: Tamara Oldaker	All Results are emailed. Please provide Email address: thillard@ensolum.com, kthomason@ensolum.com
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 5.7 Corrected Temp. °C 5.1	Sample Condition Cool Yes No Intact Yes No	CHECKED BY: (Initials) TB

REMARKS:

Turnaround Time: 24 hr Standard ☐ Rush ☒ #140

Thermometer ID #413 Correction Factor -0.5°C

Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No Observed Temp. °C Corrected Temp. °C

To 11/1/24

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

FORM-006 R 3.2 10/07/21

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CARDINAL Laboratories

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: 3122 National Parks Hwy
City: Carlsbad State: NM Zip: 88220
Phone #: 575-937-3906 Fax #:
Project #: 03C1558497 Project Owner:
Project Name: PLU 28 BS West Battery
Project Location:
Sampler Name: Sherrell Brooks

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: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	Benzene	BTEX	TPH	Chloride
H246676																X	X	X	X
13	PH01	0.5'	G	1			X					X		10/31/24	09:59	1	1	1	1
14	PH01A	1'	1	1			1					1			10:00				
15	PH01D	4'	1	1			1					1		1	10:16	1	1	1	1

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Relinquished By:	Date:	Received By:
Sherrell Brooks	10/31/24 Time: 14:46	
Relinquished By:	Date: 11-1-24 Time: 1200	Received By: Tamara Oldaker

Delivered By: (Circle One) Sampler - UPS - Bus - Other:
Observed Temp. °C 5.7
Corrected Temp. °C 5.1
Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No
CHECKED BY: (Initials) TO

Verbal Result: ☐ Yes ☐ No Add'l Phone #:
All Results are emailed. Please provide Email address:
thillard@ensolum.com, kthomason@ensolum.com
REMARKS:
SB 10/31/24
Turnaround Time: 24 48 hr Standard ☐ Rush ☒
Thermometer ID #113 #140
Correction Factor -0.3°C
Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No; Intact ☐ Yes ☐ No
Observed Temp. °C
Corrected Temp. °C
TO 11/1/24

FORM-006 R 3.2 10/07/21

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CARDINAL Laboratories

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: 3122 National Parks Hwy
City: Carlsbad State: NM Zip: 88220
Phone #: 575-937-3906 Fax #:
Project #: 03C1558497 Project Owner:
Project Name: PLU 28 BS West Battery
Project Location:
Sampler Name: Sherde Brooks

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: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	Benzene	BTEX	TPH	Chlorides
H246676																			
14	PH02	0.5'	G	1			X					X		10/31/24	10:33	X	X	X	X
17	PH02A	1'	"	"			"					"		"	10:35	"	"	"	"
18	PH02C	3'	"	"			"					"		"	10:43	"	"	"	"

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Relinquished By: Sherde Brooks Date: 10/31/24 Time: 17:46
Received By:
Relinquished By: Date: 11-1-24 Time: 1200
Received By: Tamara Oldaker

Delivered By: (Circle One) Sampler - UPS - Bus - Other:
Observed Temp. °C 5.7
Corrected Temp. °C 5.1
Sample Condition: Cool Yes Intact Yes / No No
CHECKED BY: (Initials)

Verbal Result: ☐ Yes ☐ No Add'l Phone #:
All Results are emailed. Please provide Email address:
thillard@ensolum.com, kthomason@ensolum.com
REMARKS:

Turnaround Time: Standard ☐ Rush ☑ 24 hrs
Thermometer ID #113 #140
Correction Factor -0.5°C
Bacteria (only) Sample Condition: Cool Yes / No Intact Yes / No
Observed Temp. °C
Corrected Temp. °C
TO: 11/1/24

FORM-006 R 3.2 10/07/21

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

General Information
Phone: (505) 629-6116

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

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

QUESTIONS

Action 400334

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 400334
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2422260664**
Incident Name	**NAPP2422260664 PLU 28 BIG SINKS WEST BATTERY @ 0**
Incident Type	**Other**
Incident Status	**Deferral Request Received**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	PLU 28 Big Sinks West Battery
Date Release Discovered	08/09/2024
Surface Owner	Federal

Incident Details	
Please answer all the questions in this group.	
Incident Type	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 | Other (Specify) | Crude Oil | Released: 1 BBL | Recovered: 0 BBL | Lost: 1 BBL.
Produced Water Released (bbls) Details	Cause: Corrosion | Other (Specify) | Produced Water | Released: 6 BBL | Recovered: 2 BBL | Lost: 4 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	No
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	leaking 2"CS spool piece located on tester

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

General Information
Phone: (505) 629-6116

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

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

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 400334
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**No, according to supplied volumes this does not appear to be a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	**No**
Reasons why this would be considered a submission for a notification of a major release	*Unavailable.*
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

Initial Response	
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.	
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	*Not answered.*
Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.	

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

I hereby agree and sign off to the above statement	Name: Colton Brown Title: Environmental Advisor Email: colton.s.brown@exxonmobil.com Date: 08/12/2024

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

General Information
Phone: (505) 629-6116

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

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

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 400334
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

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

Remediation Plan	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	3360
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	8619
GRO+DRO (EPA SW-846 Method 8015M)	8030
BTEX (EPA SW-846 Method 8021B or 8260B)	111
Benzene (EPA SW-846 Method 8021B or 8260B)	0
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
On what estimated date will the remediation commence	08/19/2024
On what date will (or did) the final sampling or liner inspection occur	10/31/2024
On what date will (or was) the remediation complete(d)	10/31/2024
What is the estimated surface area (in square feet) that will be reclaimed	584
What is the estimated volume (in cubic yards) that will be reclaimed	65
What is the estimated surface area (in square feet) that will be remediated	584
What is the estimated volume (in cubic yards) that will be remediated	65
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.	
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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

General Information
Phone: (505) 629-6116

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

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

QUESTIONS (continued)

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QUESTIONS

Remediation Plan (continued)	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
(Select all answers below that apply.)	
(Ex Situ) Excavation and **off-site** disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for **off-site** disposal	HALFWAY DISPOSAL AND LANDFILL [fEEM0112334510]
OR which OCD approved well (API) will be used for **off-site** disposal	*Not answered.*
OR is the **off-site** disposal site, to be used, out-of-state	*Not answered.*
OR is the **off-site** disposal site, to be used, an NMED facility	*Not answered.*
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	*Not answered.*
(In Situ) Soil Vapor Extraction	*Not answered.*
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	*Not answered.*
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	*Not answered.*
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	*Not answered.*
Ground Water Abatement pursuant to 19.15.30 NMAC	*Not answered.*
OTHER (Non-listed remedial process)	*Not answered.*
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: Kailee Smith Title: Regulatory Analyst Email: kailee.smith@exxonmobil.com Date: 11/07/2024
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

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	Action Number: 400334
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	**Yes**
Is the remaining contamination in areas immediately under or around production equipment where remediation could cause a major facility deconstruction	Yes
Please list or describe the production equipment and how (re)moving the equipment would cause major facility deconstruction	compressors, pipelines, risers
What is the remaining surface area (in square feet) that will still need to be remediated if a deferral is granted	646
What is the remaining volume (in cubic yards) that will still need to be remediated if a deferral is granted	72
Per Paragraph (2) of Subsection C of 19.15.29.12 NMAC if contamination is located in areas immediately under or around production equipment such as production tanks, wellheads and pipelines where remediation could cause a major facility deconstruction, the remediation, restoration and reclamation may be deferred with division written approval until the equipment is removed during other operations, or when the well or facility is plugged or abandoned, whichever comes first.	
Enter the facility ID (f#) on which this deferral should be granted	PLU 28 BIG SINKS WEST BTY [fAPP2126356070]
Enter the well API (30-) on which this deferral should be granted	*Not answered.*
Contamination does not cause an imminent risk to human health, the environment, or groundwater	True
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: Kailee Smith Title: Regulatory Analyst Email: kailee.smith@exxonmobil.com Date: 11/07/2024

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QUESTIONS (continued)

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QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**395247**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**10/31/2024**
What was the (estimated) number of samples that were to be gathered	**15**
What was the sampling surface area in square feet	**1200**

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	No

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CONDITIONS

Action 400334

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 400334
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	XTO's deferral requests final remediation for (Incident Number NAPP2422260664) until final reclamation of the well pad or major construction, whichever comes first. Ensolum and XTO do not believe deferment will result in imminent risk to human health, the environment, or groundwater. The impacted soil is the shaded area on figure 4 that is limited to the area between active production equipment, where remediation would require a major facility deconstruction. At this time, OCD approves this request. The Deferral Request and C-141 will be accepted for record and marked accordingly. The release will remain open in OCD database files and reflect an open environmental issue.	12/18/2024