Location:	**PLU 432H**	
Spill Date:	**4/2/2024**	
Area 1		
Approximate Area =	1166.00	sq. ft.
Average Saturation (or depth) of spill =	1.50	inches
Average Porosity Factor =	0.25	
VOLUME OF LEAK		
Total Crude Oil =	1.30	bbls
Total Produced Water =	5.19	bbls
Area 2		
Approximate Area =	3871.00	sq. ft.
Average Saturation (or depth) of spill =	0.01	inches

Average Porosity Factor =	0.01	

VOLUME OF LEAK		
Total Crude Oil =	0.03	bbls
Total Produced Water =	0.11	bbls

TOTAL VOLUME OF LEAK		
Total Crude Oil =	**1.33**	**bbls**
Total Produced Water =	**5.30**	**bbls**
TOTAL VOLUME RECOVERED		
Total Crude Oil =	**0.00**	**bbls**
Total Produced Water =	**0.00**	**bbls**

ENSOLUM

June 27, 2024

New Mexico Oil Conservation Division
New Mexico Energy, Minerals, and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Closure Request
PLU 432H
Incident Number NAPP2410737428
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 site assessment, excavation, and soil sampling activities at the PLU 432H (Site). The purpose of the Site assessment and soil sampling activities was to assess for the presence or absence of impacts to soil following a release of crude oil and produced water. Based on field observations and soil sample laboratory analytical results, XTO is submitting this *Closure Request*, describing Site assessment, delineation, and excavation activities that have occurred and requesting no further remediation for Incident Number NAPP2410737428. Reclamation and revegetation activites will be completed following pad abandonment.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit M, Section 23, Township 24 South, Range 30 East, in Eddy County, New Mexico (32.19861°, -103.85934°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On April 2, 2024, equipment failure at the wellhead caused approximately 1 barrel (bbls) of crude oil and 5 bbls of produced water fluids to release on the surface of the well pad. No fluids were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) via email and submitted a Release Notification Form C-141 (Form C-141) on April 16, 2024. The release was assigned Incident Number NAPP2410737428.

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 discussed below.

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on a soil boring drilled for determination of regional groundwater depth. On August 3, 2023, a soil boring permitted by New Mexico Office of the State Engineer (OSE) as C-04761 was advanced approximately 0.43 miles southwest of the Site. The boring was drilled to a total depth of 115 feet bgs.

A field geologist logged and described soils continuously. The borehole was left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period without observing groundwater, it was confirmed that groundwater beneath the Site is greater than 115 feet bgs. The borehole was properly abandoned using hydrated bentonite chips. The well log is included in Appendix A. All wells used to evaluate depth to groundwater are presented on Figure 1.

The closest continuously flowing or significant watercourse to the Site is a freshwater emergent wetland, located approximately 1,229 feet northwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (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)- gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 20,000 mg/kg

SITE ASSESSMENT ACTIVITIES AND ANALYTICAL RESULTS

On April 30, 2024, Site assessment activities were conducted by Ensolum to evaluate the release extent based on information provided on the Form-C141 and visual observations. Six delineation soil samples (SS01 through SS06) were collected from a depth of 0.5 feet bgs. Delineation soil samples SS01 through SS06 were collected outside of the release extent to define the lateral extent of the release. The delineation soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The release extent and delineation soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was collected and a Photographic Log is included in Appendix B.

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 constituents of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method SM4500. Soil samples delivered to the laboratory the same day they were collected may not have equilibrated to the 6 degrees Celsius required for shipment and long-term storage but are considered to have been received in acceptable condition by the laboratory.

Laboratory analytical results for delineation soil samples SS01 through SS06 exhibited COC concentrations in compliance with the Closure Criteria and reclamation requirement and thus, successfully defines the lateral extent of the release.

DELINEATION AND EXCAVATION SOIL SAMPLING ACTIVITIES

On May 16, 2024, Ensolum personnel returned to the Site to oversee delineation and excavation activities. Two potholes (PH01 and PH02) were advanced via backhoe within the release extent to assess the vertical extent of the release. Pothole PH01 was advanced to a depth of 1-foot bgs and pothole PH02 was advanced to 2 feet bgs. Delineation soil samples were collected from both potholes at 0.5 feet bgs and the terminal depth. Soil from the potholes were field screened, handled, and submitted for the same COCs as described above. Field screening results and observations for the potholes were logged on lithologic soil sampling logs, which are included in Appendix C. The potholes and delineation soil sample locations are depicted on Figure 2.

Soil was excavated from the release area as indicated by field screening results from soil samples PH01 and PH02. Field screening results suggested the presence of elevated chloride concentrations exceeding the reclamation requirement in PH02 at 0.5 feet and 1-foot bgs. All other delineation field screening results indicated concentrations were below Closure Criteria and reclamation requirements. Excavation activities were performed in the area of PH02 using a backhoe and transport vehicle and the entirety of the excavation occurred on pad. To direct excavation activities, soil was screened as described above. The excavation was completed to a depth of 2 feet bgs. Following removal of the soil, 5-point composite soil samples were collected at least every 200 square feet from the release extent area, and the sidewall and floor of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil sample FS01 was collected from the floor of the excavation at a depth of 2-feet bgs. Composite soil sample SW01 was collected from the sidewall of the excavation from depths ranging from the ground surface to 2-feet bgs. Composite soil samples CS01 through CS08 were collected on the surface of the pad at approximately 0.5 feet bgs and were within the release extent area where the excavation activities did not occur. Since confirmation soil samples CS01 through CS08 were collected on the surface of the pad and not within an excavated area, sidewall soil samples could not be retrieved. The soil samples were collected, handled, and analyzed following the same procedures as described above.

On June 4, 2024, Ensolum personnel returned to the Site to oversee additional excavation activities due to laboratory analytical results for confirmation soil sample CS02 at 0.5 feet bgs that exceeded Closure Criteria and confirmation soil sample CS03 at 0.5 feet bgs that exceeded reclamation requirement. The excavation was advanced to a depth of 1.5 feet bgs and encompassed soil sample locations CS02 and CS03. After the soil was removed, two confirmation floor soil samples (CS02 collected at 1.5 feet bgs and CS03 collected at 1-foot bgs) and one confirmation sidewall soil sample (SW02 collected from ground surface to 1.5 feet bgs) were collected. Additionally, confirmation soil sample CS09 was collected at a depth of 0.5 feet bgs to ensure the entirety of the release extent area was sampled at least every 200 square-feet. The excavation extents, release extent/confirmation soil sampling area, and confirmation soil sample locations are presented on Figure 3. Photographic documentation was collected is included in a Photographic Log presented in Appendix B.

The release extent/confirmation soil sampling area and the excavation areas measured a combined 1,890 square feet. A total of approximately 32 cubic yards of impacted and waste-containing soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Landfill Disposal Facility in Hobbs, New Mexico.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for all delineation soil samples collected indicated COC concentrations were below Closure Criteria. Only delineation soil sample PH02 collected at 0.5 feet bgs indicated chloride concentrations exceeding reclamation requirement but the soil sample was removed during excavation activities.

Laboratory analytical results for soil sample CS02 collected at 0.5 feet bgs indicated TPH concentrations exceeded Closure Criteria and soil sample CS03 collected at 0.5 feet bgs indicated TPH concentrations exceeded the reclamation requirement but both samples were removed during excavation activities. All other remaining final confirmation soil samples collected indicated COC concentrations were compliant with the Closure Criteria and reclamation requirement. Laboratory analytical results are summarized in Table 1 and complete laboratory analytical reports are included in Appendix D.

CLOSURE REQUEST

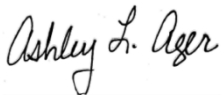
Site assessment, delineation, and excavation activities were conducted at the Site to address the April 2, 2024, release of crude oil and produced water. Laboratory analytical results for all confirmation soil samples collected from the release extent/confirmation soil sampling area and final excavation extents indicated that all COC concentrations were compliant with Closure Criteria and reclamation requirements. Based on laboratory analytical results, no further remediation is required. The excavation was backfilled on June 19, 2024, with caliche material purchased locally and the area was recontoured to match pre-existing Site conditions.

Excavation of impacted and waste-containing soil has mitigated impacts at this Site. Based on depth to groundwater estimating to be greater than 100 feet bgs, and confirmation soil sample laboratory analytical results compliant with Closure Criteria, no further remediation appears to be needed at this time. As such, XTO believes these remedial actions are protective of human health, the environment, and groundwater and respectfully requests closure for Incident Number NAPP2410737428.

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

Sincerely,
Ensolum, LLC

David A. McInnis
Project Geologist



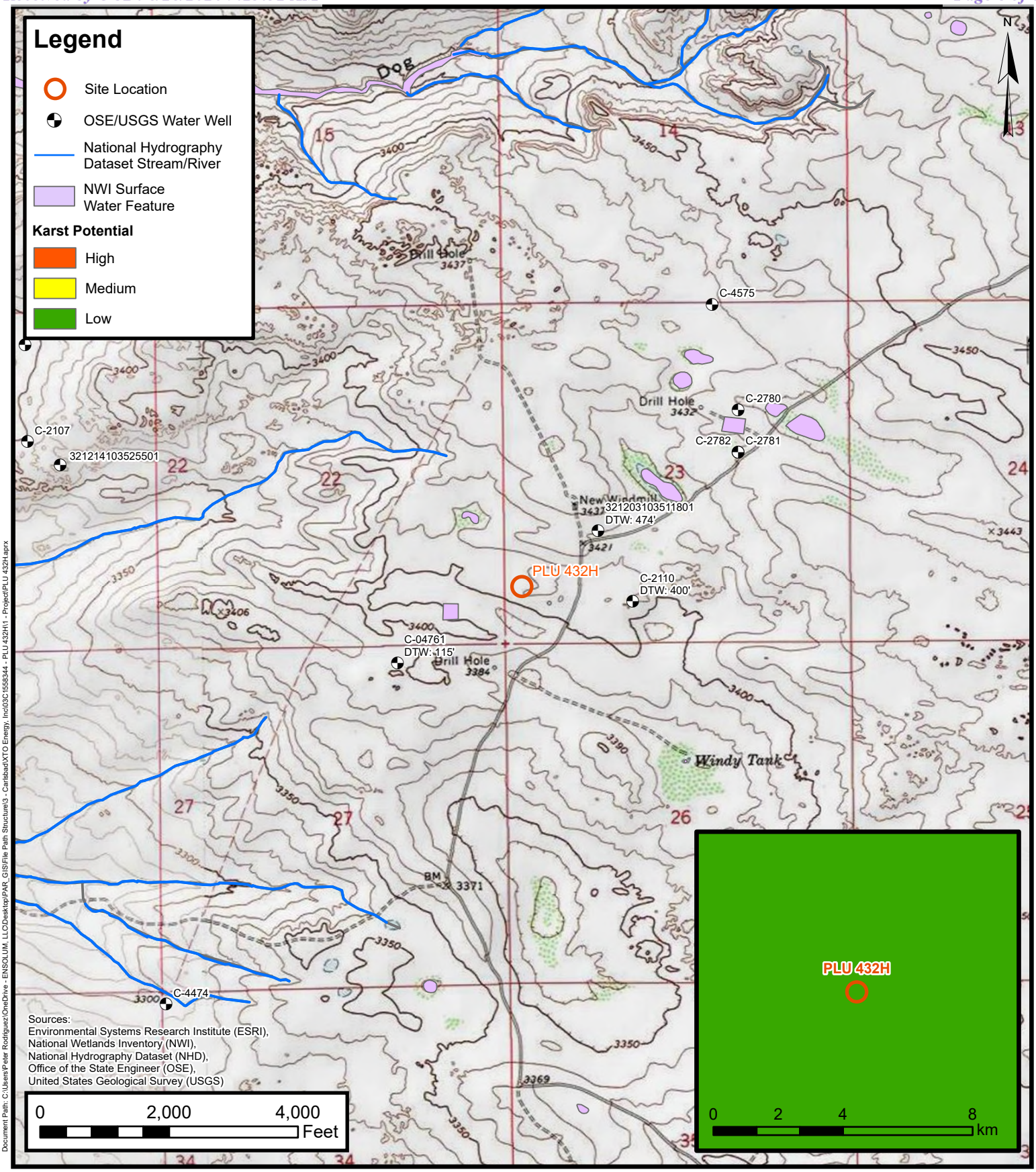
Ashley L. Ager, M.S., P.G.
Principal

cc: Amy Ruth, XTO
Amanda Garcia, XTO
BLM

Appendices:

ENSOLUM

FIGURES



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Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

XTO Energy, Inc

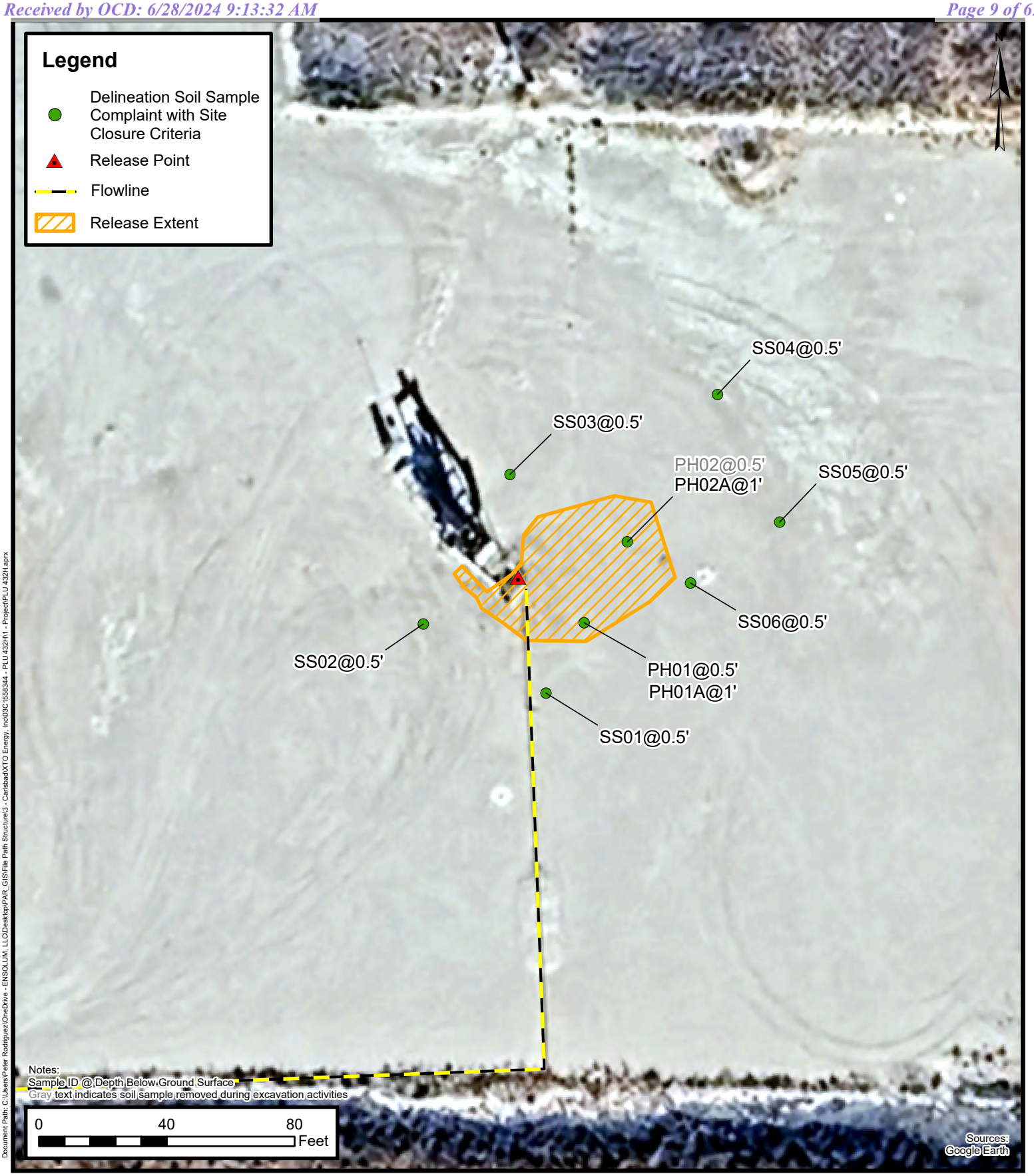
PLU 432H

Incident Number: NAPP2410737428

Unit M, Section 23, Township 24 South, Range 30 East
Eddy County, New Mexico

FIGURE

1



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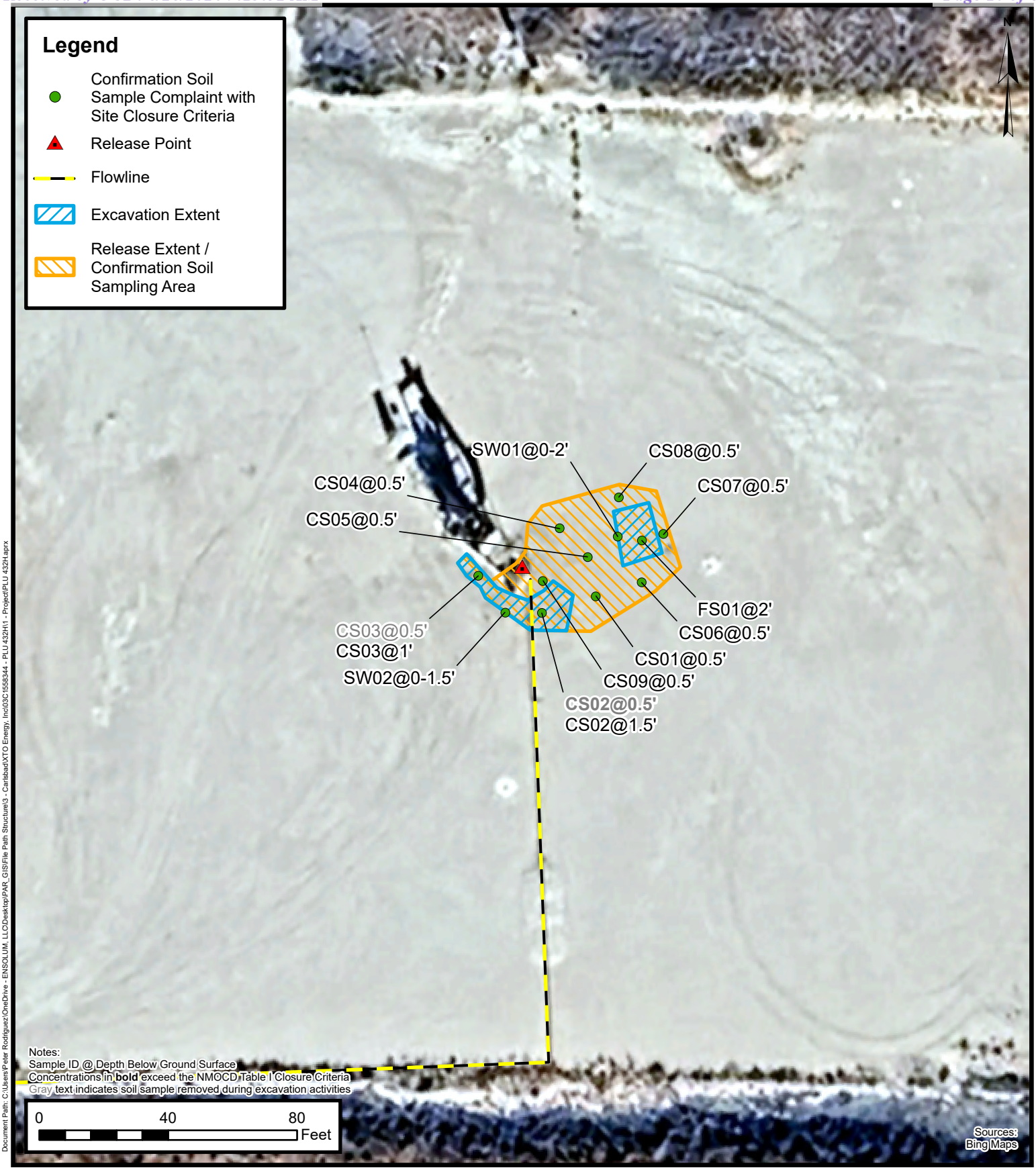
Environmental, Engineering and Hydrogeologic Consultants

Delineation Soil Sample Locations

XTO Energy, Inc
PLU 432H
Incident Number: NAPP2410737428
Unit M, Section 23, Township 24 South, Range 30 East
Eddy County, New Mexico

FIGURE
2



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ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Confirmation Soil Sample Locations

XTO Energy, Inc
PLU 432H
Incident Number: NAPP2410737428
Unit M, Section 23, Township 24 South, Range 30 East
Eddy County, New Mexico

FIGURE
3

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Poker Lake Unit 432H
XTO Energy, Inc
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Delineation Soil Samples										
SS01	04/30/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS02	04/30/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SS03	04/30/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	448
SS04	04/30/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112
SS05	04/30/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	128
SS06	04/30/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	176
PH01	05/16/2024	0.5	<0.050	<0.300	<10.0	34.6	<10.0	34.6	34.6	304
PH01A	05/16/2024	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	288
~~PH02~~	~~05/16/2024~~	~~0.5~~	~~<0.050~~	~~<0.300~~	~~<10.0~~	~~<10.0~~	~~<10.0~~	~~<10.0~~	~~<10.0~~	~~1,100~~
PH02A	05/16/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	352
Confirmation Soil Samples										
CS01	05/16/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	432
~~CS02~~	~~05/16/2024~~	~~0.5~~	~~<0.050~~	~~<0.300~~	~~<10.0~~	~~1,170~~	~~93.1~~	~~**1,170**~~	~~1,263~~	~~350~~
CS02	06/04/2024	1.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192
~~CS03~~	~~05/16/2024~~	~~0.5~~	~~<0.050~~	~~<0.300~~	~~<10.0~~	~~206~~	~~<10.0~~	~~206~~	~~206~~	~~352~~
CS03	06/04/2024	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144
CS04	05/16/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192
CS05	05/16/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	336
CS06	05/16/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	256
CS07	05/16/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	320
CS08	05/16/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	336
CS09	06/04/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	320
FS01	05/16/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	176
SW01	05/16/2024	0-2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	208
SW02	06/04/2024	0-1.5	<0.050	<0.300	<10.0	70.7	28.8	70.7	99.5	368

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

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Sample Name: C-04761 (BH01)	Date: 8/3/2023	
Site Name: PLU-301H		
Incident Number: nAB1507941546		
Job Number: 03C1558233		
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: MR	Method: Air Rotary
Coordinates: 32.195553, -103.864656	Hole Diameter: 6"	Total Depth: 115' bgs
Comments: No field screenings conducted.		

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	CCHE	0'-20' CALICHE, white/tan, medium to coarse grained with small pebbles, sub-angular to sub-rounded grains, poorly sorted, slightly moist.
						10		
						20	SP	20'-30' SAND, medium brown/ orange, medium grained, sub-rounded, poorly sorted, moist.
						30		30'-40' SAND with trace caliche, medium brown/ orange, medium grained, sub-rounded grains, poorly sorted, moist.
						40		40'-90' SAND, orange, medium grained, poorly sorted with high quartz content, moist. Injected water and foaming agent @ 40' bgs.
						50		
						60		
						70		
						80		
						90	SP-SM	90'-115' SAND with some silt, orange/brown, primarily fine grained, poorly sorted.
						100		
						110		
						TD		Total Depth @ 115' bgs.

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APPENDIX B

Photographic Log

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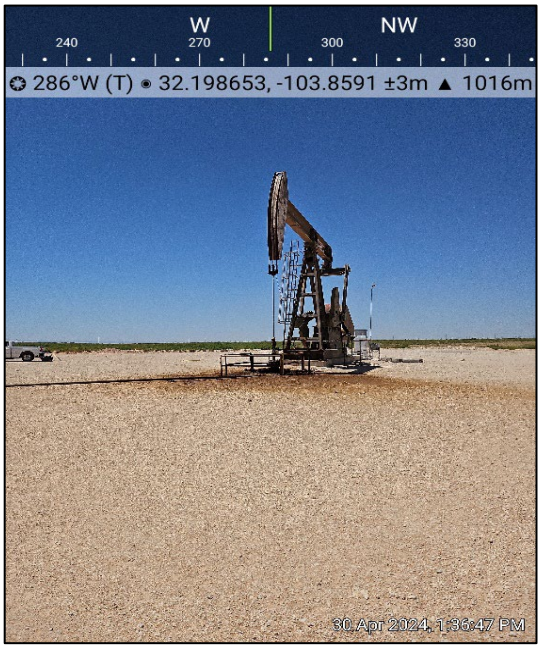
Photographic Log
XTO Energy, LLC
PLU 432H
Incident Number nAPP2410737428



Photograph: 1 Date: 4/30/2024
Description: Site assessment activities.
View: West

Photograph: 2 Date: 5/16/2024
Description: Excavation activities, east excavation.
View: Southwest

Photograph: 3 Date: 5/16/2024
Description: Final excavation extents.
View: Northeast

Photograph: 4 Date: 6/19/2024
Description: Backfill of excavations.
View: Southwest

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APPENDIX C

Lithologic Soil Sampling Logs

ENSOLUM

	Sample Name: PH01	Date: 5/16/2024
	Site Name: PLU 432H	
	Incident Number: nAPP2410737428	
	Job Number: 03C1558344	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: MO	Method: Backhoe
Coordinates: 32.1988582, -103.859225	Hole Diameter: ~3.5'	Total Depth: 1'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
D	459.2	0.0	N	PH01	0.5	0	CCHE	Caliche, light tan - off white, indurated, some sand, very fine - fine grained, well graded
D	314	0.0	N	PH01A	1	1	SW	Sand, reddish brown, well graded, very fine - fine grained, some caliche
						2	TD	Total depth at 1' bgs.
						3		
						4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

ENSOLUM

Sample Name: PH02	Date: 5/16/2024	
Site Name: PLU 432H		
Incident Number: nAPP2410737428		
Job Number: 03C1558344		
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: MO	Method: Backhoe
Coordinates: 32.198651, -103.859180	Hole Diameter: ~3.5'	Total Depth: 2'

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. All chloride calculations made with a +40% correction factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
D	1,798	0.0	N	PH02	0.5	0	CCHE/ SW	Caliche/Sand mixture, light tan - reddish brown, very fine - fine grained, well graded, dry
D	1,254	0.0	N		1	1		
D	358	0.0	N	PH02A	2	2	SP	Sand, reddish brown, very fine - fine grained, poorly graded, dry
							TD	Total depth @ 2' bgs.
						3		
						4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

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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

May 07, 2024

BEN BELILL

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: PLU 432H

Enclosed are the results of analyses for samples received by the laboratory on 05/01/24 16:07.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. 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
BEN BELILL
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	05/01/2024	Sampling Date:	04/30/2024
Reported:	05/07/2024	Sampling Type:	Soil
Project Name:	PLU 432H	Sampling Condition:	Cool & Intact
Project Number:	03C1558344	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.19861, -103.85434		

Sample ID: SS 01 0.5' (H242349-01)

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	05/04/2024	ND	1.85	92.5	2.00	5.32	
Toluene*	<0.050	0.050	05/04/2024	ND	1.86	93.2	2.00	5.78	
Ethylbenzene*	<0.050	0.050	05/04/2024	ND	1.87	93.5	2.00	5.59	
Total Xylenes*	<0.150	0.150	05/04/2024	ND	5.43	90.5	6.00	5.57	
Total BTEX	<0.300	0.300	05/04/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.9 %* *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	**32.0**	16.0	05/07/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/03/2024	ND	211	105	200	3.52	
DRO >C10-C28*	<10.0	10.0	05/03/2024	ND	198	98.9	200	5.97	
EXT DRO >C28-C36	<10.0	10.0	05/03/2024	ND					

Surrogate: 1-Chlorooctane *86.0 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *70.4 %* *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
BEN BELILL
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	05/01/2024	Sampling Date:	04/30/2024
Reported:	05/07/2024	Sampling Type:	Soil
Project Name:	PLU 432H	Sampling Condition:	Cool & Intact
Project Number:	03C1558344	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.19861, -103.85434		

Sample ID: SS 02 0.5' (H242349-02)

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	05/04/2024	ND	1.85	92.5	2.00	5.32	
Toluene*	<0.050	0.050	05/04/2024	ND	1.86	93.2	2.00	5.78	
Ethylbenzene*	<0.050	0.050	05/04/2024	ND	1.87	93.5	2.00	5.59	
Total Xylenes*	<0.150	0.150	05/04/2024	ND	5.43	90.5	6.00	5.57	
Total BTEX	<0.300	0.300	05/04/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.6 %* *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	**48.0**	16.0	05/07/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/03/2024	ND	211	105	200	3.52	
DRO >C10-C28*	<10.0	10.0	05/03/2024	ND	198	98.9	200	5.97	
EXT DRO >C28-C36	<10.0	10.0	05/03/2024	ND					

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

Surrogate: 1-Chlorooctadecane *87.8 %* *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
BEN BELILL
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	05/01/2024	Sampling Date:	04/30/2024
Reported:	05/07/2024	Sampling Type:	Soil
Project Name:	PLU 432H	Sampling Condition:	Cool & Intact
Project Number:	03C1558344	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.19861, -103.85434		

Sample ID: SS 03 0.5' (H242349-03)

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	05/04/2024	ND	1.85	92.5	2.00	5.32	
Toluene*	<0.050	0.050	05/04/2024	ND	1.86	93.2	2.00	5.78	
Ethylbenzene*	<0.050	0.050	05/04/2024	ND	1.87	93.5	2.00	5.59	
Total Xylenes*	<0.150	0.150	05/04/2024	ND	5.43	90.5	6.00	5.57	
Total BTEX	<0.300	0.300	05/04/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.8 %* *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	**448**	16.0	05/07/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/03/2024	ND	211	105	200	3.52	
DRO >C10-C28*	<10.0	10.0	05/03/2024	ND	198	98.9	200	5.97	
EXT DRO >C28-C36	<10.0	10.0	05/03/2024	ND					

Surrogate: 1-Chlorooctane *98.5 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *79.6 %* *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
BEN BELILL
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	05/01/2024	Sampling Date:	04/30/2024
Reported:	05/07/2024	Sampling Type:	Soil
Project Name:	PLU 432H	Sampling Condition:	Cool & Intact
Project Number:	03C1558344	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.19861, -103.85434		

Sample ID: SS 04 0.5' (H242349-04)

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	05/04/2024	ND	1.85	92.5	2.00	5.32	
Toluene*	<0.050	0.050	05/04/2024	ND	1.86	93.2	2.00	5.78	
Ethylbenzene*	<0.050	0.050	05/04/2024	ND	1.87	93.5	2.00	5.59	
Total Xylenes*	<0.150	0.150	05/04/2024	ND	5.43	90.5	6.00	5.57	
Total BTEX	<0.300	0.300	05/04/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.8 %* *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	05/07/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/03/2024	ND	211	105	200	3.52	
DRO >C10-C28*	<10.0	10.0	05/03/2024	ND	198	98.9	200	5.97	
EXT DRO >C28-C36	<10.0	10.0	05/03/2024	ND					

Surrogate: 1-Chlorooctane *101 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *81.7 %* *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
BEN BELILL
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	05/01/2024	Sampling Date:	04/30/2024
Reported:	05/07/2024	Sampling Type:	Soil
Project Name:	PLU 432H	Sampling Condition:	Cool & Intact
Project Number:	03C1558344	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.19861, -103.85434		

Sample ID: SS 05 0.5' (H242349-05)

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	05/04/2024	ND	1.85	92.5	2.00	5.32	
Toluene*	<0.050	0.050	05/04/2024	ND	1.86	93.2	2.00	5.78	
Ethylbenzene*	<0.050	0.050	05/04/2024	ND	1.87	93.5	2.00	5.59	
Total Xylenes*	<0.150	0.150	05/04/2024	ND	5.43	90.5	6.00	5.57	
Total BTEX	<0.300	0.300	05/04/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.4 %* *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	05/07/2024	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/03/2024	ND	211	105	200	3.52	
DRO >C10-C28*	<10.0	10.0	05/03/2024	ND	198	98.9	200	5.97	
EXT DRO >C28-C36	<10.0	10.0	05/03/2024	ND					

Surrogate: 1-Chlorooctane *96.1 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *79.0 %* *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
BEN BELILL
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	05/01/2024	Sampling Date:	04/30/2024
Reported:	05/07/2024	Sampling Type:	Soil
Project Name:	PLU 432H	Sampling Condition:	Cool & Intact
Project Number:	03C1558344	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.19861, -103.85434		

Sample ID: SS 06 0.5' (H242349-06)

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	05/04/2024	ND	1.85	92.5	2.00	5.32	
Toluene*	<0.050	0.050	05/04/2024	ND	1.86	93.2	2.00	5.78	
Ethylbenzene*	<0.050	0.050	05/04/2024	ND	1.87	93.5	2.00	5.59	
Total Xylenes*	<0.150	0.150	05/04/2024	ND	5.43	90.5	6.00	5.57	
Total BTEX	<0.300	0.300	05/04/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.7 %* *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	**176**	16.0	05/07/2024	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/03/2024	ND	211	105	200	3.52	
DRO >C10-C28*	<10.0	10.0	05/03/2024	ND	198	98.9	200	5.97	
EXT DRO >C28-C36	<10.0	10.0	05/03/2024	ND					

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

Surrogate: 1-Chlorooctadecane *75.1 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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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

Celey D. Keene, Lab Director/Quality Manager

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: Ben Belill	P.O. #:
Address: 3122 National Parks Hwy	Company: XTO Energy
City: Carlsbad State: NM Zip: 88220	Attn: Amy Ruth
Phone #: 9898540852 Fax #:	Address: 3104 E Greene St.
Project #: 03C1558344 Project Owner:	City: Carlsbad
Project Name: PLU 432H	State: NM Zip: 88220
Project Location: 32.19861, -103.85934	Phone #:
Sampler Name: Uriel Santillana	Fax #:

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	ANALYSIS REQUEST: Chlorides	TPH	BTEX
H242349-1	SS01	0.5'	G	1			X					X		4/30/24	1345	X	X	X
2	SS02														1500			
3	SS03														1355			
4	SS04														1400			
5	SS05														1445			
6	SS06														1420			

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 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 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental 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: U Dan	Date: 5/1/24 Time: 0700	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: 5/1/24 Time: 1607	Received By: S Rodriguez	All Results are emailed. Please provide Email address: bbelill@ensolum.com usantillana@ensolum.com
			REMARKS: Incident ID: nAPP2410737428 cost center (will send later)
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 0.8 Corrected Temp. °C	Sample Condition Cool: Yes / No Intact: Yes / No	CHECKED BY: (Initials) SR
Turnaround Time: Standard / Rush	Thermometer ID #113 Correction Factor -0.5°C	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

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

May 23, 2024

BEN BELILL

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: PLU 432H

Enclosed are the results of analyses for samples received by the laboratory on 05/17/24 13:54.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. 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

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
BEN BELILL
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	05/17/2024	Sampling Date:	05/16/2024
Reported:	05/23/2024	Sampling Type:	Soil
Project Name:	PLU 432H	Sampling Condition:	Cool & Intact
Project Number:	03C1558344	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.19861, -103.85934		

Sample ID: PH 01 0.5' (H242749-01)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/20/2024	ND	2.08	104	2.00	0.0246	
Toluene*	<0.050	0.050	05/20/2024	ND	2.18	109	2.00	0.561	
Ethylbenzene*	<0.050	0.050	05/20/2024	ND	2.17	109	2.00	0.972	
Total Xylenes*	<0.150	0.150	05/20/2024	ND	6.84	114	6.00	0.821	
Total BTEX	<0.300	0.300	05/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *108 %* *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	**304**	16.0	05/20/2024	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/20/2024	ND	204	102	200	2.95	
DRO >C10-C28*	<10.0	10.0	05/20/2024	ND	178	89.2	200	15.0	
EXT DRO >C28-C36	<10.0	10.0	05/20/2024	ND					

Surrogate: 1-Chlorooctane *94.6 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *87.6 %* *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
BEN BELILL
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	05/17/2024	Sampling Date:	05/16/2024
Reported:	05/23/2024	Sampling Type:	Soil
Project Name:	PLU 432H	Sampling Condition:	Cool & Intact
Project Number:	03C1558344	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.19861, -103.85934		

Sample ID: PH 01A 1' (H242749-02)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/20/2024	ND	2.08	104	2.00	0.0246	
Toluene*	**0.135**	0.050	05/20/2024	ND	2.18	109	2.00	0.561	
Ethylbenzene*	<0.050	0.050	05/20/2024	ND	2.17	109	2.00	0.972	
Total Xylenes*	<0.150	0.150	05/20/2024	ND	6.84	114	6.00	0.821	
Total BTEX	<0.300	0.300	05/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *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	**288**	16.0	05/20/2024	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/20/2024	ND	191	95.6	200	0.788	
DRO >C10-C28*	**34.6**	10.0	05/20/2024	ND	186	93.1	200	2.59	
EXT DRO >C28-C36	<10.0	10.0	05/20/2024	ND					

Surrogate: 1-Chlorooctane *56.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *67.1 %* *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
BEN BELILL
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	05/17/2024	Sampling Date:	05/16/2024
Reported:	05/23/2024	Sampling Type:	Soil
Project Name:	PLU 432H	Sampling Condition:	Cool & Intact
Project Number:	03C1558344	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.19861, -103.85934		

Sample ID: PH 02 0.5' (H242749-03)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/20/2024	ND	2.08	104	2.00	0.0246	
Toluene*	<0.050	0.050	05/20/2024	ND	2.18	109	2.00	0.561	
Ethylbenzene*	<0.050	0.050	05/20/2024	ND	2.17	109	2.00	0.972	
Total Xylenes*	<0.150	0.150	05/20/2024	ND	6.84	114	6.00	0.821	
Total BTEX	<0.300	0.300	05/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *107 %* *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	**1100**	16.0	05/20/2024	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/20/2024	ND	191	95.6	200	0.788	
DRO >C10-C28*	<10.0	10.0	05/20/2024	ND	186	93.1	200	2.59	
EXT DRO >C28-C36	<10.0	10.0	05/20/2024	ND					

Surrogate: 1-Chlorooctane *69.5 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *81.8 %* *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
BEN BELILL
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	05/17/2024	Sampling Date:	05/16/2024
Reported:	05/23/2024	Sampling Type:	Soil
Project Name:	PLU 432H	Sampling Condition:	Cool & Intact
Project Number:	03C1558344	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.19861, -103.85934		

Sample ID: PH 02A 2' (H242749-04)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/20/2024	ND	2.08	104	2.00	0.0246	
Toluene*	<0.050	0.050	05/20/2024	ND	2.18	109	2.00	0.561	
Ethylbenzene*	<0.050	0.050	05/20/2024	ND	2.17	109	2.00	0.972	
Total Xylenes*	<0.150	0.150	05/20/2024	ND	6.84	114	6.00	0.821	
Total BTEX	<0.300	0.300	05/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *107 %* *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	05/20/2024	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/20/2024	ND	191	95.6	200	0.788	
DRO >C10-C28*	<10.0	10.0	05/20/2024	ND	186	93.1	200	2.59	
EXT DRO >C28-C36	<10.0	10.0	05/20/2024	ND					

Surrogate: 1-Chlorooctane *82.6 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *99.2 %* *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
BEN BELILL
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	05/17/2024	Sampling Date:	05/16/2024
Reported:	05/23/2024	Sampling Type:	Soil
Project Name:	PLU 432H	Sampling Condition:	Cool & Intact
Project Number:	03C1558344	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.19861, -103.85934		

Sample ID: FS 01 2' (H242749-05)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/20/2024	ND	2.08	104	2.00	0.0246	
Toluene*	<0.050	0.050	05/20/2024	ND	2.18	109	2.00	0.561	
Ethylbenzene*	<0.050	0.050	05/20/2024	ND	2.17	109	2.00	0.972	
Total Xylenes*	<0.150	0.150	05/20/2024	ND	6.84	114	6.00	0.821	
Total BTEX	<0.300	0.300	05/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *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	**176**	16.0	05/20/2024	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/20/2024	ND	191	95.6	200	0.788	
DRO >C10-C28*	<10.0	10.0	05/20/2024	ND	186	93.1	200	2.59	
EXT DRO >C28-C36	<10.0	10.0	05/20/2024	ND					

Surrogate: 1-Chlorooctane *79.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *105 %* *49.1-148*

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

Analytical Results For:

ENSOLUM
BEN BELILL
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	05/17/2024	Sampling Date:	05/16/2024
Reported:	05/23/2024	Sampling Type:	Soil
Project Name:	PLU 432H	Sampling Condition:	Cool & Intact
Project Number:	03C1558344	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.19861, -103.85934		

Sample ID: SW 01 0-2' (H242749-06)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/20/2024	ND	2.08	104	2.00	0.0246	
Toluene*	<0.050	0.050	05/20/2024	ND	2.18	109	2.00	0.561	
Ethylbenzene*	<0.050	0.050	05/20/2024	ND	2.17	109	2.00	0.972	
Total Xylenes*	<0.150	0.150	05/20/2024	ND	6.84	114	6.00	0.821	
Total BTEX	<0.300	0.300	05/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *107 %* *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	**208**	16.0	05/20/2024	ND	400	100	400	7.69	

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	05/20/2024	ND	191	95.6	200	0.788	
DRO >C10-C28*	<10.0	10.0	05/20/2024	ND	186	93.1	200	2.59	
EXT DRO >C28-C36	<10.0	10.0	05/20/2024	ND					

Surrogate: 1-Chlorooctane *86.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *105 %* *49.1-148*

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Analytical Results For:

ENSOLUM
BEN BELILL
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	05/17/2024	Sampling Date:	05/16/2024
Reported:	05/23/2024	Sampling Type:	Soil
Project Name:	PLU 432H	Sampling Condition:	Cool & Intact
Project Number:	03C1558344	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.19861, -103.85934		

Sample ID: CS 01 0.5' (H242749-07)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/20/2024	ND	2.08	104	2.00	0.0246	
Toluene*	<0.050	0.050	05/20/2024	ND	2.18	109	2.00	0.561	
Ethylbenzene*	<0.050	0.050	05/20/2024	ND	2.17	109	2.00	0.972	
Total Xylenes*	<0.150	0.150	05/20/2024	ND	6.84	114	6.00	0.821	
Total BTEX	<0.300	0.300	05/20/2024	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	**432**	16.0	05/20/2024	ND	400	100	400	7.69	

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	05/20/2024	ND	191	95.6	200	0.788	
DRO >C10-C28*	<10.0	10.0	05/20/2024	ND	186	93.1	200	2.59	
EXT DRO >C28-C36	<10.0	10.0	05/20/2024	ND					

Surrogate: 1-Chlorooctane *69.0 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *82.2 %* *49.1-148*

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Analytical Results For:

ENSOLUM
BEN BELILL
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	05/17/2024	Sampling Date:	05/16/2024
Reported:	05/23/2024	Sampling Type:	Soil
Project Name:	PLU 432H	Sampling Condition:	Cool & Intact
Project Number:	03C1558344	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.19861, -103.85934		

Sample ID: CS 02 0.5' (H242749-08)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/20/2024	ND	2.08	104	2.00	0.0246	
Toluene*	<0.050	0.050	05/20/2024	ND	2.18	109	2.00	0.561	
Ethylbenzene*	<0.050	0.050	05/20/2024	ND	2.17	109	2.00	0.972	
Total Xylenes*	<0.150	0.150	05/20/2024	ND	6.84	114	6.00	0.821	
Total BTEX	<0.300	0.300	05/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *107 %* *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	**320**	16.0	05/20/2024	ND	400	100	400	7.69	

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	05/20/2024	ND	191	95.6	200	0.788	
DRO >C10-C28*	**1170**	10.0	05/20/2024	ND	186	93.1	200	2.59	
EXT DRO >C28-C36	**93.1**	10.0	05/20/2024	ND					

Surrogate: 1-Chlorooctane *64.4 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *90.7 %* *49.1-148*

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Analytical Results For:

ENSOLUM
BEN BELILL
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	05/17/2024	Sampling Date:	05/16/2024
Reported:	05/23/2024	Sampling Type:	Soil
Project Name:	PLU 432H	Sampling Condition:	Cool & Intact
Project Number:	03C1558344	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.19861, -103.85934		

Sample ID: CS 03 0.5' (H242749-09)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/20/2024	ND	2.19	110	2.00	10.3	
Toluene*	<0.050	0.050	05/20/2024	ND	2.10	105	2.00	6.72	
Ethylbenzene*	<0.050	0.050	05/20/2024	ND	2.12	106	2.00	3.38	
Total Xylenes*	<0.150	0.150	05/20/2024	ND	6.08	101	6.00	3.88	
Total BTEX	<0.300	0.300	05/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.8 %* *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	**352**	16.0	05/20/2024	ND	400	100	400	7.69	

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	05/20/2024	ND	191	95.6	200	0.788	
DRO >C10-C28*	**206**	10.0	05/20/2024	ND	186	93.1	200	2.59	
EXT DRO >C28-C36	<10.0	10.0	05/20/2024	ND					

Surrogate: 1-Chlorooctane *56.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *72.9 %* *49.1-148*

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Analytical Results For:

ENSOLUM
BEN BELILL
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	05/17/2024	Sampling Date:	05/16/2024
Reported:	05/23/2024	Sampling Type:	Soil
Project Name:	PLU 432H	Sampling Condition:	Cool & Intact
Project Number:	03C1558344	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.19861, -103.85934		

Sample ID: CS 04 0.5' (H242749-10)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/20/2024	ND	2.19	110	2.00	10.3	
Toluene*	<0.050	0.050	05/20/2024	ND	2.10	105	2.00	6.72	
Ethylbenzene*	<0.050	0.050	05/20/2024	ND	2.12	106	2.00	3.38	
Total Xylenes*	<0.150	0.150	05/20/2024	ND	6.08	101	6.00	3.88	
Total BTEX	<0.300	0.300	05/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *91.8 %* *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	**192**	16.0	05/20/2024	ND	400	100	400	7.69	

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	05/20/2024	ND	191	95.6	200	0.788	
DRO >C10-C28*	<10.0	10.0	05/20/2024	ND	186	93.1	200	2.59	
EXT DRO >C28-C36	<10.0	10.0	05/20/2024	ND					

Surrogate: 1-Chlorooctane *74.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *88.0 %* *49.1-148*

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CARDINAL Laboratories

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Analytical Results For:

ENSOLUM
BEN BELILL
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	05/17/2024	Sampling Date:	05/16/2024
Reported:	05/23/2024	Sampling Type:	Soil
Project Name:	PLU 432H	Sampling Condition:	Cool & Intact
Project Number:	03C1558344	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.19861, -103.85934		

Sample ID: CS 05 0.5' (H242749-11)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/20/2024	ND	2.19	110	2.00	10.3	
Toluene*	<0.050	0.050	05/20/2024	ND	2.10	105	2.00	6.72	
Ethylbenzene*	<0.050	0.050	05/20/2024	ND	2.12	106	2.00	3.38	
Total Xylenes*	<0.150	0.150	05/20/2024	ND	6.08	101	6.00	3.88	
Total BTEX	<0.300	0.300	05/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *92.6 %* *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	**336**	16.0	05/20/2024	ND	400	100	400	7.69	

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	05/20/2024	ND	191	95.6	200	0.788	
DRO >C10-C28*	<10.0	10.0	05/20/2024	ND	186	93.1	200	2.59	
EXT DRO >C28-C36	<10.0	10.0	05/20/2024	ND					

Surrogate: 1-Chlorooctane *72.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *86.6 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

ENSOLUM
BEN BELILL
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	05/17/2024	Sampling Date:	05/16/2024
Reported:	05/23/2024	Sampling Type:	Soil
Project Name:	PLU 432H	Sampling Condition:	Cool & Intact
Project Number:	03C1558344	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.19861, -103.85934		

Sample ID: CS 06 0.5' (H242749-12)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/20/2024	ND	2.19	110	2.00	10.3	
Toluene*	<0.050	0.050	05/20/2024	ND	2.10	105	2.00	6.72	
Ethylbenzene*	<0.050	0.050	05/20/2024	ND	2.12	106	2.00	3.38	
Total Xylenes*	<0.150	0.150	05/20/2024	ND	6.08	101	6.00	3.88	
Total BTEX	<0.300	0.300	05/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *90.7 %* *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	**256**	16.0	05/20/2024	ND	400	100	400	7.69	

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	05/20/2024	ND	191	95.6	200	0.788	
DRO >C10-C28*	<10.0	10.0	05/20/2024	ND	186	93.1	200	2.59	
EXT DRO >C28-C36	<10.0	10.0	05/20/2024	ND					

Surrogate: 1-Chlorooctane *69.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *80.6 %* *49.1-148*

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Analytical Results For:

ENSOLUM
BEN BELILL
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	05/17/2024	Sampling Date:	05/16/2024
Reported:	05/23/2024	Sampling Type:	Soil
Project Name:	PLU 432H	Sampling Condition:	Cool & Intact
Project Number:	03C1558344	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.19861, -103.85934		

Sample ID: CS 07 0.5' (H242749-13)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/20/2024	ND	2.19	110	2.00	10.3	
Toluene*	<0.050	0.050	05/20/2024	ND	2.10	105	2.00	6.72	
Ethylbenzene*	<0.050	0.050	05/20/2024	ND	2.12	106	2.00	3.38	
Total Xylenes*	<0.150	0.150	05/20/2024	ND	6.08	101	6.00	3.88	
Total BTEX	<0.300	0.300	05/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *93.1 %* *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	**320**	16.0	05/20/2024	ND	400	100	400	7.69	

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	05/20/2024	ND	191	95.6	200	0.788	
DRO >C10-C28*	<10.0	10.0	05/20/2024	ND	186	93.1	200	2.59	
EXT DRO >C28-C36	<10.0	10.0	05/20/2024	ND					

Surrogate: 1-Chlorooctane *68.3 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *80.5 %* *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
BEN BELILL
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	05/17/2024	Sampling Date:	05/16/2024
Reported:	05/23/2024	Sampling Type:	Soil
Project Name:	PLU 432H	Sampling Condition:	Cool & Intact
Project Number:	03C1558344	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.19861, -103.85934		

Sample ID: CS 08 0.5' (H242749-14)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/20/2024	ND	2.19	110	2.00	10.3	
Toluene*	<0.050	0.050	05/20/2024	ND	2.10	105	2.00	6.72	
Ethylbenzene*	<0.050	0.050	05/20/2024	ND	2.12	106	2.00	3.38	
Total Xylenes*	<0.150	0.150	05/20/2024	ND	6.08	101	6.00	3.88	
Total BTEX	<0.300	0.300	05/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *92.8 %* *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	**336**	16.0	05/20/2024	ND	400	100	400	7.69	

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	05/20/2024	ND	191	95.6	200	0.788	
DRO >C10-C28*	<10.0	10.0	05/20/2024	ND	186	93.1	200	2.59	
EXT DRO >C28-C36	<10.0	10.0	05/20/2024	ND					

Surrogate: 1-Chlorooctane *80.1 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *94.9 %* *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

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
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.
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

Celey D. Keene, Lab Director/Quality Manager

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: Ben Belill	**P.O. #:**
Address: 3122 National Parks Hwy	**Company:** XTO Energy
City: Carlsbad **State:** NM **Zip:** 88220	**Attn:** Amy Ruth
Phone #: 989-854-0852 **Fax #:**	**Address:** 3104 E. Greene St
Project #: 03C1558344 **Project Owner:**	**City:** Carlsbad
Project Name: PLU 432H	**State:** NM **Zip:** 88220
Project Location: 32.19861, -103.85934	**Phone #:**
Sampler Name: Mariaha O'Dell	**Fax #:**

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	ANALYSIS REQUEST: Chlorides	TPH	BTEX
H247746																		
1	PH01	0.5'	G	1			X					X		5/16/24	9:45	X	X	X
2	PH01A	1'													9:50			
3	PH02	0.5'													10:00			
4	PH02A	2'													10:15			
5	FS01	2'	C												12:15			
6	SW01	0-2'													12:20			
7	CS01	0.5'													12:50			
8	CS02	0.5'													12:35			
9	CS03	0.5'													12:40			
10	CS04	0.5'													12:45			

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 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 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:	**Date:** 5/17/24 **Time:** 13:54	**Received By:** SRodriguez	**Verbal Result:** ☐ Yes ☒ No **Add'l Phone #:**
			All Results are emailed. Please provide Email address: bbelille ensolum.com, modell@ensolum.com
Relinquished By:	**Date:** **Time:**	**Received By:**	**REMARKS:** Incident #: NAPP2410737428 Cost center: 114098100I API: 30-015-42488

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 2.6 Corrected Temp. °C	**Sample Condition** Cool: ☒ Yes ☐ No Intact: ☒ Yes ☐ No	**CHECKED BY: (Initials)** SR	**Turnaround Time:** 5 days **Standard** ☒ **Rush** ☐ Thermometer ID #113 Correction Factor 0.5°C #140	**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

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC	BILL TO
Project Manager: Ben Belill	P.O. #:
Address: 3122 National Parks Hwy	Company: XTO Energy
City: Carlsbad State: NM Zip: 88220	Attn: Amy Ruth
Phone #: 989-854-0852 Fax #:	Address: 3104 E. Greene St
Project #: 03C1558344 Project Owner:	City: Carlsbad
Project Name: PLU 432H	State: NM Zip: 88220
Project Location: 32.19861, -103.85934	Phone #:
Sampler Name: Mariaha O'Dell	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	Chlorides	TPH	BTEX										
H247049																												
11	CS05	0.5'	C				X					X		5/16/24	12:55	X	X	X										
12	CS06	0.5'													13:00													
13	CS07	0.5'													13:05													
14	CS08	0.5'													13:10													

MD

Relinquished By:	Date: 5/17/24 Time: 13:54	Received By:	Verbal Result: ☐ Yes ☑ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	All Results are emailed. Please provide Email address: bbelill@ensolum.com, modell@ensolum.com
			REMARKS: Incident #: NAPP2410737428 Cost center: 1140981001 API: 30-015-42488

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 2.6 Corrected Temp. °C	Sample Condition Cool: ☑ Yes ☐ No Intact: ☐ Yes ☐ No	CHECKED BY: (Initials)	Turnaround Time: 5 days Standard ☑ Rush ☐ Thermometer ID #113 Correction Factor -0.5°C #140	Bacteria (only) Sample Condition Cool: ☐ Yes ☐ No Intact: ☐ Yes ☐ No Observed Temp. °C Corrected Temp. °C

FORM-006 R 3.2 10/07/21

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CARDINAL Laboratories

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

June 11, 2024

BEN BELILL

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: PLU 432H

Enclosed are the results of analyses for samples received by the laboratory on 06/05/24 14:49.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. 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

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
BEN BELILL
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/05/2024	Sampling Date:	06/04/2024
Reported:	06/11/2024	Sampling Type:	Soil
Project Name:	PLU 432H	Sampling Condition:	Cool & Intact
Project Number:	03C1558344	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.19861, -103.85934		

Sample ID: CS 02 1.5' (H243202-01)

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	06/07/2024	ND	1.88	94.0	2.00	8.16	
Toluene*	<0.050	0.050	06/07/2024	ND	1.98	99.0	2.00	9.03	
Ethylbenzene*	<0.050	0.050	06/07/2024	ND	2.00	100	2.00	9.96	
Total Xylenes*	<0.150	0.150	06/07/2024	ND	6.23	104	6.00	8.62	
Total BTEX	<0.300	0.300	06/07/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *109 %* *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	06/07/2024	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	06/06/2024	ND	193	96.3	200	1.94	
DRO >C10-C28*	<10.0	10.0	06/06/2024	ND	214	107	200	0.944	
EXT DRO >C28-C36	<10.0	10.0	06/06/2024	ND					

Surrogate: 1-Chlorooctane *115 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *119 %* *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
BEN BELILL
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/05/2024	Sampling Date:	06/04/2024
Reported:	06/11/2024	Sampling Type:	Soil
Project Name:	PLU 432H	Sampling Condition:	Cool & Intact
Project Number:	03C1558344	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.19861, -103.85934		

Sample ID: CS 03 1' (H243202-02)

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	06/07/2024	ND	1.88	94.0	2.00	8.16	
Toluene*	<0.050	0.050	06/07/2024	ND	1.98	99.0	2.00	9.03	
Ethylbenzene*	<0.050	0.050	06/07/2024	ND	2.00	100	2.00	9.96	
Total Xylenes*	<0.150	0.150	06/07/2024	ND	6.23	104	6.00	8.62	
Total BTEX	<0.300	0.300	06/07/2024	ND					

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

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**144**	16.0	06/07/2024	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	06/06/2024	ND	193	96.3	200	1.94	
DRO >C10-C28*	<10.0	10.0	06/06/2024	ND	214	107	200	0.944	
EXT DRO >C28-C36	<10.0	10.0	06/06/2024	ND					

Surrogate: 1-Chlorooctane *114 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *119 %* *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
BEN BELILL
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/05/2024	Sampling Date:	06/04/2024
Reported:	06/11/2024	Sampling Type:	Soil
Project Name:	PLU 432H	Sampling Condition:	Cool & Intact
Project Number:	03C1558344	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.19861, -103.85934		

Sample ID: CS 09 0.5' (H243202-03)

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	06/07/2024	ND	1.88	94.0	2.00	8.16	
Toluene*	<0.050	0.050	06/07/2024	ND	1.98	99.0	2.00	9.03	
Ethylbenzene*	<0.050	0.050	06/07/2024	ND	2.00	100	2.00	9.96	
Total Xylenes*	<0.150	0.150	06/07/2024	ND	6.23	104	6.00	8.62	
Total BTEX	<0.300	0.300	06/07/2024	ND					

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

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**320**	16.0	06/07/2024	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	06/06/2024	ND	193	96.3	200	1.94	
DRO >C10-C28*	<10.0	10.0	06/06/2024	ND	214	107	200	0.944	
EXT DRO >C28-C36	<10.0	10.0	06/06/2024	ND					

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

Surrogate: 1-Chlorooctadecane *77.3 %* *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
BEN BELILL
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/05/2024	Sampling Date:	06/04/2024
Reported:	06/11/2024	Sampling Type:	Soil
Project Name:	PLU 432H	Sampling Condition:	Cool & Intact
Project Number:	03C1558344	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.19861, -103.85934		

Sample ID: SW 02 0-1.5' (H243202-04)

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	06/07/2024	ND	1.88	94.0	2.00	8.16	
Toluene*	<0.050	0.050	06/07/2024	ND	1.98	99.0	2.00	9.03	
Ethylbenzene*	<0.050	0.050	06/07/2024	ND	2.00	100	2.00	9.96	
Total Xylenes*	<0.150	0.150	06/07/2024	ND	6.23	104	6.00	8.62	
Total BTEX	<0.300	0.300	06/07/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *111 %* *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	**368**	16.0	06/07/2024	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	06/06/2024	ND	193	96.3	200	1.94	
DRO >C10-C28*	**70.7**	10.0	06/06/2024	ND	214	107	200	0.944	
EXT DRO >C28-C36	**28.8**	10.0	06/06/2024	ND					

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

Surrogate: 1-Chlorooctadecane *103 %* *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

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

Celey D. Keene, Lab Director/Quality Manager

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: Ben Belill	P.O. #:
Address: 601 N Marienfeld Street, Suite 400	Company: XTO Energy
City: Midland State: TX Zip: 79701	Attn: Amy Ruth
Phone #: 989-854-0852 Fax #:	Address: 3104 E. Greene
Project #: 03C1558344 Project Owner: XTO	City: Carlsbad
Project Name: PLU 4324	State: NM Zip: 88220
Project Location:	Phone #: 432-661-0571
Sampler Name: Tracy Hillard	Fax #:

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	TPH 8015	BTEX 8021	Chloride 4500
H243202												✓				†		
1	CS02	1.5	C	1			X					X		6-4-24	1117	X	X	X
2	CS03	1	C	1			X					X			1145	1	1	1
3	CS09	0.5	C	1			X					X			1205			
4	SW02	0-1.5	C	1			X					X			1210			

TIH

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Relinquished By:	Date: 6/5/24	Received By:	
	Time: 0700		
Relinquished By:	Date: 6/5/24	Received By:	Rodriguez
	Time: 1449		

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

All Results are emailed. Please provide Email address:

BBelill@ensolum.com, TMorrissey@ensolum.com, THillard@ensolum.com

REMARKS:

Cost center: 1140981001

Incident: nAPP2410737428

Turnaround Time: Standard ☑ Rush ☐

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

Observed Temp. °C

Corrected Temp. °C

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

Observed Temp. °C 5.9

Corrected Temp. °C

Sample Condition: Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No

CHECKED BY: (Initials) BR

Thermometer ID #113

Correction Factor -0.5°C #140

FORM-006 R 3.2 10/07/21

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

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS

Action 359468

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 359468
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2410737428**
Incident Name	**NAPP2410737428 POKER LAKE UNIT 432H @ 0**
Incident Type	**Release Other**
Incident Status	**Remediation Closure Report Received**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	Poker Lake Unit 432H
Date Release Discovered	04/02/2024
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: Equipment Failure | Well | Crude Oil | Released: 1 BBL | Recovered: 0 BBL | Lost: 1 BBL.
Produced Water Released (bbls) Details	Cause: Equipment Failure | Well | Produced Water | Released: 5 BBL | Recovered: 0 BBL | Lost: 5 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	*Not answered.*

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Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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: 359468
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**No, according to supplied volumes this does not appear to be a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	**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: Amy Ruth Title: Coordinator SSHE Environmental Email: amy.ruth@exxonmobil.com Date: 06/28/2024

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QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 359468
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

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	Attached Document
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 1000 (ft.) and ½ (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Greater than 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 1000 (ft.) and ½ (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Between 1000 (ft.) and ½ (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)	448
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	99.5
GRO+DRO (EPA SW-846 Method 8015M)	70.7
BTEX (EPA SW-846 Method 8021B or 8260B)	0
Benzene (EPA SW-846 Method 8021B or 8260B)	0
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
On what estimated date will the remediation commence	05/16/2024
On what date will (or did) the final sampling or liner inspection occur	06/04/2024
On what date will (or was) the remediation complete(d)	06/19/2024
What is the estimated surface area (in square feet) that will be reclaimed	1890
What is the estimated volume (in cubic yards) that will be reclaimed	32
What is the estimated surface area (in square feet) that will be remediated	1890
What is the estimated volume (in cubic yards) that will be remediated	32
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.	
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 359468
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

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: Amy Ruth Title: Coordinator SSHE Environmental Email: amy.ruth@exxonmobil.com Date: 06/28/2024
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)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 359468
	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 (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

Sampling Event Information	
Last sampling notification (C-141N) recorded	**349274**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**06/04/2024**
What was the (estimated) number of samples that were to be gathered	**10**
What was the sampling surface area in square feet	**2000**

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	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	1890
What was the total volume (cubic yards) remediated	32
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	1890
What was the total volume (in cubic yards) reclaimed	32
Summarize any additional remediation activities not included by answers (above)	Site assessment, delineation, and excavation activities were conducted at the Site to address the April 2, 2024, release of crude oil and condensate. Laboratory analytical results for all confirmation soil samples collected from the release extent/confirmation soil sampling area and final excavation extents indicated that all COC concentrations were compliant with Closure Criteria and reclamation requirements. Based on laboratory analytical results, no further remediation is required. The excavation was backfilled on June 19, 2024, with caliche material purchased locally and the area was recontoured to match pre-existing Site conditions. Excavation of impacted and waste-containing soil has mitigated impacts at this Site. Based on depth to groundwater estimating to be greater than 100 feet bgs, and confirmation soil sample laboratory analytical results compliant with Closure Criteria, no further remediation appears to be needed at this time.
The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (in .pdf format) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.	
I hereby agree and sign off to the above statement	Name: Amy Ruth Title: Coordinator SSHE Environmental Email: amy.ruth@exxonmobil.com Date: 06/28/2024

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QUESTIONS (continued)

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

QUESTIONS

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

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CONDITIONS

Action 359468

CONDITIONS

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

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your Remediation Closure Report for Incident #NAPP2410737428 POKER LAKE UNIT 432H, thank you. This Remediation Closure Report is approved.	7/2/2024