



September 25, 2024

New Mexico Energy Minerals and Natural Resources Department

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

**Re: Deferral Request
Remuda 500 Battery
Incident Number NAPP2418053192
Eddy County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum) on behalf of XTO Energy, Inc. (XTO), has prepared this *Deferral Request* to document assessment, delineation, excavation, and soil sampling activities at the Remuda 500 Battery (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 produced water. Based on field observations and soil sample laboratory analytical results, XTO is submitting this *Deferral Request*, describing Site assessment, delineation, and excavation activities that have occurred and requesting deferral of final remediation for Incident Number NAPP2418053192 until the Site is reconstructed, and/or the well pad is abandoned.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit O, Section 25, Township 23 South, Range 29 East, in Eddy County, New Mexico (32.270479°, -103.937524°) and is associated with oil and gas exploration and production operations on state land managed by the New Mexico State Land Office (NMSLO).

On June 27, 2024, internal corrosion on a pipeline resulted in the release of approximately 37 barrels (bbls) of produced water onto the surface of the well pad and around active production equipment and process piping with no released fluids recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) via Notification of Release (NOR) on June 28, 2024 and submitted an Initial C-141 Application (C-141) on July 1, 2024. The release was assigned Incident Number NAPP2418053192.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

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

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on a soil boring drilled for determination of regional groundwater depth. On January 5, 2021, a soil boring permitted by New Mexico Office of the State Engineer (OSE) well C-04494, located approximately 0.30 miles northwest of the Site, was drilled utilizing a truck-mounted hollow-stem auger

XTO Energy, Inc.
Deferral Request
Remuda 500 Battery

rig. The boring was drilled to a total depth of 105 feet bgs. A field geologist logged and described soils continuously. No moisture or groundwater was encountered during drilling activities. The borehole was left open for over 72 hours to allow for the potential slow infill of groundwater. After the 72-hour waiting period without observing groundwater, it was confirmed that groundwater at that location is greater than 105 feet bgs. The borehole was properly abandoned with drill cuttings and hydrated bentonite chips. The Well Record and 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 seasonal dry wash, located approximately 128 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 (medium potential karst designation area). Potential Site receptors are identified on Figure 1.

Based on the closest significant watercourse, the following Table I Closure Criteria (Closure Criteria) apply:

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

CULTURAL PROPERTIES PROTECTION

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

DELINEATION AND EXCAVATION ACTIVITIES

On July 15, 2024 through August 23, 2024, Ensolum personnel were onsite to oversee delineation and excavation activities. Five potholes (PH01 through PH05) were advanced via backhoe or hydrovac to assess the lateral and vertical definition of the release. Potholes PH01 through PH05 were advanced to maximum depths ranging from 6 feet to 9 feet bgs. Discrete delineation soil samples were collected from each pothole at depths ranging from 0.5 feet to 9 feet bgs. The delineation soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride utilizing Hach® chloride QuanTab® test strips. Field screening results and observations from each pothole were logged on lithologic/soil sampling logs, which are included in Appendix B. All delineation soil sample locations are depicted on Figure 2. Photographic documentation was conducted and photographs are included in a Photographic Log in Appendix C.

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 in Hobbs, New Mexico, for analysis of the following constituents of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-gasoline range organics (GRO), TPH diesel range organics (DRO), and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following Standards Method SM4500.

Soil was excavated to the maximum extent possible (MEP) with hydrovac, backhoe, and transport vehicles. XTO safety policy restricts soil disturbing activities within a 2-foot radius of any active production equipment, pipelines, and or utilities. Following the removal of impacted soil, 5-point

XTO Energy, Inc.
Deferral Request
Remuda 500 Battery

composite confirmation soil samples were collected every 200 square feet from the floor of the excavation (FS01 through FS12) at depths ranging from 3 feet to 9 feet bgs and from the sidewalls of the excavation (SW01 through SW06) at depths ranging from ground surface to 9 feet bgs. Sidewall soil sample SW07 was collected from ground surface to 4 feet bgs and a second sidewall in the same area was collected from 4 feet bgs to 9 feet bgs to confirm the top 4 feet of the excavation was compliant with the Closure Criteria. 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. The soil samples were collected, handled, and analyzed following the same procedures as described above. The final excavation extent and floor and sidewall soil sample locations are depicted on Figure 3.

Laboratory analytical results for delineation soil samples collected from PH01, located within the release extent, at depths of 0.5 feet and 1 foot bgs indicated that chloride concentrations exceeded the Closure Criteria. The terminal delineation soil sample of PH01B collected at 6 feet bgs indicated all COC concentrations were compliant with the Closure Criteria, successfully defining the vertical extent of the release. Laboratory analytical results for delineation soil samples PH02 through PH05B, located north, south, east, and west of the excavation extent, collected at depths ranging from 0.5 feet bgs to 9 feet bgs indicated all COCs were compliant with the Closure Criteria, successfully defining the lateral extent of the release.

Laboratory analytical results for confirmation soil samples SW01 and SW03 indicated chloride concentrations exceeded Site Closure Criteria. On September 6, 2024, Ensolum personnel returned to the Site to oversee additional excavation and sampling activities in response to elevated chloride levels in the area of SW03. Two confirmation soil samples were collected from the new sidewall: SW07 from ground surface to 4 feet bgs and another sample representing the sidewall at depths of 4 feet to 9 feet bgs. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included in Appendix D.

The final excavation extent measured approximately 2,220 square feet. A total of approximately 330 cubic yards of impacted soil was removed during excavation activities and was properly disposed of at the R360 Landfill Facility in Hobbs, New Mexico.

Due to proximity to active production equipment requiring access for operations, the excavation was backfilled on September 13, 2024, with locally procured material and recontoured to match the surrounding pad conditions.

DEFERRAL REQUEST

Due to active production equipment and process piping present in the area, depicted in photos 6 through 8, the remaining impacted soil along the sidewall represented by confirmation soil sample SW01 was not removed. XTO is requesting a deferral of final remediation of residual impacts. The estimated extent of remaining impacted soil measures approximately 2,777 square feet, and a total of approximately 617 cubic yards of impacted soil remains in place, assuming a depth of 6 feet bgs based on laboratory analytical results from delineation soil sample PH01B. The release extent has been laterally delineated by delineation soil samples PH02 through PH05 and excavation sidewall soil samples SW02 and SW04 through SW07. The proposed deferral area and all samples used to define the deferral area are depicted on Figure 4.

XTO does not believe deferment will result in imminent risk to human health, the environment, or groundwater. Depth to groundwater was determined to be greater than 110 feet, and the entirety of the release remained on pad. Based on the presence of active production equipment and process piping within the release area and the complete lateral and vertical definition of impacted soil remaining in place, XTO requests deferral of final remediation for Incident Number NAPP2418053192 until final abandonment of the well pad or major construction, whichever comes first.

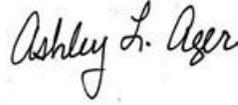
XTO Energy, Inc.
Deferral Request
Remuda 500 Battery

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, MS, PG
Principal

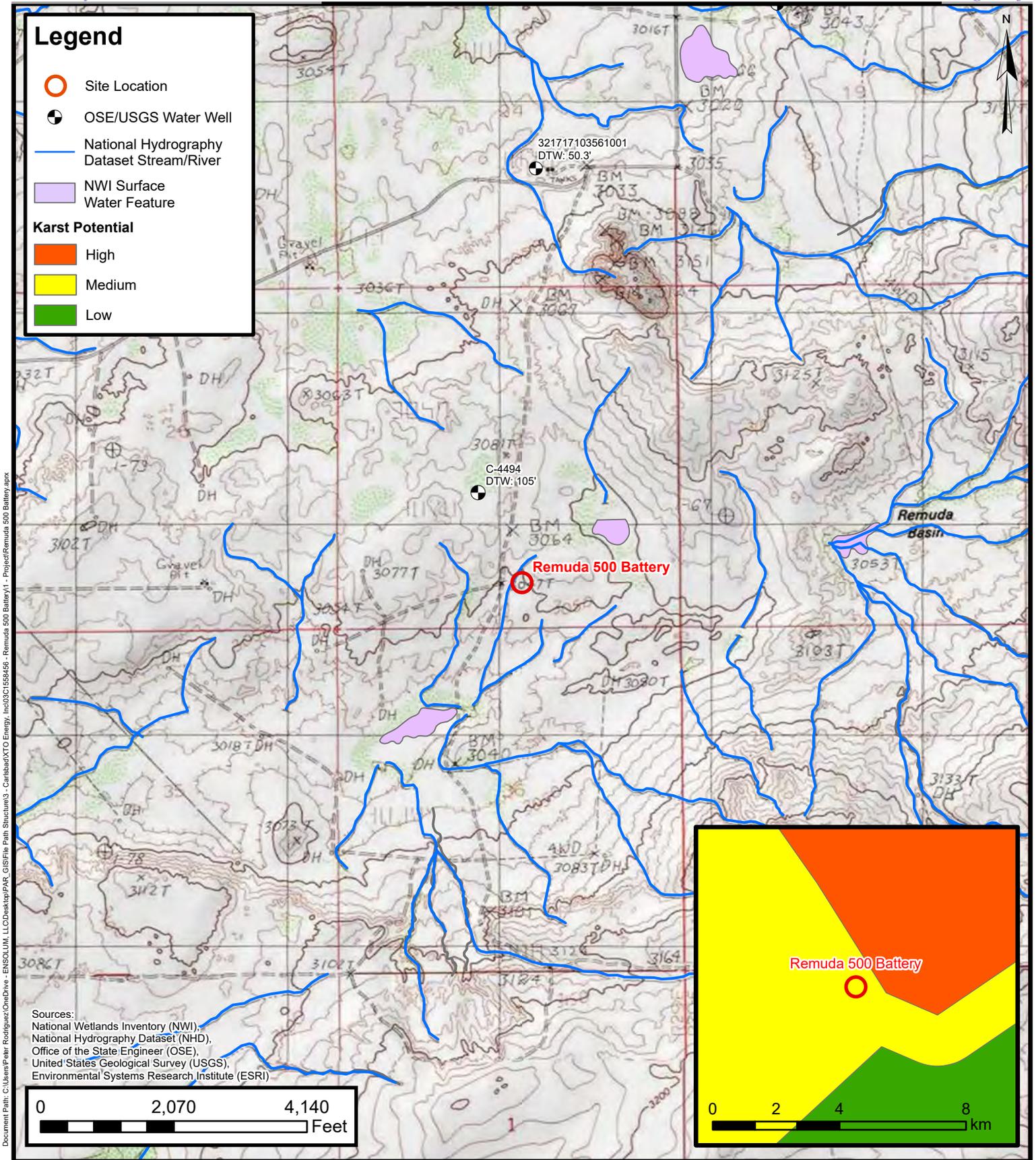
cc: Colton Brown, XTO
Kaylan Dirkx, XTO
BLM

Appendices:

- Figure 1 Site Receptor Map
- Figure 2 Delineation Soil Sample Locations
- Figure 3 Excavation Soil Sample Locations
- Figure 4 Deferral Area Map
- Table 1 Soil Sample Analytical Results
- Appendix A Referenced Well Records
- Appendix B Lithologic / Soil Sampling Logs
- Appendix C Photographic Log
- Appendix D Laboratory Analytical Reports & Chain-of-Custody Documentation



FIGURES



Site Receptor Map

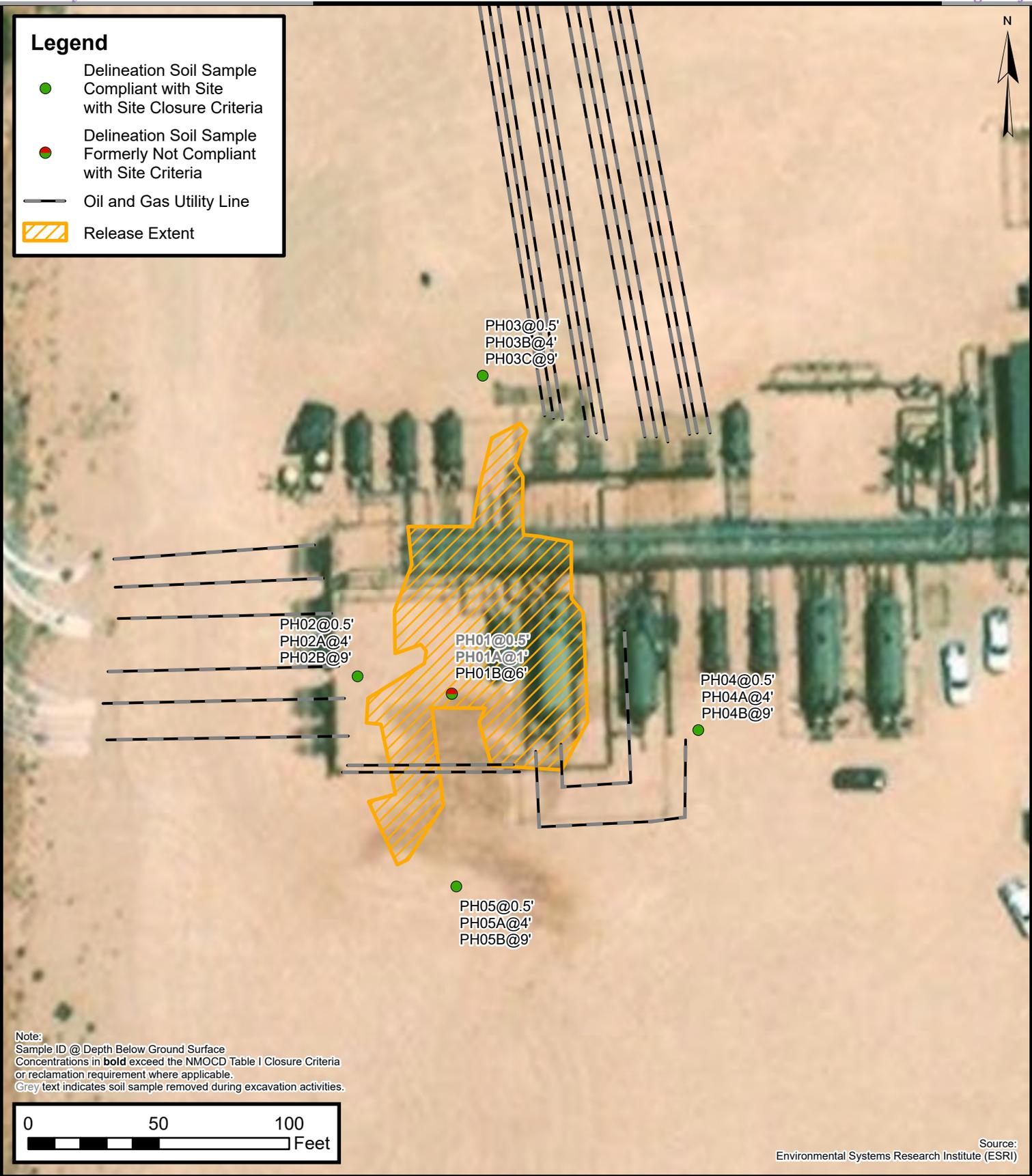
XTO Energy, Inc
 Remuda 500 Battery
 Incident Number: NAPP2418053192
 Unit O , Sec 25, T23S, R29E
 Eddy County, New Mexico

FIGURE
 1



Legend

- Delineation Soil Sample Compliant with Site with Site Closure Criteria
- Delineation Soil Sample Formerly Not Compliant with Site Criteria
- Oil and Gas Utility Line
- Release Extent



Document Path: C:\Users\Peter.Rodriguez\OneDrive - ENSOLUM, LLC\Desktop\PAR_GIS\File Path Structure3 - Carlsbad\XTO Energy - Remuda 500 Battery\1 - Project\Remuda 500 Battery.aprx

Source:
Environmental Systems Research Institute (ESRI)

Delineation Soil Sample Locations

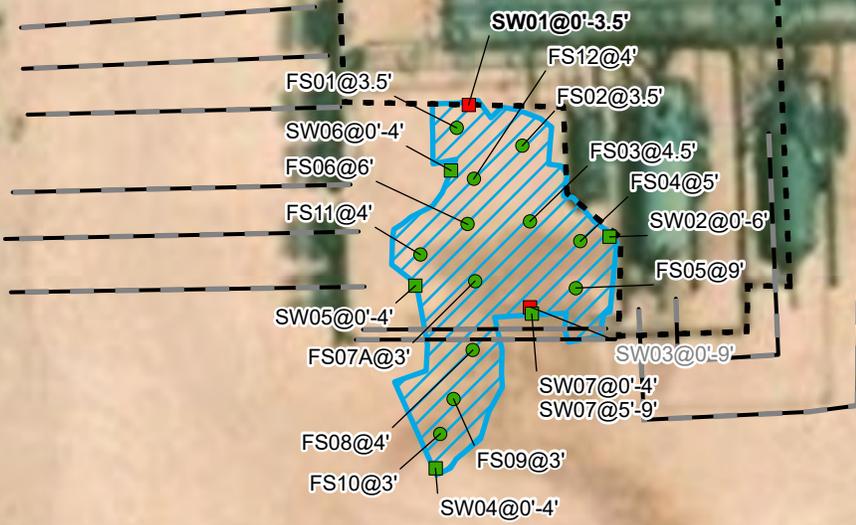
XTO Energy, Inc
 Remuda 500 Battery
 Incident Number: NAPP2418053192
 Unit O , Sec 25, T23S, R29E
 Eddy County, New Mexico

FIGURE

2

Legend

- Confirmation Soil Sample Compliant with Site with Site Closure Criteria
- Confirmation Sidewall Sample Compliant with Site Closure Criteria
- Confirmation Sidewall Sample Not Compliant with Site Closure Criteria
- Oil and Gas Utility Line
- Active Surface Pipelines / Production Equipment
- Excavation Extent



Note:
 Sample ID @ Depth Below Ground Surface
 Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation requirement where applicable.
 Grey text indicates soil sample removed during excavation activities.



Source:
 Environmental Systems Research Institute (ESRI)

Excavation Soil Sample Locations

XTO Energy, Inc
 Remuda 500 Battery
 Incident Number: NAPP2418053192
 Unit O , Sec 25, T23S, R29E
 Eddy County, New Mexico

FIGURE
3



Document Path: C:\Users\Peter.Rodriguez\OneDrive - ENSOLUM, LLC\Desktop\PAR_GIS\File Path Structure3 - Carlsbad\XTO Energy - Inc\0301558466 - Remuda 500 Battery\1 - Project\Remuda 500 Battery.aprx

Legend

- Confirmation Soil Sample Compliant with Site Closure Criteria
- Confirmation Sidewall Sample Compliant with Site Closure Criteria
- Confirmation Sidewall Sample Not Compliant with Site Closure Criteria
- Oil and Gas Utility Line
- Deferral Area



PH03@0.5'
PH03B@4'
PH03C@9'

SW01@0'-3.5'

PH02@0.5'
PH02A@4'
PH02B@9'

PH01B@6'

SW02@0'-6'

PH04@0.5'
PH04A@4'
PH04B@9'

PH05@0.5'
PH05A@4'
PH05B@9'

Note:
Sample ID @ Depth Below Ground Surface
Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation requirement where applicable.
Grey text indicates soil sample removed during excavation activities.



Source:
Environmental Systems Research Institute (ESRI)

Deferral Area

XTO Energy, Inc
Remuda 500 Battery
Incident Number: NAPP2418053192
Unit O , Sec 25, T23S, R29E
Eddy County, New Mexico

FIGURE
4





TABLES



TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
 Remuda 500 Battery
 XTO Energy, Inc
 Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCDC Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
Delineation Soil Samples										
PH01	07/15/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	7,000
PH01A	07/15/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	5,700
PH01B	07/15/2024	6	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
PH02	07/30/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	256
PH02A	07/30/2024	4	<0.50	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
PH02B	07/30/2024	9	<0.50	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
PH03	07/30/2024	0.5	<0.50	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	160
PH03B	07/30/2024	4	<0.50	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112
PH03C	07/30/2024	9	<0.50	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
PH04	07/30/2024	0.5	<0.50	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	160
PH04A	07/30/2024	4	<0.50	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144
PH04B	07/30/2024	9	<0.50	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
PH05	07/30/2024	0.5	<0.50	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	288
PH05A	07/30/2024	4	<0.50	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144
PH05B	07/30/2024	9	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
Confirmation Soil Samples										
FS01	07/16/2024	3.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	160
FS02	07/16/2024	3.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	160
FS03	07/17/2024	4.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	240
FS04	07/16/2024	5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	176
FS05	07/16/2024	9	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	128
FS06	07/17/2024	6	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
FS07	08/23/2024	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	176
FS08	08/23/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192
FS09	08/23/2024	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	240
FS10	08/23/2024	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	240
FS11	09/06/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
FS12	09/06/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112



**TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Remuda 500 Battery
XTO Energy, Inc
Eddy County, New Mexico**

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
SW01	07/16/2024	0 - 3.5	<0.050	<0.300	<10.0	30.5	<48.0	30.5	30.5	896
SW02	07/16/2024	0 - 6	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	368
SW03	08/23/2024	0 - 9	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,230
SW04	08/23/2024	0 - 4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	288
SW05	09/06/2024	0 - 4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	224
SW06	09/06/2024	0 - 4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80
SW07	09/06/2024	0 - 4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	128
SW07	09/06/2024	4 - 9	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

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

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

NMAC: New Mexico Administrative Code

~~Grey~~ text indicates soil sample removed during excavation activities



APPENDIX A

Referenced Well Records

<p>WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220</p>				BH or PH Name:		Date:		
				BH01 (C-04494)		11/18/2020, 12/02/20, 01/05/2021		
				Site Name:		Remuda North 25 Observation Well		
				RP or Incident Number:				
LITHOLOGIC / SOIL SAMPLING LOG				LTE Job Number:		TE012919039		
Lat/Long:				Field Screening:		Logged By BB, LAD, FS		
						Method: Hollow Stem Auger, sonic		
				Hole Diameter:		Total Depth:		
				6.25", 4.25"		105'		
Comments: Lithology remarks only. No field screenings: Dry hole								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D			N			1	SP-SC	0-1' : SAND, dry, brown, poorly graded, fine grain, Clay (10% clay), some roots, no stain, no odor 1-4' : SAND, dry, reddish-light brown, poorly graded, very fine - fine grain, some rounded caliche pebbles, no stain, no odor 4-9' : CALICHE, dry, light brown-tan, poorly consolidated, sub-rounded caliche pebbles and gravel, very silty, gradational 9-14' : Abundent sub-round caliche gravel 14-19' : Some sub-angular caliche gravel and pebbles 19-24' : Abundant sub-angular caliche gravel and pebbles, moderately consolidated
D			N			4	CCHE	
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		
						13		
						14		
						15		
						16		
						17		
						18		
						19		
						20		
						21		
						22		
						23		
D			N			24	CL	
						25		

 <p style="text-align: center;">WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220</p>		BH or PH Name: BH01 (C-04494)	Date: 11/18/2020, 12/02/2020, 1/5/2021					
		Site Name: Remuda North 25 Observation Well						
		RP or Incident Number:						
		LTE Job Number: TE012919039						
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long:		Field Screening:	Logged By BB, LAD, FS	Method: Hollow Stem Auger, sonic				
			Hole Diameter: 6.25", 4.25"	Total Depth: 105'				
Comments: Lithologic log only, no field screenings								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D			N			51	DOL	48-56' : Advanced borehole with new air rotary bit (12/02/20), DOLOMITE, white, well consolidated, dark gray- banding, no stain no odor
						52		
						53		
						54		
						55		
						56		
						57		
						58		
						59		
						60		
D			N			61	GYP	62' : Brown-pale yellow coarse crystalline dolomitic limestone stringer (2cm) 63-65' : Abundant calcite crystalline veins (<1mm), pale green-gray, poorly consolidated
						62		
						63		
						64		
						65		
						66		
						67		
						68		
						69		
						70		
						71		
						72		
						73		
						74		
						75		

 <p style="text-align: center;">WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220</p>	BH or PH Name: BH01 (C-04494)	Date: 11/18/2020, 12/02/2020, 1/5/2021
	Site Name: Remuda North 25 Observation Well	
	RP or Incident Number:	
	LTE Job Number: TE012919039	

LITHOLOGIC / SOIL SAMPLING LOG		Logged By BB, LAD, FS	Method: Hollow Stem Auger, sonic
Lat/Long:	Field Screening:	Hole Diameter: 6.25", 4.25"	Total Depth: 105'

Comments:
Lithologic log only, no field screenings

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D			N			76	GYP	69-81' : GYPSUM with Anhydrite, dry, greenish gray, some pale yellow, well consolidated, fine crystalline, 20% anhydrite, no stain, no odor 81-98' : MUDSTONE, moist, dark reddish brown, moderately consolidated, high plasticity, cohesive, trace coarse crystalline gypsum inclusions, no stain, no odor 85-86.5' : greenish-gray well consolidated coarse crystalline gypsum/anhydrite stringer 90-98' : Some fine grain brown sand At 97' : dark gray-gray gypsum stringer (4cm) 98-99.5' : GYPSUM, dark gray-gray, some brown, dry, well consolidated, fine-coarse crystalline, no stain, no odor 99.5-105' : Sandy SILTSTONE, moist, brown, some gray-dark gray, poorly consolidated, 20% very fine grain sand, no stain, no odor
						77		
						78		
						79		
						80		
						81		
						82		
						83		
						84		
						85		
D			N			86	GYP	
						87		
D			N			88	ML-S	
						89		
						90		
						91		
						92		
						93		
						94		
						95		
						96		
						97		
						98		
						99		
						100		

 <p style="text-align: center;">WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220</p>	BH or PH Name: BH01 (C-04494)	Date: 11/18/2020, 12/02/2020, 1/5/2021
	Site Name: Remuda North 25 Observation Well	
	RP or Incident Number:	
	LTE Job Number: TE012919039	

LITHOLOGIC / SOIL SAMPLING LOG		Logged By BB, LAD, FS	Method: Hollow Stem Auger, sonic
Lat/Long:	Field Screening:	Hole Diameter: 6.25", 4.25"	Total Depth: 105'

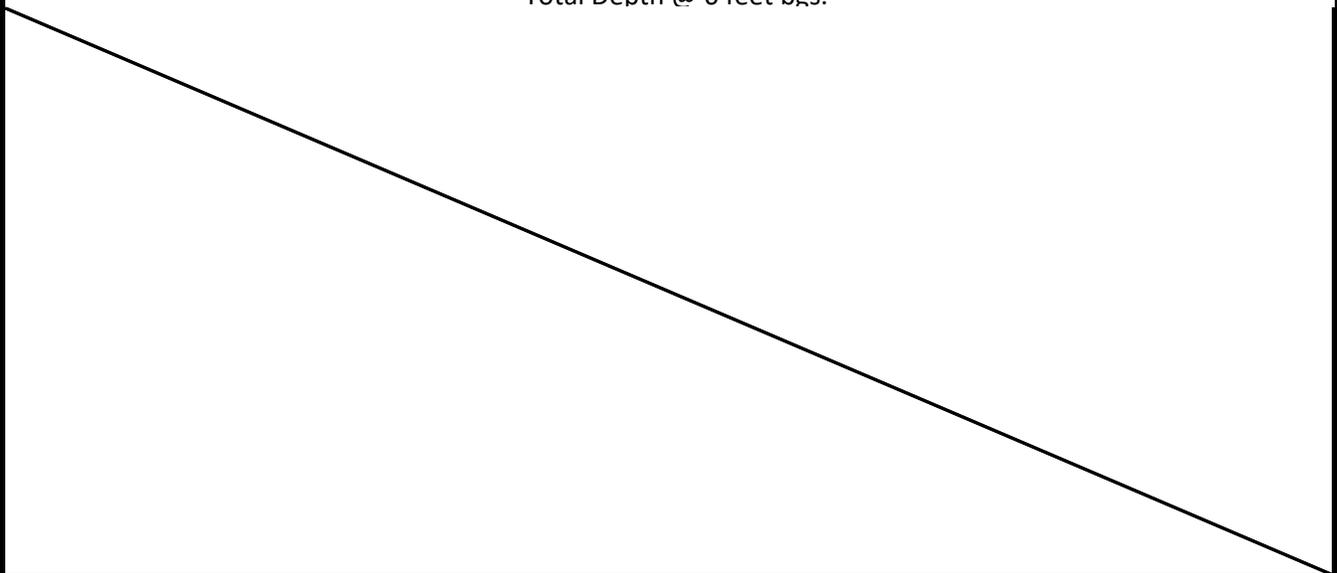
Comments:
Lithologic log only, no field screenings

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks	
D			N			101	ML-S	99.5-105' : Sandy SILTSTONE, moist, brown, some gray-dark gray, poorly consolidated, 20% very fine grain sand, no stain, no odor	
						102			
						103		At 102' : Thin (<1mm) laminated black/gray well consolidated shale stringer (4cm thick)	
						104			
						105			
						106			TD @ 105' bgs (1/5/2021)
						107			
						108			
						109			
						110			
						111			
						112			
						113			
						114			
						115			
						116			
						117			
						118			
						119			
						120			
						121			
						122			
						123			
						124			
						125			



APPENDIX B

Lithologic Soil Sampling Logs

					Sample Name: PH01		Date: 7-15-24	
					Site Name: Remuda 500 Battery			
					Incident Number: nAPP2418053192			
					Job Number: 03C1558456			
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: Connor Whitman		Method: Backhoe	
Coordinates: 32.270310, -103.937525					Hole Diameter: 2'		Total Depth: 6'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	8,495	20.8	Y	PH01	0.5	0	CCHE	CALICHE brown/tan, with silt moist. Staining, no HC odor.
M	11,575	0.0	Y	PH01A	1	1		
M	9,917	0.0	Y		2	2		
M	10,712	0.0	Y		3	3		
M	2,240	0.0	Y		4	4		
D	5,712	0.0	N		5	5	SP	SAND, brown, very fine, with silt. No stain or HC odor
D	<168	0.0	N	PH01B	6	6		
Total Depth @ 6 feet bgs.								
								

							Sample Name: PH02		Date: 7-30-24	
							Site Name: Remuda 500 Battery			
							Incident Number: nAPP2418053192			
							Job Number: 03C1558456			
LITHOLOGIC / SOIL SAMPLING LOG							Logged By: Connor Whitman		Method: Hydro Vac	
Coordinates: 32.270420, -103.937733							Hole Diameter: 1'		Total Depth: 9'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.										
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions		
D	168	0.0	N	PH02	0.5	0	CCHE	CALICHE, tan, with cobble sized rocks, and silt. No stain, no odor.		
D	168	0.0	N		1	1				
D	168	0.0	N		2	2				
D	168	0.0	N		3	3				
D	168	0.0	N	PH02A	4	4				
D	168	0.0	N		6	6	SP	SAND, brown, very fine, with silt. No stain, No odor.		
D	168	0.0	N		8	8				
D	168	0.0	N	PH02B	9	9				
Total Depth @ 9 feet bgs.										

							Sample Name: PH03		Date: 7-30-24	
							Site Name: Remuda 500 Battery			
							Incident Number: nAPP2418053192			
							Job Number: 03C1558456			
LITHOLOGIC / SOIL SAMPLING LOG							Logged By: Connor Whitman		Method: Hydro Vac	
Coordinates: 32.270685, -103.937556							Hole Diameter: 1'		Total Depth: 9'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.										
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions		
D	235	0.0	N	PH03	0.5	0	CCHE	CALICHE, tan, with cobble sized rocks, and silt. No stain, no odor.		
D	168	0.0	N		1	1				
D	168	0.0	N		2	2				
D	168	0.0	N		3	3				
D	168	0.0	N	PH03A	4	4				
D	168	0.0	N		6	6	SP	SAND, brown, very fine, with silt. No stain, No odor.		
D	168	0.0	N		8	8				
D	168	0.0	N	PH03B	9	9				
Total Depth @ 9 feet bgs.										

							Sample Name: PH04		Date: 7-30-24	
							Site Name: Remuda 500 Battery			
							Incident Number: nAPP2418053192			
							Job Number: 03C1558456			
LITHOLOGIC / SOIL SAMPLING LOG							Logged By: Connor Whitman		Method: Backhoe	
Coordinates: 32.270374, -103.937238							Hole Diameter: 2'		Total Depth: 9'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.										
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions		
D	<168	0.0	N	PH04	0.5	0	CCHE	CALICHE, tan, with cobble sized rocks, and silt. No stain, no odor.		
D	<168	0.0	N		1	1				
D	<168	0.0	N		2	2				
D	<168	0.0	N		3	3				
D	<168	0.0	N	PH04A	4	4				
D	<168	0.0	N		6	6	SP	SAND, brown, very fine, with silt. No stain, No odor.		
D	<168	0.0	N	PH04B	9	9				
Total Depth @ 9 feet bgs.										

							Sample Name: PH05		Date: 7-30-24	
							Site Name: Remuda 500 Battery			
							Incident Number: nAPP2418053192			
							Job Number: 03C1558456			
LITHOLOGIC / SOIL SAMPLING LOG							Logged By: Connor Whitman		Method: Backhoe	
Coordinates: 32.270236, -103.937583							Hole Diameter: 2'		Total Depth: 9'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.										
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions		
D	<168	0.0	N	PH05	0.5	0	CCHE	CALICHE, tan, with cobble sized rocks, and silt. No stain, no odor.		
D	<168	0.0	N		1	1				
D	<168	0.0	N		2	2				
D	<168	0.0	N		3	3				
D	<168	0.0	N	PH05A	4	4	SP	SAND brown, very fine, with low plasticity clay and silt. No stain or odor.		
						5				
D	<168	0.0	N		6	6	SP	SAND, brown, very fine, with silt. No stain, No odor.		
						7				
D	<168	0.0	N		8	8				
D	<168	0.0	N	PH05B	9	9				
Total Depth @ 9 feet bgs.										



APPENDIX C

Photographic Log



Photographic Log
XTO Energy, Inc
Remuda 500 Battery
NAPP2418053192



Photograph: 1 Date: 6/27/2024
Description: Soil staining in release footprint
View: North

Photograph: 2 Date: 6/27/2024
Description: Soil staining in release footprint
View: North



Photograph: 3 Date: 7/30/2024
Description: Excavation activities
View: Southeast

Photograph: 4 Date: 7/30/2024
Description: Excavation activities
View: Southeast



APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation



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

July 23, 2024

DAVID MCINNIS

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: REMUDA 500 BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 07/18/24 13:50.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 DAVID MCINNIS
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	07/18/2024	Sampling Date:	07/16/2024
Reported:	07/23/2024	Sampling Type:	Soil
Project Name:	REMUDA 500 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558456	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.270479,-103.937524		

Sample ID: FS 01 3'6" (H244310-01)

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	07/19/2024	ND	1.95	97.3	2.00	2.33	
Toluene*	<0.050	0.050	07/19/2024	ND	1.91	95.3	2.00	1.13	
Ethylbenzene*	<0.050	0.050	07/19/2024	ND	2.00	100	2.00	0.996	
Total Xylenes*	<0.150	0.150	07/19/2024	ND	5.90	98.3	6.00	0.866	
Total BTEX	<0.300	0.300	07/19/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.9 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	07/22/2024	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	07/19/2024	ND	197	98.6	200	7.97	
DRO >C10-C28*	<10.0	10.0	07/19/2024	ND	214	107	200	11.6	
EXT DRO >C28-C36	<10.0	10.0	07/19/2024	ND					

Surrogate: 1-Chlorooctane 88.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 86.7 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 DAVID MCINNIS
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	07/18/2024	Sampling Date:	07/16/2024
Reported:	07/23/2024	Sampling Type:	Soil
Project Name:	REMUDA 500 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558456	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.270479,-103.937524		

Sample ID: FS 02 3'6" (H244310-02)

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	07/19/2024	ND	1.95	97.3	2.00	2.33	
Toluene*	<0.050	0.050	07/19/2024	ND	1.91	95.3	2.00	1.13	
Ethylbenzene*	<0.050	0.050	07/19/2024	ND	2.00	100	2.00	0.996	
Total Xylenes*	<0.150	0.150	07/19/2024	ND	5.90	98.3	6.00	0.866	
Total BTEX	<0.300	0.300	07/19/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.6 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	07/22/2024	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	07/19/2024	ND	197	98.6	200	7.97	
DRO >C10-C28*	<10.0	10.0	07/19/2024	ND	214	107	200	11.6	
EXT DRO >C28-C36	<10.0	10.0	07/19/2024	ND					

Surrogate: 1-Chlorooctane 84.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.5 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 DAVID MCINNIS
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	07/18/2024	Sampling Date:	07/16/2024
Reported:	07/23/2024	Sampling Type:	Soil
Project Name:	REMUDA 500 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558456	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.270479,-103.937524		

Sample ID: SW 01 0-3'6" (H244310-03)

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	07/19/2024	ND	1.95	97.3	2.00	2.33	
Toluene*	<0.050	0.050	07/19/2024	ND	1.91	95.3	2.00	1.13	
Ethylbenzene*	<0.050	0.050	07/19/2024	ND	2.00	100	2.00	0.996	
Total Xylenes*	<0.150	0.150	07/19/2024	ND	5.90	98.3	6.00	0.866	
Total BTEX	<0.300	0.300	07/19/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.0 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	896	16.0	07/22/2024	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	07/19/2024	ND	197	98.6	200	7.97	
DRO >C10-C28*	30.5	10.0	07/19/2024	ND	214	107	200	11.6	
EXT DRO >C28-C36	<10.0	10.0	07/19/2024	ND					

Surrogate: 1-Chlorooctane 105 % 48.2-134

Surrogate: 1-Chlorooctadecane 103 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 DAVID MCINNIS
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	07/18/2024	Sampling Date:	07/16/2024
Reported:	07/23/2024	Sampling Type:	Soil
Project Name:	REMUDA 500 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558456	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.270479,-103.937524		

Sample ID: FS 04 5' (H244310-04)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/19/2024	ND	1.95	97.3	2.00	2.33		
Toluene*	<0.050	0.050	07/19/2024	ND	1.91	95.3	2.00	1.13		
Ethylbenzene*	<0.050	0.050	07/19/2024	ND	2.00	100	2.00	0.996		
Total Xylenes*	<0.150	0.150	07/19/2024	ND	5.90	98.3	6.00	0.866		
Total BTEX	<0.300	0.300	07/19/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.7 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	176	16.0	07/22/2024	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	07/19/2024	ND	197	98.6	200	7.97		
DRO >C10-C28*	<10.0	10.0	07/19/2024	ND	214	107	200	11.6		
EXT DRO >C28-C36	<10.0	10.0	07/19/2024	ND						

Surrogate: 1-Chlorooctane 86.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.5 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 DAVID MCINNIS
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	07/18/2024	Sampling Date:	07/16/2024
Reported:	07/23/2024	Sampling Type:	Soil
Project Name:	REMUDA 500 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558456	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.270479,-103.937524		

Sample ID: SW 02 0-6' (H244310-05)

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	07/19/2024	ND	1.95	97.3	2.00	2.33	
Toluene*	<0.050	0.050	07/19/2024	ND	1.91	95.3	2.00	1.13	
Ethylbenzene*	<0.050	0.050	07/19/2024	ND	2.00	100	2.00	0.996	
Total Xylenes*	<0.150	0.150	07/19/2024	ND	5.90	98.3	6.00	0.866	
Total BTEX	<0.300	0.300	07/19/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.3 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	368	16.0	07/22/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/19/2024	ND	197	98.6	200	7.97	
DRO >C10-C28*	<10.0	10.0	07/19/2024	ND	214	107	200	11.6	
EXT DRO >C28-C36	<10.0	10.0	07/19/2024	ND					

Surrogate: 1-Chlorooctane 103 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 DAVID MCINNIS
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	07/18/2024	Sampling Date:	07/16/2024
Reported:	07/23/2024	Sampling Type:	Soil
Project Name:	REMUDA 500 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558456	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.270479,-103.937524		

Sample ID: FS 05 9' (H244310-06)

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	07/19/2024	ND	1.95	97.3	2.00	2.33		
Toluene*	<0.050	0.050	07/19/2024	ND	1.91	95.3	2.00	1.13		
Ethylbenzene*	<0.050	0.050	07/19/2024	ND	2.00	100	2.00	0.996		
Total Xylenes*	<0.150	0.150	07/19/2024	ND	5.90	98.3	6.00	0.866		
Total BTEX	<0.300	0.300	07/19/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.6 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	07/22/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	07/19/2024	ND	202	101	200	6.64		
DRO >C10-C28*	<10.0	10.0	07/19/2024	ND	193	96.3	200	9.45		
EXT DRO >C28-C36	<10.0	10.0	07/19/2024	ND						

Surrogate: 1-Chlorooctane 81.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 81.8 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 DAVID MCINNIS
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	07/18/2024	Sampling Date:	07/17/2024
Reported:	07/23/2024	Sampling Type:	Soil
Project Name:	REMUDA 500 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558456	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.270479,-103.937524		

Sample ID: FS 03 4'6" (H244310-07)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/19/2024	ND	1.95	97.3	2.00	2.33		
Toluene*	<0.050	0.050	07/19/2024	ND	1.91	95.3	2.00	1.13		
Ethylbenzene*	<0.050	0.050	07/19/2024	ND	2.00	100	2.00	0.996		
Total Xylenes*	<0.150	0.150	07/19/2024	ND	5.90	98.3	6.00	0.866		
Total BTEX	<0.300	0.300	07/19/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.8 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	240	16.0	07/22/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	07/19/2024	ND	202	101	200	6.64		
DRO >C10-C28*	<10.0	10.0	07/19/2024	ND	193	96.3	200	9.45		
EXT DRO >C28-C36	<10.0	10.0	07/19/2024	ND						

Surrogate: 1-Chlorooctane 93.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 DAVID MCINNIS
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	07/18/2024	Sampling Date:	07/17/2024
Reported:	07/23/2024	Sampling Type:	Soil
Project Name:	REMUDA 500 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558456	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.270479,-103.937524		

Sample ID: FS 06 6' (H244310-08)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/19/2024	ND	1.95	97.3	2.00	2.33		
Toluene*	<0.050	0.050	07/19/2024	ND	1.91	95.3	2.00	1.13		
Ethylbenzene*	<0.050	0.050	07/19/2024	ND	2.00	100	2.00	0.996		
Total Xylenes*	<0.150	0.150	07/19/2024	ND	5.90	98.3	6.00	0.866		
Total BTEX	<0.300	0.300	07/19/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.3 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	07/22/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	07/19/2024	ND	202	101	200	6.64		
DRO >C10-C28*	<10.0	10.0	07/19/2024	ND	193	96.3	200	9.45		
EXT DRO >C28-C36	<10.0	10.0	07/19/2024	ND						

Surrogate: 1-Chlorooctane 86.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 86.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

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

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC

Project Manager: David Mcinnis

Address: 3422 National Parks Hwy

City: Carlsbad State: NM Zip: 88220

Phone #: 409 454 3009 Fax #:

Project #: 03C1558456 Project Owner:

Project Name: Remuda 500 Battery

Project Location: 32,270479,-103,937524

Sampler Name: Virel Santillana

BILL TO

P.O. #: Company: XTO Energy

Attn: Amy Ruth

Address: 364 E Greene St

City: Carlsbad State: NM Zip: 88220

Phone #:

Fax #:

ANALYSIS REQUEST

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	ANALYSIS REQUEST		
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :					
184430	FS01	3'6"	C	1			X					7/16/24	1321	Chlorides	X
	FS02	3'6"	C	1			X					7/16/24	1405	TPH	X
	FS02	0-3'6"										7/16/24	1409	BTEX	X
	FS04	5'										7/16/24	1512		
	FS05	9'										7/16/24	1555		
	FS03	4'6"										7/17/24	1023		
	FS06	6'										7/17/24	1302		

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Relinquished By: *[Signature]*

Date: 7/18/24 Time: 1350

Received By: *[Signature]*

Verbal Result: Yes No Add'l Phone #: *[Number]*

Remarks: *[Handwritten notes]*

Delivered By: (Circle One)

Observed Temp. °C: 0.32

Sample Condition: Cool Intact Yes No

CHECKED BY: *[Signature]*

Turnaround Time: *[Handwritten]*

Standard Rush

Bacteria (only) Yes No

Corrected Temp. °C: *[Handwritten]*

FORM 006 R 3.2 (10/07/21) Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com



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

July 22, 2024

DAVID MCINNIS

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: REMUDA 500 BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 07/16/24 13:25.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 DAVID MCINNIS
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	07/16/2024	Sampling Date:	07/15/2024
Reported:	07/22/2024	Sampling Type:	Soil
Project Name:	REMUDA 500 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558456	Sample Received By:	Alyssa Parras
Project Location:	XTO		

Sample ID: PH 01 .5' (H244232-01)

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	07/17/2024	ND	1.97	98.5	2.00	4.05	
Toluene*	<0.050	0.050	07/17/2024	ND	2.14	107	2.00	3.45	
Ethylbenzene*	<0.050	0.050	07/17/2024	ND	2.20	110	2.00	3.02	
Total Xylenes*	<0.150	0.150	07/17/2024	ND	6.83	114	6.00	2.91	
Total BTEX	<0.300	0.300	07/17/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7000	16.0	07/17/2024	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	07/17/2024	ND	206	103	200	5.27	
DRO >C10-C28*	<10.0	10.0	07/17/2024	ND	179	89.4	200	7.62	
EXT DRO >C28-C36	<10.0	10.0	07/17/2024	ND					

Surrogate: 1-Chlorooctane 112 % 48.2-134

Surrogate: 1-Chlorooctadecane 142 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 DAVID MCINNIS
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	07/16/2024	Sampling Date:	07/15/2024
Reported:	07/22/2024	Sampling Type:	Soil
Project Name:	REMUDA 500 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558456	Sample Received By:	Alyssa Parras
Project Location:	XTO		

Sample ID: PH 01A 1' (H244232-02)

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	07/17/2024	ND	1.97	98.5	2.00	4.05		
Toluene*	<0.050	0.050	07/17/2024	ND	2.14	107	2.00	3.45		
Ethylbenzene*	<0.050	0.050	07/17/2024	ND	2.20	110	2.00	3.02		
Total Xylenes*	<0.150	0.150	07/17/2024	ND	6.83	114	6.00	2.91		
Total BTEX	<0.300	0.300	07/17/2024	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5700	16.0	07/17/2024	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	07/17/2024	ND	206	103	200	5.27		
DRO >C10-C28*	<10.0	10.0	07/17/2024	ND	179	89.4	200	7.62		
EXT DRO >C28-C36	<10.0	10.0	07/17/2024	ND						

Surrogate: 1-Chlorooctane 105 % 48.2-134

Surrogate: 1-Chlorooctadecane 131 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 DAVID MCINNIS
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	07/16/2024	Sampling Date:	07/15/2024
Reported:	07/22/2024	Sampling Type:	Soil
Project Name:	REMUDA 500 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558456	Sample Received By:	Alyssa Parras
Project Location:	XTO		

Sample ID: PH 01B 6' (H244232-03)

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	07/17/2024	ND	1.97	98.5	2.00	4.05	
Toluene*	<0.050	0.050	07/17/2024	ND	2.14	107	2.00	3.45	
Ethylbenzene*	<0.050	0.050	07/17/2024	ND	2.20	110	2.00	3.02	
Total Xylenes*	<0.150	0.150	07/17/2024	ND	6.83	114	6.00	2.91	
Total BTEX	<0.300	0.300	07/17/2024	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	07/17/2024	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	07/17/2024	ND	206	103	200	5.27	
DRO >C10-C28*	<10.0	10.0	07/17/2024	ND	179	89.4	200	7.62	
EXT DRO >C28-C36	<10.0	10.0	07/17/2024	ND					

Surrogate: 1-Chlorooctane 101 % 48.2-134

Surrogate: 1-Chlorooctadecane 123 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

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

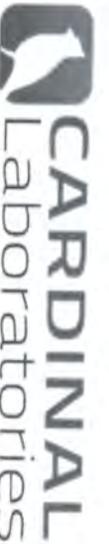
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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC **BILL TO** ANALYSIS REQUEST

Project Manager: David McInnis P.O. #: Company: XTO Energy Inc.

Address: 3122 National Parks Hwy City: Carlsbad Attn: Amy Ruth

City: Carlsbad State: NM Zip: 88220 Address: 3104 E. Green St.

Phone #: 337 257-8307 Fax #: Project Owner: XTO

Project #: : 03C1558456 Project Location: Remuda 500 Battery

Project Name: Remuda 500 Battery State: NM Zip: 88220

Project Location: Phone #: Project Location: Phone #:

Sampler Name: Jesse Dorman

FOR LAB USE ONLY

Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.		DATE	TIME	BTEX	TPH	CHLORIDE
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL					
1044232	Ph01	5'	G	1								7/5/24	0950	/	/	/	
	Ph01A	6'	G	1								7/5/24	0955	/	/	/	
	Ph01B	6'	G	1								7/5/24	1020	/	/	/	

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Relinquished By: [Signature] Date: 7-14-24 Received By: [Signature] Date: 7-14-24

Delivered By: (Circle One) Observed Temp.: 24.4°C Corrected Temp.: 24.4°C

Sampler - UPS - Bus - Other: Sample Condition Cool Intact Bacteria (only) Sample Condition Cool Intact

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



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

August 07, 2024

DAVID MCINNIS

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: REMUDA 500 BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 08/01/24 14:10.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 DAVID MCINNIS
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	08/01/2024	Sampling Date:	07/30/2024
Reported:	08/07/2024	Sampling Type:	Soil
Project Name:	REMUDA 500 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558456	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.270479,-103.937524		

Sample ID: PH 02 0.5 (H244608-01)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/02/2024	ND	1.82	91.2	2.00	8.24	
Toluene*	<0.050	0.050	08/02/2024	ND	1.78	89.0	2.00	8.35	
Ethylbenzene*	<0.050	0.050	08/02/2024	ND	1.89	94.3	2.00	8.35	
Total Xylenes*	<0.150	0.150	08/02/2024	ND	5.54	92.4	6.00	8.35	
Total BTEX	<0.300	0.300	08/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.7 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	08/06/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/02/2024	ND	212	106	200	2.64	
DRO >C10-C28*	<10.0	10.0	08/02/2024	ND	232	116	200	8.76	
EXT DRO >C28-C36	<10.0	10.0	08/02/2024	ND					

Surrogate: 1-Chlorooctane 68.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 76.5 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 DAVID MCINNIS
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	08/01/2024	Sampling Date:	07/30/2024
Reported:	08/07/2024	Sampling Type:	Soil
Project Name:	REMUDA 500 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558456	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.270479,-103.937524		

Sample ID: PH 02A 4 (H244608-02)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/02/2024	ND	1.82	91.2	2.00	8.24	
Toluene*	<0.050	0.050	08/02/2024	ND	1.78	89.0	2.00	8.35	
Ethylbenzene*	<0.050	0.050	08/02/2024	ND	1.89	94.3	2.00	8.35	
Total Xylenes*	<0.150	0.150	08/02/2024	ND	5.54	92.4	6.00	8.35	
Total BTEX	<0.300	0.300	08/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.7 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	08/06/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/02/2024	ND	212	106	200	2.64	
DRO >C10-C28*	<10.0	10.0	08/02/2024	ND	232	116	200	8.76	
EXT DRO >C28-C36	<10.0	10.0	08/02/2024	ND					

Surrogate: 1-Chlorooctane 87.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 98.2 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 DAVID MCINNIS
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	08/01/2024	Sampling Date:	07/30/2024
Reported:	08/07/2024	Sampling Type:	Soil
Project Name:	REMUDA 500 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558456	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.270479,-103.937524		

Sample ID: PH 02B 9 (H244608-03)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/02/2024	ND	1.82	91.2	2.00	8.24		
Toluene*	<0.050	0.050	08/02/2024	ND	1.78	89.0	2.00	8.35		
Ethylbenzene*	<0.050	0.050	08/02/2024	ND	1.89	94.3	2.00	8.35		
Total Xylenes*	<0.150	0.150	08/02/2024	ND	5.54	92.4	6.00	8.35		
Total BTEX	<0.300	0.300	08/02/2024	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	08/06/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	08/02/2024	ND	212	106	200	2.64		
DRO >C10-C28*	<10.0	10.0	08/02/2024	ND	232	116	200	8.76		
EXT DRO >C28-C36	<10.0	10.0	08/02/2024	ND						

Surrogate: 1-Chlorooctane 62.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 70.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 DAVID MCINNIS
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	08/01/2024	Sampling Date:	07/30/2024
Reported:	08/07/2024	Sampling Type:	Soil
Project Name:	REMUDA 500 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558456	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.270479,-103.937524		

Sample ID: PH 03 0.5 (H244608-04)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/02/2024	ND	1.82	91.2	2.00	8.24	
Toluene*	<0.050	0.050	08/02/2024	ND	1.78	89.0	2.00	8.35	
Ethylbenzene*	<0.050	0.050	08/02/2024	ND	1.89	94.3	2.00	8.35	
Total Xylenes*	<0.150	0.150	08/02/2024	ND	5.54	92.4	6.00	8.35	
Total BTEX	<0.300	0.300	08/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.5 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	08/06/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/02/2024	ND	212	106	200	2.64	
DRO >C10-C28*	<10.0	10.0	08/02/2024	ND	232	116	200	8.76	
EXT DRO >C28-C36	<10.0	10.0	08/02/2024	ND					

Surrogate: 1-Chlorooctane 74.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 DAVID MCINNIS
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	08/01/2024	Sampling Date:	07/30/2024
Reported:	08/07/2024	Sampling Type:	Soil
Project Name:	REMUDA 500 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558456	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.270479,-103.937524		

Sample ID: PH 03B 4 (H244608-05)

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	08/02/2024	ND	1.82	91.2	2.00	8.24	
Toluene*	<0.050	0.050	08/02/2024	ND	1.78	89.0	2.00	8.35	
Ethylbenzene*	<0.050	0.050	08/02/2024	ND	1.89	94.3	2.00	8.35	
Total Xylenes*	<0.150	0.150	08/02/2024	ND	5.54	92.4	6.00	8.35	
Total BTEX	<0.300	0.300	08/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.9 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	08/06/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/02/2024	ND	212	106	200	2.64	
DRO >C10-C28*	<10.0	10.0	08/02/2024	ND	232	116	200	8.76	
EXT DRO >C28-C36	<10.0	10.0	08/02/2024	ND					

Surrogate: 1-Chlorooctane 77.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 86.6 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 DAVID MCINNIS
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	08/01/2024	Sampling Date:	07/30/2024
Reported:	08/07/2024	Sampling Type:	Soil
Project Name:	REMUDA 500 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558456	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.270479,-103.937524		

Sample ID: PH 03C 9 (H244608-06)

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	08/02/2024	ND	1.82	91.2	2.00	8.24		
Toluene*	<0.050	0.050	08/02/2024	ND	1.78	89.0	2.00	8.35		
Ethylbenzene*	<0.050	0.050	08/02/2024	ND	1.89	94.3	2.00	8.35		
Total Xylenes*	<0.150	0.150	08/02/2024	ND	5.54	92.4	6.00	8.35		
Total BTEX	<0.300	0.300	08/02/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.8 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	08/06/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	08/02/2024	ND	212	106	200	2.64		
DRO >C10-C28*	<10.0	10.0	08/02/2024	ND	232	116	200	8.76		
EXT DRO >C28-C36	<10.0	10.0	08/02/2024	ND						

Surrogate: 1-Chlorooctane 80.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 88.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 DAVID MCINNIS
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	08/01/2024	Sampling Date:	07/30/2024
Reported:	08/07/2024	Sampling Type:	Soil
Project Name:	REMUDA 500 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558456	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.270479,-103.937524		

Sample ID: PH 04 0.5 (H244608-07)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/02/2024	ND	1.82	91.2	2.00	8.24	
Toluene*	<0.050	0.050	08/02/2024	ND	1.78	89.0	2.00	8.35	
Ethylbenzene*	<0.050	0.050	08/02/2024	ND	1.89	94.3	2.00	8.35	
Total Xylenes*	<0.150	0.150	08/02/2024	ND	5.54	92.4	6.00	8.35	
Total BTEX	<0.300	0.300	08/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.3 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	08/06/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/02/2024	ND	212	106	200	2.64	
DRO >C10-C28*	<10.0	10.0	08/02/2024	ND	232	116	200	8.76	
EXT DRO >C28-C36	<10.0	10.0	08/02/2024	ND					

Surrogate: 1-Chlorooctane 78.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 87.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 DAVID MCINNIS
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	08/01/2024	Sampling Date:	07/30/2024
Reported:	08/07/2024	Sampling Type:	Soil
Project Name:	REMUDA 500 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558456	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.270479,-103.937524		

Sample ID: PH 04A 4 (H244608-08)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/02/2024	ND	1.82	91.2	2.00	8.24	
Toluene*	<0.050	0.050	08/02/2024	ND	1.78	89.0	2.00	8.35	
Ethylbenzene*	<0.050	0.050	08/02/2024	ND	1.89	94.3	2.00	8.35	
Total Xylenes*	<0.150	0.150	08/02/2024	ND	5.54	92.4	6.00	8.35	
Total BTEX	<0.300	0.300	08/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.8 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	08/06/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/02/2024	ND	212	106	200	2.64	
DRO >C10-C28*	<10.0	10.0	08/02/2024	ND	232	116	200	8.76	
EXT DRO >C28-C36	<10.0	10.0	08/02/2024	ND					

Surrogate: 1-Chlorooctane 75.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.1 % 49.1-148

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 DAVID MCINNIS
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	08/01/2024	Sampling Date:	07/30/2024
Reported:	08/07/2024	Sampling Type:	Soil
Project Name:	REMUDA 500 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558456	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.270479,-103.937524		

Sample ID: PH 04B 9 (H244608-09)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/02/2024	ND	1.82	91.2	2.00	8.24		
Toluene*	<0.050	0.050	08/02/2024	ND	1.78	89.0	2.00	8.35		
Ethylbenzene*	<0.050	0.050	08/02/2024	ND	1.89	94.3	2.00	8.35		
Total Xylenes*	<0.150	0.150	08/02/2024	ND	5.54	92.4	6.00	8.35		
Total BTEX	<0.300	0.300	08/02/2024	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	08/06/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	08/02/2024	ND	212	106	200	2.64		
DRO >C10-C28*	<10.0	10.0	08/02/2024	ND	232	116	200	8.76		
EXT DRO >C28-C36	<10.0	10.0	08/02/2024	ND						

Surrogate: 1-Chlorooctane 64.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 71.2 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 DAVID MCINNIS
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	08/01/2024	Sampling Date:	07/30/2024
Reported:	08/07/2024	Sampling Type:	Soil
Project Name:	REMUDA 500 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558456	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.270479,-103.937524		

Sample ID: PH 05 0.5 (H244608-10)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/02/2024	ND	1.82	91.2	2.00	8.24	
Toluene*	<0.050	0.050	08/02/2024	ND	1.78	89.0	2.00	8.35	
Ethylbenzene*	<0.050	0.050	08/02/2024	ND	1.89	94.3	2.00	8.35	
Total Xylenes*	<0.150	0.150	08/02/2024	ND	5.54	92.4	6.00	8.35	
Total BTEX	<0.300	0.300	08/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.8 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	08/06/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/02/2024	ND	212	106	200	2.64	
DRO >C10-C28*	<10.0	10.0	08/02/2024	ND	232	116	200	8.76	
EXT DRO >C28-C36	<10.0	10.0	08/02/2024	ND					

Surrogate: 1-Chlorooctane 68.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 75.2 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 DAVID MCINNIS
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	08/01/2024	Sampling Date:	07/30/2024
Reported:	08/07/2024	Sampling Type:	Soil
Project Name:	REMUDA 500 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558456	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.270479,-103.937524		

Sample ID: PH 05A 4 (H244608-11)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/02/2024	ND	1.82	91.2	2.00	8.24	
Toluene*	<0.050	0.050	08/02/2024	ND	1.78	89.0	2.00	8.35	
Ethylbenzene*	<0.050	0.050	08/02/2024	ND	1.89	94.3	2.00	8.35	
Total Xylenes*	<0.150	0.150	08/02/2024	ND	5.54	92.4	6.00	8.35	
Total BTEX	<0.300	0.300	08/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.7 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	08/06/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/02/2024	ND	212	106	200	2.64	
DRO >C10-C28*	<10.0	10.0	08/02/2024	ND	232	116	200	8.76	
EXT DRO >C28-C36	<10.0	10.0	08/02/2024	ND					

Surrogate: 1-Chlorooctane 75.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 DAVID MCINNIS
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	08/01/2024	Sampling Date:	07/30/2024
Reported:	08/07/2024	Sampling Type:	Soil
Project Name:	REMUDA 500 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558456	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.270479,-103.937524		

Sample ID: PH 05B 9 (H244608-12)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/02/2024	ND	1.82	91.2	2.00	8.24	
Toluene*	<0.050	0.050	08/02/2024	ND	1.78	89.0	2.00	8.35	
Ethylbenzene*	<0.050	0.050	08/02/2024	ND	1.89	94.3	2.00	8.35	
Total Xylenes*	<0.150	0.150	08/02/2024	ND	5.54	92.4	6.00	8.35	
Total BTEX	<0.300	0.300	08/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.0 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	08/06/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/02/2024	ND	212	106	200	2.64	
DRO >C10-C28*	<10.0	10.0	08/02/2024	ND	232	116	200	8.76	
EXT DRO >C28-C36	<10.0	10.0	08/02/2024	ND					

Surrogate: 1-Chlorooctane 81.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 91.8 % 49.1-148

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Notes and Definitions

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

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

1 of 2

Company Name: Ensolum, LLC Project Manager: David McInnis Address: 3122 National Parks Hwy City: Carlsbad State: NM Zip: 88220 Phone #: 337 257-8307 Fax #: _____ Project #: 03C1558456 Project Owner: XTO Project Name: Remuda 500 Battery Project Location: _____ Sampler Name: Connor Whitman		BILL TO P.O. #: _____ Company: XTO Energy Inc. Attn: Amy Ruth Address: 3104 E. Green St. City: Carlsbad State: NM Zip: 88220 Phone #: _____ Fax #: _____		ANALYSIS REQUEST	
FOR LAB USE ONLY Lab I.D. <u>PH02</u> Sample I.D. _____ Sample Depth (feet) _____ (G)RAB OR (C)OMP. _____ # CONTAINERS _____ MATRIX: GROUNDWATER _____ WASTEWATER _____ SOIL _____ OIL _____ SLUDGE _____ OTHER: _____ PRESERV: ACID/BASE: _____ ICE / COOL _____ OTHER: _____ DATE: 7-30-24 TIME: 950 BTEX _____ TPH _____ CHLORIDE _____		CHECKED BY: (Initials) <u>BD</u> Turnaround Time: <u>Standard</u> <input checked="" type="checkbox"/> <u>Rush</u> <input type="checkbox"/> Bacteria (only) Sample Condition: <input type="checkbox"/> Cool <input type="checkbox"/> Intact <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No Corrected Temp. °C _____		Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Phone #: _____ All Results are emailed. Please provide Email address: _____ REMARKS: Cost Center: 1067601001 Incident ID: NAPP2418053192 Please send copy of signed COC to: cwhitman@ensolum.com	
Relinquished By: <u>[Signature]</u> Date: <u>8-1-24</u> Time: <u>1410</u> Relinquished By: _____ Date: _____ Time: _____ Received By: <u>[Signature]</u>		Delivered By: (Circle One) <input type="checkbox"/> UPS <input type="checkbox"/> Bus <input type="checkbox"/> Other: _____ Observed Temp. °C <u>14.1</u> Corrected Temp. °C _____ Sample Condition: <input type="checkbox"/> Cool <input type="checkbox"/> Intact <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No		Turnaround Time: _____ Thermometer ID # <u>444</u> <u>4140</u> Correction Factor <u>44°C</u> <u>41°C</u>	



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: Ensolum, LLC

P.O. #:

Project Manager: David Mcinnis

Company: XTO Energy Inc.

Address: 3122 National Parks Hwy

Attn: Amy Ruth

City: Carlsbad

Address: 3104 E. Green St.

Phone #: 337 257-8307

City: Carlsbad

Project #: 03C1558456

State: NM Zip: 88220

Project Name: Remuda 500 Battery

Phone #:

Project Location:

Fax #:

Sampler Name: Connor Whitman

PRESERV:

SAMPLING

Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	BTEX	TPH	CHLORIDE
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:					
120408	PH05	0.5	G	2								7-30-24	1255			
11	PH05A	4											1315			
12	PH05B	9											1330			

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Relinquished By: *AW*

Date: 8-1-24
 Time: 1410

Received By: *AS*

Checked By: *AW*

REMARKS: Cost Center: 1067601001 Incident ID: nAPP2418053192
 Please send copy of signed COC to: cwhitman@ensolum.com
 Verbal Result: Yes No Add'l Phone #:
 All Results are emailed. Please provide Email address:
 bbell@ensolum.com, TMorrissey@ensolum.com, dmclinnis@ensolum.com

Delivered By: (Circle One)

Observed Temp. °C: 14.5
 Corrected Temp. °C: 14.5

Sample Condition: Cool Intact Yes No

Turnaround Time: Standard Rush

Thermometer ID #449
 Correction Factor: 0.56
 Bacteria (only) Sample Condition: Cool Intact Yes No

Sampler - UPS - Bus - Other:

Observed Temp. °C: 14.5
 Corrected Temp. °C: 14.5

Sample Condition: Cool Intact Yes No

Turnaround Time: Standard Rush

Thermometer ID #449
 Correction Factor: 0.56
 Bacteria (only) Sample Condition: Cool Intact Yes No

FORM-006 R-3-2 10/07/21

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



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

August 28, 2024

DAVID MCINNIS

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: REMUDA 500 BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 08/27/24 13:47.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 DAVID MCINNIS
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	08/27/2024	Sampling Date:	08/23/2024
Reported:	08/28/2024	Sampling Type:	Soil
Project Name:	REMUDA 500 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558456	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.270479,-103.937524		

Sample ID: FS 07 3' (H245190-01)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/27/2024	ND	1.93	96.4	2.00	0.204	
Toluene*	<0.050	0.050	08/27/2024	ND	1.86	93.0	2.00	0.911	
Ethylbenzene*	<0.050	0.050	08/27/2024	ND	1.86	93.0	2.00	0.958	
Total Xylenes*	<0.150	0.150	08/27/2024	ND	5.54	92.4	6.00	1.14	
Total BTEX	<0.300	0.300	08/27/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.6 % 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	176	16.0	08/28/2024	ND	448	112	400	3.64	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/27/2024	ND	218	109	200	2.16	
DRO >C10-C28*	<10.0	10.0	08/27/2024	ND	209	104	200	1.68	
EXT DRO >C28-C36	<10.0	10.0	08/27/2024	ND					

Surrogate: 1-Chlorooctane 70.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 DAVID MCINNIS
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	08/27/2024	Sampling Date:	08/23/2024
Reported:	08/28/2024	Sampling Type:	Soil
Project Name:	REMUDA 500 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558456	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.270479,-103.937524		

Sample ID: FS 08 4' (H245190-02)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/27/2024	ND	1.93	96.4	2.00	0.204	
Toluene*	<0.050	0.050	08/27/2024	ND	1.86	93.0	2.00	0.911	
Ethylbenzene*	<0.050	0.050	08/27/2024	ND	1.86	93.0	2.00	0.958	
Total Xylenes*	<0.150	0.150	08/27/2024	ND	5.54	92.4	6.00	1.14	
Total BTEX	<0.300	0.300	08/27/2024	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	08/28/2024	ND	448	112	400	3.64	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/27/2024	ND	218	109	200	2.16	
DRO >C10-C28*	<10.0	10.0	08/27/2024	ND	209	104	200	1.68	
EXT DRO >C28-C36	<10.0	10.0	08/27/2024	ND					

Surrogate: 1-Chlorooctane 75.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 86.2 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 DAVID MCINNIS
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	08/27/2024	Sampling Date:	08/23/2024
Reported:	08/28/2024	Sampling Type:	Soil
Project Name:	REMUDA 500 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558456	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.270479,-103.937524		

Sample ID: FS 09 3' (H245190-03)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/27/2024	ND	1.93	96.4	2.00	0.204	
Toluene*	<0.050	0.050	08/27/2024	ND	1.86	93.0	2.00	0.911	
Ethylbenzene*	<0.050	0.050	08/27/2024	ND	1.86	93.0	2.00	0.958	
Total Xylenes*	<0.150	0.150	08/27/2024	ND	5.54	92.4	6.00	1.14	
Total BTEX	<0.300	0.300	08/27/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.8 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	08/28/2024	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	08/27/2024	ND	218	109	200	2.16	
DRO >C10-C28*	<10.0	10.0	08/27/2024	ND	209	104	200	1.68	
EXT DRO >C28-C36	<10.0	10.0	08/27/2024	ND					

Surrogate: 1-Chlorooctane 69.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 79.4 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 DAVID MCINNIS
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	08/27/2024	Sampling Date:	08/23/2024
Reported:	08/28/2024	Sampling Type:	Soil
Project Name:	REMUDA 500 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558456	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.270479,-103.937524		

Sample ID: FS 10 3' (H245190-04)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/27/2024	ND	1.93	96.4	2.00	0.204	
Toluene*	<0.050	0.050	08/27/2024	ND	1.86	93.0	2.00	0.911	
Ethylbenzene*	<0.050	0.050	08/27/2024	ND	1.86	93.0	2.00	0.958	
Total Xylenes*	<0.150	0.150	08/27/2024	ND	5.54	92.4	6.00	1.14	
Total BTEX	<0.300	0.300	08/27/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.3 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	08/28/2024	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	08/27/2024	ND	218	109	200	2.16	
DRO >C10-C28*	<10.0	10.0	08/27/2024	ND	209	104	200	1.68	
EXT DRO >C28-C36	<10.0	10.0	08/27/2024	ND					

Surrogate: 1-Chlorooctane 78.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 89.4 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 DAVID MCINNIS
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	08/27/2024	Sampling Date:	08/23/2024
Reported:	08/28/2024	Sampling Type:	Soil
Project Name:	REMUDA 500 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558456	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.270479,-103.937524		

Sample ID: SW 03 0-9' (H245190-05)

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	08/27/2024	ND	1.93	96.4	2.00	0.204	
Toluene*	<0.050	0.050	08/27/2024	ND	1.86	93.0	2.00	0.911	
Ethylbenzene*	<0.050	0.050	08/27/2024	ND	1.86	93.0	2.00	0.958	
Total Xylenes*	<0.150	0.150	08/27/2024	ND	5.54	92.4	6.00	1.14	
Total BTEX	<0.300	0.300	08/27/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.5 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1230	16.0	08/28/2024	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	08/27/2024	ND	218	109	200	2.16	
DRO >C10-C28*	<10.0	10.0	08/27/2024	ND	209	104	200	1.68	
EXT DRO >C28-C36	<10.0	10.0	08/27/2024	ND					

Surrogate: 1-Chlorooctane 78.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 91.2 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 DAVID MCINNIS
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	08/27/2024	Sampling Date:	08/23/2024
Reported:	08/28/2024	Sampling Type:	Soil
Project Name:	REMUDA 500 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558456	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.270479,-103.937524		

Sample ID: SW 04 0-4' (H245190-06)

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	08/27/2024	ND	1.93	96.4	2.00	0.204	
Toluene*	<0.050	0.050	08/27/2024	ND	1.86	93.0	2.00	0.911	
Ethylbenzene*	<0.050	0.050	08/27/2024	ND	1.86	93.0	2.00	0.958	
Total Xylenes*	<0.150	0.150	08/27/2024	ND	5.54	92.4	6.00	1.14	
Total BTEX	<0.300	0.300	08/27/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.1 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	08/28/2024	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	08/27/2024	ND	218	109	200	2.16	
DRO >C10-C28*	<10.0	10.0	08/27/2024	ND	209	104	200	1.68	
EXT DRO >C28-C36	<10.0	10.0	08/27/2024	ND					

Surrogate: 1-Chlorooctane 77.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 89.5 % 49.1-148

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Notes and Definitions

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

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

BILL TO

ANALYSIS REQUEST

Company Name: Ensolum, LLC
 Project Manager: David Mcinnis
 Address: 3122 National Parks Hwy
 City: Carlsbad State: NM Zip: 88220
 Phone #: 409-454-3009 Fax #:
 Project #: 03C1558456 Project Owner: XTO
 Project Name: Remuda 500 Battery
 Project Location: 32.270479, -103.937524
 City: Carlsbad State: NM Zip: 88220
 Phone #:
 Fax #:
 P.O. #:
 Company: XTO Energy Inc.
 Attn: Amy Ruth
 Address: 3104 E. Green St.
 City: Carlsbad
 State: NM Zip: 88220
 Phone #:
 Fax #:

Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	BTEX	TPH	CHLORIDE
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :					
1845190	F507	3'	↓	4							9/23/24	1105			
	F508	4'	↓									1355			
	F509	3'	↓									1300			
	F510	3'	↓									1305			
	SW03	0-9'	↓									0929			
	SW04	0-4'	↓									1430			

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Relinquished By: *[Signature]*
 Date: *9/23/24*
 Time: *1347*
 Received By: *Shedrick*
 Date: *9/23/24*
 Time: *1347*
 Verbal Result: Yes No Add'l Phone #:
 All Results are emailed. Please provide Email address:
 DMcinnis@ensolum.com, TMorrissey@ensolum.com, BBeall@ensolum.com
 REMARKS: Cost Center: 1067601001
 Incident ID: nAPP2418053192

Delivered By: (Circle One) Observed Temp. °C: *18.2* Sample Condition: Intact Cool Intact No No
 Corrected Temp. °C: *18.2* Checked By: *[Signature]*
 Turnaround Time: *4:40-0:45* Standard Flush: Bacteria (only) Sample Condition: Intact Cool Intact No No
 Thermometer ID: *9773* Corrected Temp. °C: *24.1*
 Correction Factor: *0.0*

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



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

September 25, 2024

DAVID MCINNIS

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: REMUDA 500 BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 09/06/24 15:26.

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

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

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

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: REMUDA 500 BATTERY Project Number: 03C1558456 Project Manager: DAVID MCINNIS Fax To:	Reported: 25-Sep-24 08:29
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Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SW 07 0-4'	H245416-01	Soil	06-Sep-24 12:00	06-Sep-24 15:26
SW 07 4-9'	H245416-02	Soil	06-Sep-24 12:02	06-Sep-24 15:26
SW 05 0-4'	H245416-03	Soil	06-Sep-24 12:04	06-Sep-24 15:26
SW 06 0-4'	H245416-04	Soil	06-Sep-24 12:06	06-Sep-24 15:26
FS 11 4'	H245416-05	Soil	06-Sep-24 12:08	06-Sep-24 15:26
FS 12 4'	H245416-06	Soil	06-Sep-24 12:10	06-Sep-24 15:26
BF 01	H245416-07	Soil	06-Sep-24 12:12	06-Sep-24 15:26

09/19/24 - Client changed the sample IDs for -01 and -02 (see COC). This is the revised report and will replace the one sent on 09/19/24.

09/25/24 - Client changed the depth on sample -02 (see COC). This is the 2nd revision of the report and will replace the one sent on 09/19/24.

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Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: REMUDA 500 BATTERY Project Number: 03C1558456 Project Manager: DAVID MCINNIS Fax To:	Reported: 25-Sep-24 08:29
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**SW 07 0-4'
H245416-01 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	128		16.0	mg/kg	4	4090913	HM	09-Sep-24	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4090622	JH	07-Sep-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4090622	JH	07-Sep-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4090622	JH	07-Sep-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4090622	JH	07-Sep-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4090622	JH	07-Sep-24	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			97.3 %	71.5-134		4090622	JH	07-Sep-24	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4090623	MS	06-Sep-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4090623	MS	06-Sep-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4090623	MS	06-Sep-24	8015B	
Surrogate: 1-Chlorooctane			70.9 %	48.2-134		4090623	MS	06-Sep-24	8015B	
Surrogate: 1-Chlorooctadecane			80.8 %	49.1-148		4090623	MS	06-Sep-24	8015B	

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Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: REMUDA 500 BATTERY Project Number: 03C1558456 Project Manager: DAVID MCINNIS Fax To:	Reported: 25-Sep-24 08:29
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**SW 07 4-9'
H245416-02 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	64.0		16.0	mg/kg	4	4090913	HM	09-Sep-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4090622	JH	07-Sep-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4090622	JH	07-Sep-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4090622	JH	07-Sep-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4090622	JH	07-Sep-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4090622	JH	07-Sep-24	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			97.0 %	71.5-134		4090622	JH	07-Sep-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4090623	MS	06-Sep-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4090623	MS	06-Sep-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4090623	MS	06-Sep-24	8015B	

<i>Surrogate: 1-Chlorooctane</i>			85.0 %	48.2-134		4090623	MS	06-Sep-24	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			97.7 %	49.1-148		4090623	MS	06-Sep-24	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: REMUDA 500 BATTERY Project Number: 03C1558456 Project Manager: DAVID MCINNIS Fax To:	Reported: 25-Sep-24 08:29
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**SW 05 0-4'
H245416-03 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	224		16.0	mg/kg	4	4090913	HM	09-Sep-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4090622	JH	07-Sep-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4090622	JH	07-Sep-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4090622	JH	07-Sep-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4090622	JH	07-Sep-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4090622	JH	07-Sep-24	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			98.7 %	71.5-134		4090622	JH	07-Sep-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4090623	MS	06-Sep-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4090623	MS	06-Sep-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4090623	MS	06-Sep-24	8015B	

Surrogate: 1-Chlorooctane			66.8 %	48.2-134		4090623	MS	06-Sep-24	8015B	
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Surrogate: 1-Chlorooctadecane			76.3 %	49.1-148		4090623	MS	06-Sep-24	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: REMUDA 500 BATTERY Project Number: 03C1558456 Project Manager: DAVID MCINNIS Fax To:	Reported: 25-Sep-24 08:29
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**SW 06 0-4'
H245416-04 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	80.0		16.0	mg/kg	4	4090913	HM	09-Sep-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4090622	JH	07-Sep-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4090622	JH	07-Sep-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4090622	JH	07-Sep-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4090622	JH	07-Sep-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4090622	JH	07-Sep-24	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			100 %	71.5-134		4090622	JH	07-Sep-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4090623	MS	06-Sep-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4090623	MS	06-Sep-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4090623	MS	06-Sep-24	8015B	

Surrogate: 1-Chlorooctane			96.7 %	48.2-134		4090623	MS	06-Sep-24	8015B	
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Surrogate: 1-Chlorooctadecane			112 %	49.1-148		4090623	MS	06-Sep-24	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: REMUDA 500 BATTERY Project Number: 03C1558456 Project Manager: DAVID MCINNIS Fax To:	Reported: 25-Sep-24 08:29
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FS 11 4'
H245416-05 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	64.0		16.0	mg/kg	4	4090913	HM	09-Sep-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4090622	JH	07-Sep-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4090622	JH	07-Sep-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4090622	JH	07-Sep-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4090622	JH	07-Sep-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4090622	JH	07-Sep-24	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			101 %	71.5-134		4090622	JH	07-Sep-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4090623	MS	06-Sep-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4090623	MS	06-Sep-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4090623	MS	06-Sep-24	8015B	

<i>Surrogate: 1-Chlorooctane</i>			92.5 %	48.2-134		4090623	MS	06-Sep-24	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			105 %	49.1-148		4090623	MS	06-Sep-24	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: REMUDA 500 BATTERY Project Number: 03C1558456 Project Manager: DAVID MCINNIS Fax To:	Reported: 25-Sep-24 08:29
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FS 12 4'
H245416-06 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	112		16.0	mg/kg	4	4090913	HM	09-Sep-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4090622	JH	07-Sep-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4090622	JH	07-Sep-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4090622	JH	07-Sep-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4090622	JH	07-Sep-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4090622	JH	07-Sep-24	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			100 %	71.5-134		4090622	JH	07-Sep-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4090623	MS	06-Sep-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4090623	MS	06-Sep-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4090623	MS	06-Sep-24	8015B	

<i>Surrogate: 1-Chlorooctane</i>			88.2 %	48.2-134		4090623	MS	06-Sep-24	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			100 %	49.1-148		4090623	MS	06-Sep-24	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: REMUDA 500 BATTERY Project Number: 03C1558456 Project Manager: DAVID MCINNIS Fax To:	Reported: 25-Sep-24 08:29
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**BF 01
H245416-07 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	80.0		16.0	mg/kg	4	4090913	HM	09-Sep-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4090622	JH	07-Sep-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4090622	JH	07-Sep-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4090622	JH	07-Sep-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4090622	JH	07-Sep-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4090622	JH	07-Sep-24	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			99.4 %	71.5-134		4090622	JH	07-Sep-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4090623	MS	06-Sep-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4090623	MS	06-Sep-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4090623	MS	06-Sep-24	8015B	

Surrogate: 1-Chlorooctane			85.2 %	48.2-134		4090623	MS	06-Sep-24	8015B	
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Surrogate: 1-Chlorooctadecane			95.6 %	49.1-148		4090623	MS	06-Sep-24	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: REMUDA 500 BATTERY Project Number: 03C1558456 Project Manager: DAVID MCINNIS Fax To:	Reported: 25-Sep-24 08:29
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Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4090913 - 1:4 DI Water										
Blank (4090913-BLK1)										
Prepared & Analyzed: 09-Sep-24										
Chloride	ND	16.0	mg/kg							
LCS (4090913-BS1)										
Prepared & Analyzed: 09-Sep-24										
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (4090913-BSD1)										
Prepared & Analyzed: 09-Sep-24										
Chloride	416	16.0	mg/kg	400		104	80-120	0.00	20	

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Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: REMUDA 500 BATTERY Project Number: 03C1558456 Project Manager: DAVID MCINNIS Fax To:	Reported: 25-Sep-24 08:29
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Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4090622 - Volatiles

Blank (4090622-BLK1)

Prepared: 06-Sep-24 Analyzed: 07-Sep-24

Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	ND		mg/kg	0.0500		99.5	71.5-134			

LCS (4090622-BS1)

Prepared & Analyzed: 06-Sep-24

Benzene	1.99	0.050	mg/kg	2.00		99.7	82.8-130			
Toluene	1.93	0.050	mg/kg	2.00		96.3	86-128			
Ethylbenzene	1.94	0.050	mg/kg	2.00		96.9	85.9-128			
m,p-Xylene	3.87	0.100	mg/kg	4.00		96.8	89-129			
o-Xylene	1.91	0.050	mg/kg	2.00		95.5	86.1-125			
Total Xylenes	5.78	0.150	mg/kg	6.00		96.3	88.2-128			
Surrogate: 4-Bromofluorobenzene (PID)	0.0504		mg/kg	0.0500		101	71.5-134			

LCS Dup (4090622-BSD1)

Prepared: 06-Sep-24 Analyzed: 07-Sep-24

Benzene	1.97	0.050	mg/kg	2.00		98.4	82.8-130	1.28	15.8	
Toluene	1.92	0.050	mg/kg	2.00		96.2	86-128	0.108	15.9	
Ethylbenzene	1.94	0.050	mg/kg	2.00		96.9	85.9-128	0.0405	16	
m,p-Xylene	3.87	0.100	mg/kg	4.00		96.7	89-129	0.0759	16.2	
o-Xylene	1.91	0.050	mg/kg	2.00		95.4	86.1-125	0.0639	16.7	
Total Xylenes	5.78	0.150	mg/kg	6.00		96.3	88.2-128	0.0720	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	0.0502		mg/kg	0.0500		100	71.5-134			

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: REMUDA 500 BATTERY Project Number: 03C1558456 Project Manager: DAVID MCINNIS Fax To:	Reported: 25-Sep-24 08:29
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Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4090623 - General Prep - Organics

Blank (4090623-BLK1)				Prepared: 06-Sep-24 Analyzed: 07-Sep-24						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	45.0		mg/kg	50.0		89.9	48.2-134			
Surrogate: 1-Chlorooctadecane	49.0		mg/kg	50.0		98.1	49.1-148			

LCS (4090623-BS1)				Prepared & Analyzed: 06-Sep-24						
GRO C6-C10	189	10.0	mg/kg	200		94.4	66.4-123			
DRO >C10-C28	185	10.0	mg/kg	200		92.6	66.5-118			
Total TPH C6-C28	374	10.0	mg/kg	400		93.5	77.6-123			
Surrogate: 1-Chlorooctane	51.3		mg/kg	50.0		103	48.2-134			
Surrogate: 1-Chlorooctadecane	57.2		mg/kg	50.0		114	49.1-148			

LCS Dup (4090623-BSD1)				Prepared & Analyzed: 06-Sep-24						
GRO C6-C10	184	10.0	mg/kg	200		92.0	66.4-123	2.48	17.7	
DRO >C10-C28	182	10.0	mg/kg	200		90.8	66.5-118	1.94	21	
Total TPH C6-C28	366	10.0	mg/kg	400		91.4	77.6-123	2.21	18.5	
Surrogate: 1-Chlorooctane	48.7		mg/kg	50.0		97.4	48.2-134			
Surrogate: 1-Chlorooctadecane	55.0		mg/kg	50.0		110	49.1-148			

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

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

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Project Manager: *David M. Lewis*
 Address: 600 Maricopa STE 400
 City: *Medford* State: *TX* Zip: *79701*
 Phone #: *409-454-3884* Fax #: *409-454-3884*
 Project #: *0321558936* Project Owner:
 Project Name: *Rownd 500 Battery*
 Project Location: *22-2704M-103-937324*
 Sampler Name: *David M. Lewis*

P.O. #: *XXXXXX*
 Company: *XTO*
 Address: *616 W Brown*
 City: *Carlsbad*
 State: *NM* Zip: *88220*
 Phone #: *505-222-1200*

FOR LAB USE ONLY

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	BTEX	TPH	Chloride
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:					
<i>4245110</i>	<i>5W087</i>	<i>0-1</i>	<i>C</i>	<i>1</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>
	<i>5W03</i>	<i>0-9</i>	<i>C</i>	<i>1</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>
	<i>5W06</i>	<i>0-4</i>	<i>C</i>	<i>1</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>
	<i>FS11</i>	<i>0-4</i>	<i>C</i>	<i>1</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>
	<i>FS12</i>	<i>0-4</i>	<i>C</i>	<i>1</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>
	<i>RF01</i>	<i>N/A</i>	<i>C</i>	<i>1</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>

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Relinquished By: *David M. Lewis*
 Date: *9/16/24*
 Time: *15:26*
 Received By: *ADAWAS*
 Date: *9/16/24*
 Time: *15:24*

Delivered By: (Circle One)
 Sampler - UPS - Bus - Other:
 Observed Temp. °C: *4.5i*
 Corrected Temp. °C: *3.9i*
 Sample Condition: *PP*
 Cool Inhibit: *Yes*
 Checked By: *PP*

Vertical Results: Yes No
 All Results are emailed. Please provide email address: *bd@i11@oush.com*
 Residuals: *CC: 1077 06761001 * Cust. Requested ID changes.*
 Incident: *NA992918053192*
 Turnaround Time: *Standard*
 Temperature ID: *NA992918053192*
 Corrosion Factor: *0.5°C-0.4: 24h*
 Bacteria (only) Sample Condition: Cool Inhibit:
 Corrected Temp. °C: *9/19/24*

* * * Customer requested Depth
 changes. 9/19/24

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Santa Fe, NM 87505

QUESTIONS

Action 386908

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 386908
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2418053192
Incident Name	NAPP2418053192 REMUDA 500 BATTERY @ 0
Incident Type	Produced Water Release
Incident Status	Deferral Request Received

Location of Release Source

Please answer all the questions in this group.

Site Name	REMUDA 500 BATTERY
Date Release Discovered	06/27/2024
Surface Owner	State

Incident Details

Please answer all the questions in this group.

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

Nature and Volume of Release

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

Crude Oil Released (bbls) Details	Not answered.
Produced Water Released (bbls) Details	Cause: Corrosion Pipeline (Any) Produced Water Released: 37 BBL Recovered: 0 BBL Lost: 37 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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QUESTIONS, Page 2

Action 386908

QUESTIONS (continued)

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

QUESTIONS

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

Initial Response

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

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

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

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

I hereby agree and sign off to the above statement	Name: Colton Brown Title: Environmental Advisor Email: colton.s.brown@exxonmobil.com Date: 09/25/2024
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QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 386908
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Site Characterization
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 100 and 500 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 100 and 200 (ft.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Greater than 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Greater than 5 (mi.)
Any other fresh water well or spring	Greater than 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 1000 (ft.) and ½ (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Between 1000 (ft.) and ½ (mi.)
Categorize the risk of this well / site being in a karst geology	Medium
A 100-year floodplain	Between 1 and 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan

Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

Requesting a remediation plan approval with this submission	Yes
<i>Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.</i>	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No

Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)

Chloride (EPA 300.0 or SM4500 Cl B)	896
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	30.5
GRO+DRO (EPA SW-846 Method 8015M)	30.5
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	07/15/2024
On what date will (or did) the final sampling or liner inspection occur	09/06/2024
On what date will (or was) the remediation complete(d)	09/06/2024
What is the estimated surface area (in square feet) that will be reclaimed	2220
What is the estimated volume (in cubic yards) that will be reclaimed	330
What is the estimated surface area (in square feet) that will be remediated	2220
What is the estimated volume (in cubic yards) that will be remediated	330

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, Page 4

Action 386908

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 386908
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

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: Colton Brown Title: Environmental Advisor Email: colton.s.brown@exxonmobil.com Date: 09/25/2024
--	--

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: 386908
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Deferral Requests Only

Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.

Requesting a deferral of the remediation closure due date with the approval of this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	Yes
Is the remaining contamination in areas immediately under or around production equipment where remediation could cause a major facility deconstruction	Yes
Please list or describe the production equipment and how (re)moving the equipment would cause major facility deconstruction	Active production equipment and process piping including separators
What is the remaining surface area (in square feet) that will still need to be remediated if a deferral is granted	2777
What is the remaining volume (in cubic yards) that will still need to be remediated if a deferral is granted	617
<i>Per Paragraph (2) of Subsection C of 19.15.29.12 NMAC if contamination is located in areas immediately under or around production equipment such as production tanks, wellheads and pipelines where remediation could cause a major facility deconstruction, the remediation, restoration and reclamation may be deferred with division written approval until the equipment is removed during other operations, or when the well or facility is plugged or abandoned, whichever comes first.</i>	
Enter the facility ID (##) on which this deferral should be granted	REMUDA 500 TANK BATTERY [FAB1834557126]
Enter the well API (30-) on which this deferral should be granted	Not answered.
Contamination does not cause an imminent risk to human health, the environment, or groundwater	True
<i>Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.</i>	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: Colton Brown Title: Environmental Advisor Email: colton.s.brown@exxonmobil.com Date: 09/25/2024

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QUESTIONS, Page 6

Action 386908

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:	5380
	Action Number:	386908
	Action Type:	[C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	378909
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	09/06/2024
What was the (estimated) number of samples that were to be gathered	30
What was the sampling surface area in square feet	6000

Remediation Closure Request

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

Requesting a remediation closure approval with this submission	No
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CONDITIONS

Action 386908

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:	5380
	Action Number:	386908
	Action Type:	[C-141] Deferral Request C-141 (C-141-v-Deferral)

CONDITIONS

Created By	Condition	Condition Date
scott.rodgers	Deferral approved. Deferral of SW01 is approved until plugging and abandonment or a major facility deconstruction, whichever comes first. A complete and accurate remediation report and/or reclamation report will need to be submitted at that time.	10/21/2024