



June 18, 2024

New Mexico Energy Minerals and Natural Resources Department

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

**Re: Deferral Request
PLU 18 TWR Battery
Incident Number NAPP2400849152
Eddy County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum) on behalf of XTO Energy, Inc. (XTO), has prepared this *Deferral Request* to document assessment, delineation, excavation, and soil sampling activities at the PLU 18 TWR 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 and crude oil. 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 deferral of final remediation for Incident Number NAPP2400849152 until the Site is reconstructed, and/or the well pad is abandoned.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit E, Section 19, Township 24 South, Range 31 East, in Eddy County, New Mexico (32.20628°, -103.82416°) and is associated with oil and gas exploration and production operations on federal land managed by the Bureau of Land Management (BLM).

On December 23, 2023, corrosion of a valve located on an aboveground pipeline resulted in the release of approximately 7 barrels (bbls) of crude oil and 16 bbls of produced water onto the surface of the well pad and around active production equipment and process piping. A vacuum truck was immediately dispatched to the Site to recover the free-standing fluids; approximately 6 bbls of crude oil and 14 bbls of produced water were recovered. XTO submitted a Form C-141 Application (Form C-141) on January 8, 2024. The release was assigned Incident Number NAPP2400849152.

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 August 7, 2023, a soil boring permitted by New Mexico Office of the State Engineer (OSE) well C-04759, located approximately 0.4 miles east of the Site was drilled utilizing a drilling rig and air rotary drilling methods. The boring was

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drilled to a total depth of 110 feet bgs. A field geologist logged and described soils continuously. No moisture or groundwater was encountered during drilling activities. The borehole was left open for over 72 hours to allow for 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 110 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 freshwater emergent wetland, located approximately 4,693 feet north of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area).

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

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH)- gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 20,000 mg/kg

SITE ASSESSMENT ACTIVITIES

On February 21, 2024, Ensolum personnel visited the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. Seven assessment soil samples (SS01 through SS07) were collected at a depth of 0.5 feet bgs. Assessment soil samples SS01 through SS03 were collected within the release extent and SS04 through SS07 were collected outside the release extent to define the edge of the release. The assessment soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The release extent and assessment soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was collected during the site assessment and a photographic log is included in Appendix B.

The assessment 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 Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of the following constituents of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Laboratory analytical results from assessment soil samples SS01 through SS03 indicated TPH concentrations exceeded the Closure Criteria. Chloride concentrations in soil samples SS01 and SS02 and BTEX concentrations in soil sample SS03 also exceeded Site Closure Criteria. Soil samples

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collected outside of the release extent (SS04 through SS07) exhibited COC concentrations in compliance with the Closure Criteria but exceeded reclamation requirement for TPH. Based on visible staining in the release area, and laboratory analytical results, additional delineation and excavation of impacted soil appeared warranted.

DELINEATION AND EXCAVATION ACTIVITIES

Between March 4 and March 18, 2024, Ensolum personnel returned to the Site to oversee delineation and excavation activities. Five potholes (PH01 through PH05) were advanced via backhoe to assess the lateral definition of the release. All potholes were advanced to a depth of 3 feet bgs. Discrete delineation soil samples were collected from each pothole at depths ranging from 0.5 feet to 3 feet bgs. The delineation soil samples were field screened, handled, and submitted for analysis for the same COCs as described above. Field screening results and observations from all potholes were logged on lithologic/soil sampling logs, which are included in Appendix C. All delineation soil sample locations are depicted on Figure 2.

Soil was excavated to the maximum extent possible (MEP) with hand shovels in the release area where impacted soil was identified in soil samples SS01 through SS03. XTO safety policy restricts soil disturbing activities within a 2-foot radius of any on-site, active production equipment. Since the entirety of the release occurred in the area of active production equipment and process piping, only some of the release area could be accessed and the excavation was completed in two separate extents. Following the removal of impacted soil, 5-point composite confirmation soil samples were collected every 200 square feet from the floor and sidewalls of the excavation. Three floor confirmation soil samples (FS01 through FS03) were collected at a depth of 2 feet bgs and two sidewall confirmation soil samples (SW01 through SW02) were collected from the sidewalls of the excavation at depths ranging from ground surface to 2 feet bgs. 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. Confirmation soil samples were handled in the same manner as described above. The soil samples were transported under strict chain-of-custody procedures to Cardinal Laboratories (Cardinal) in Hobbs, New Mexico, for analysis of the same COC listed above but chlorides were analyzed following EPA Method SM4500. All floor and sidewall excavation confirmation soil sample locations were mapped using a GPS unit and are depicted on Figure 3.

The final excavation extent, including both excavated areas, measured approximately 340 square feet. A total of approximately 30 cubic yards of impacted soil was removed during excavation activities and was properly disposed of at the R360 Landfill Facility in Hobbs, New Mexico.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for delineation soil samples PH01 through PH05 and all excavation confirmation soil samples collected were in compliance with Closure Criteria and reclamation standards. Laboratory analytical results are summarized on Table 1, and the complete laboratory analytical reports are included in Appendix D.

DEFERRAL REQUEST

XTO is requesting deferral of final remediation due to the presence of active production equipment and process piping preventing full excavation of impacted soil. The estimated area of remaining impacted soil measures an area of 510 square feet, and a total of approximately 40 cubic yards of impacted soil remains in place, assuming a depth of 2 feet bgs based on confirmation soil sample laboratory analytical results. The impacted soil is limited to the area beneath active production equipment and surface piping where remediation would require major facility deconstruction. The release is vertically defined by

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confirmation floor soil samples FS01 through FS03. Horizontal definition to Closure Criteria has been achieved through delineation soil samples SS04 through SS07 collected as close to the edge of the release as possible, but not within 2 feet of active production equipment.

Additionally, the release is delineated to the reclamation requirement by delineation potholes PH01 through PH05. The area that represents COC concentrations in soil that exceed the reclamation requirement, the area to be reclaimed, is approximately 8,750 square feet. An estimated 650 cubic yards of soil will need to be removed following abandonment of the facility, assuming a vertical delineation at 2 feet bgs based on confirmation and delineation soil sample laboratory analytical results.

All delineation and excavation soil samples used to define the deferral area and areas to be reclaimed are depicted on Figure 4. The excavation is scheduled to be backfilled the week of June, 24, 2024 with material purchased locally and the area will be re-contoured to match pre-existing conditions.

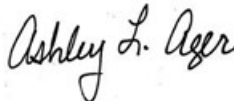
XTO does not believe deferment will result in imminent risk to human health, the environment, or groundwater. Depth to groundwater was determined to be greater than 100 feet, and the entirety of the release remained on pad. Based on the presence of active production equipment and process piping within 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 NAPP2400849152 until final reclamation of the well pad or major construction, whichever comes first.

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

Sincerely,
Ensolum, LLC



Tracy Hillard
Project Manager



Ashley L. Ager, MS, PG
Principal

cc: Amy Ruth, XTO
Amanda Garcia, XTO
BLM

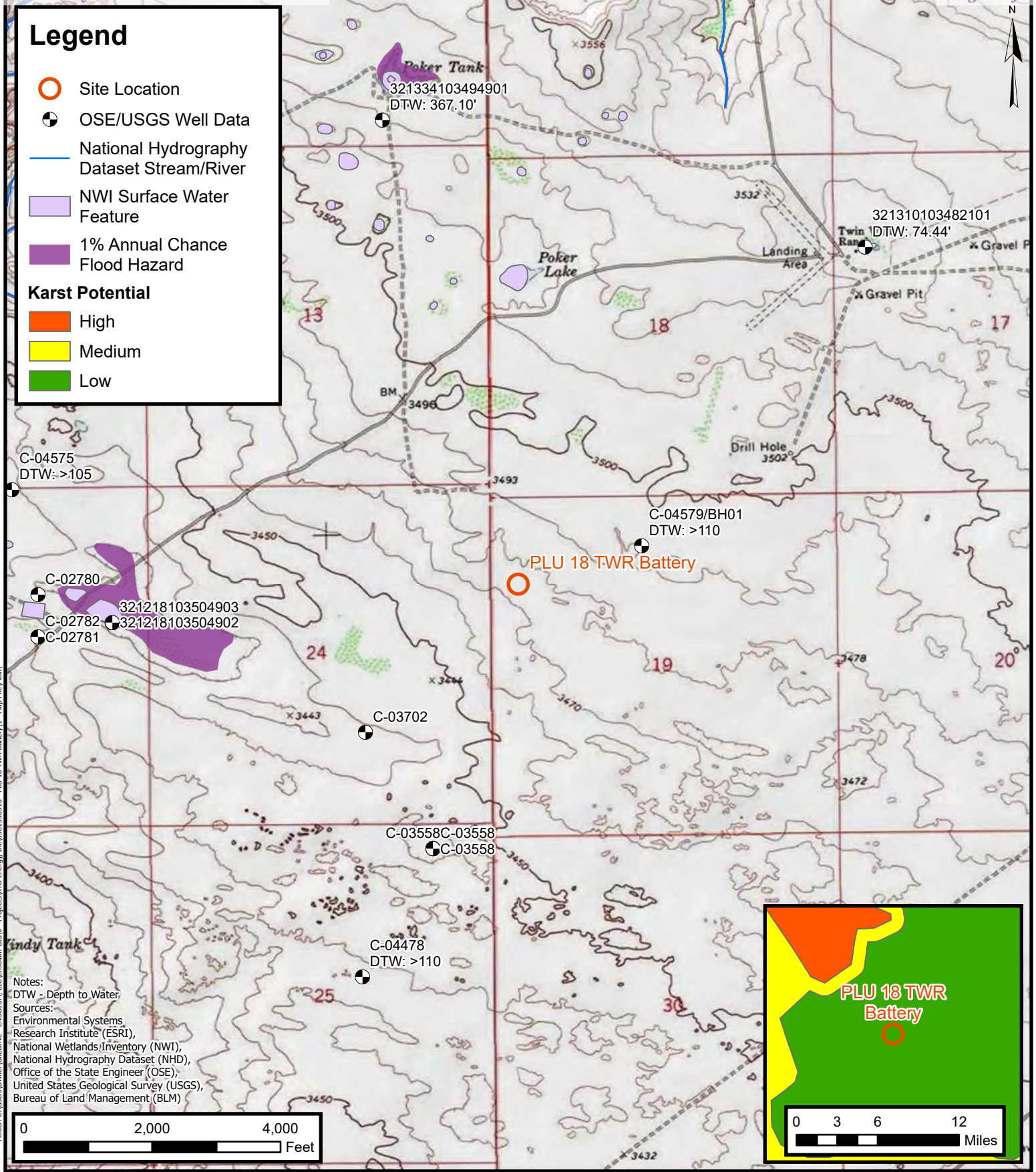
Appendices:

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





FIGURES



ENSOLUM
Environmental, Engineering and
Hydrogeologic Consultants

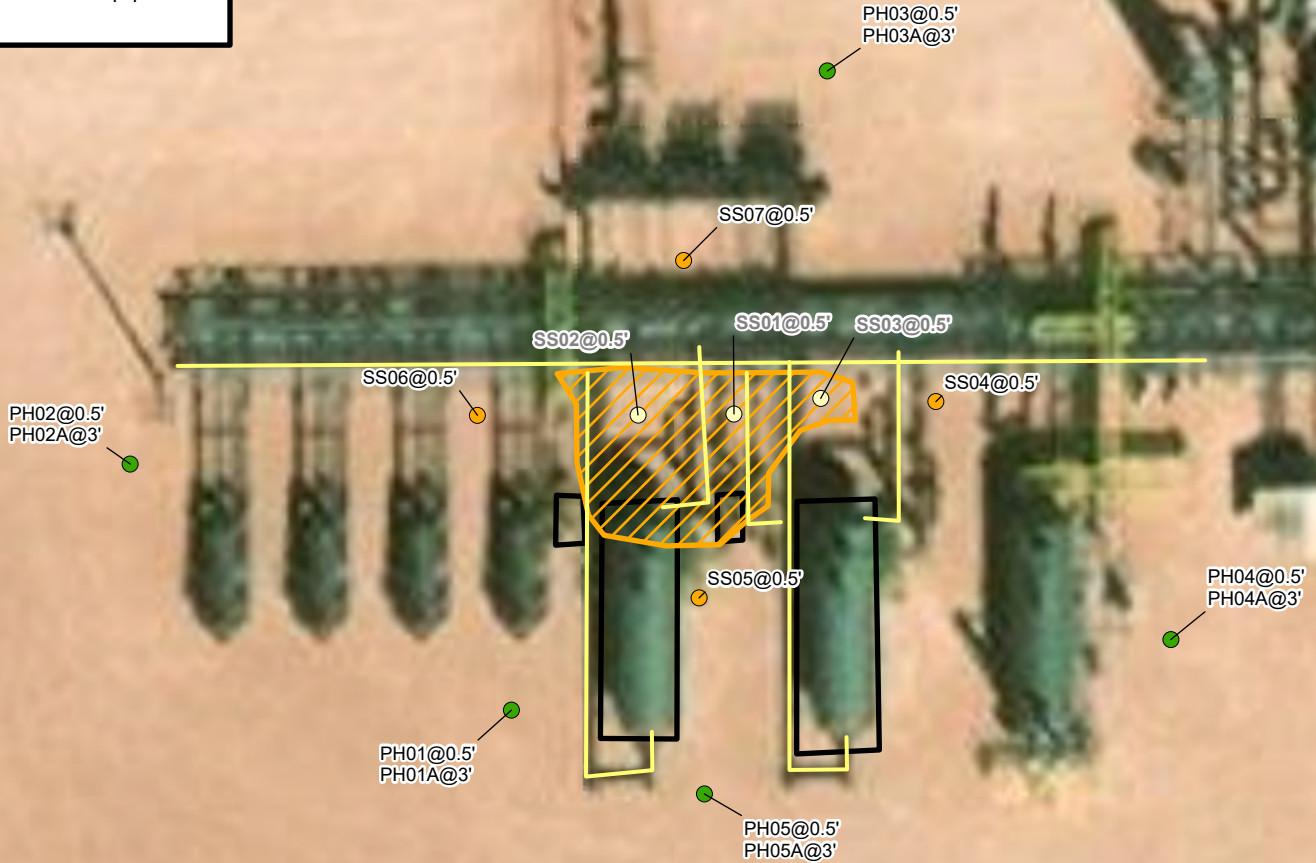
Site Receptor Map

XTO Energy, Inc
PLU 18 TWR Battery
Incident Number: nAPP2400849152
Unit E, Sec 19, T24S, R31E
Eddy County, New Mexico

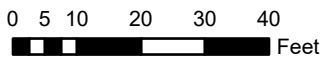
FIGURE 1

Legend

- Delineation Soil Sample in Compliance with Closure Criteria
- Delineation Soil Sample Exceeds Reclamation Requirement
- Removed Soil Sample Location
- Surface Line
- Release Extent
- Production Equipment



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



Sources: Environmental Systems Research Institute (ESRI)



Delineation Soil Sample Locations

XTO Energy, Inc
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Incident Number: nAPP2400849152
Unit E, Sec 19, T24S, R31E
Eddy County, New Mexico

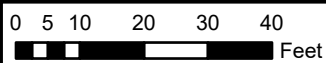
FIGURE
2

Legend

- Delineation Soil Sample in Compliance with Closure Criteria
- ▲ Delineation Soil Sample in Compliance with Closure Criteria
- Surface Line
- ▭ Production Equipment
- ▨ Excavation Extent



Notes:
Sample ID @ Depth Below Ground Surface.



Sources: Environmental Systems Research Institute (ESRI)

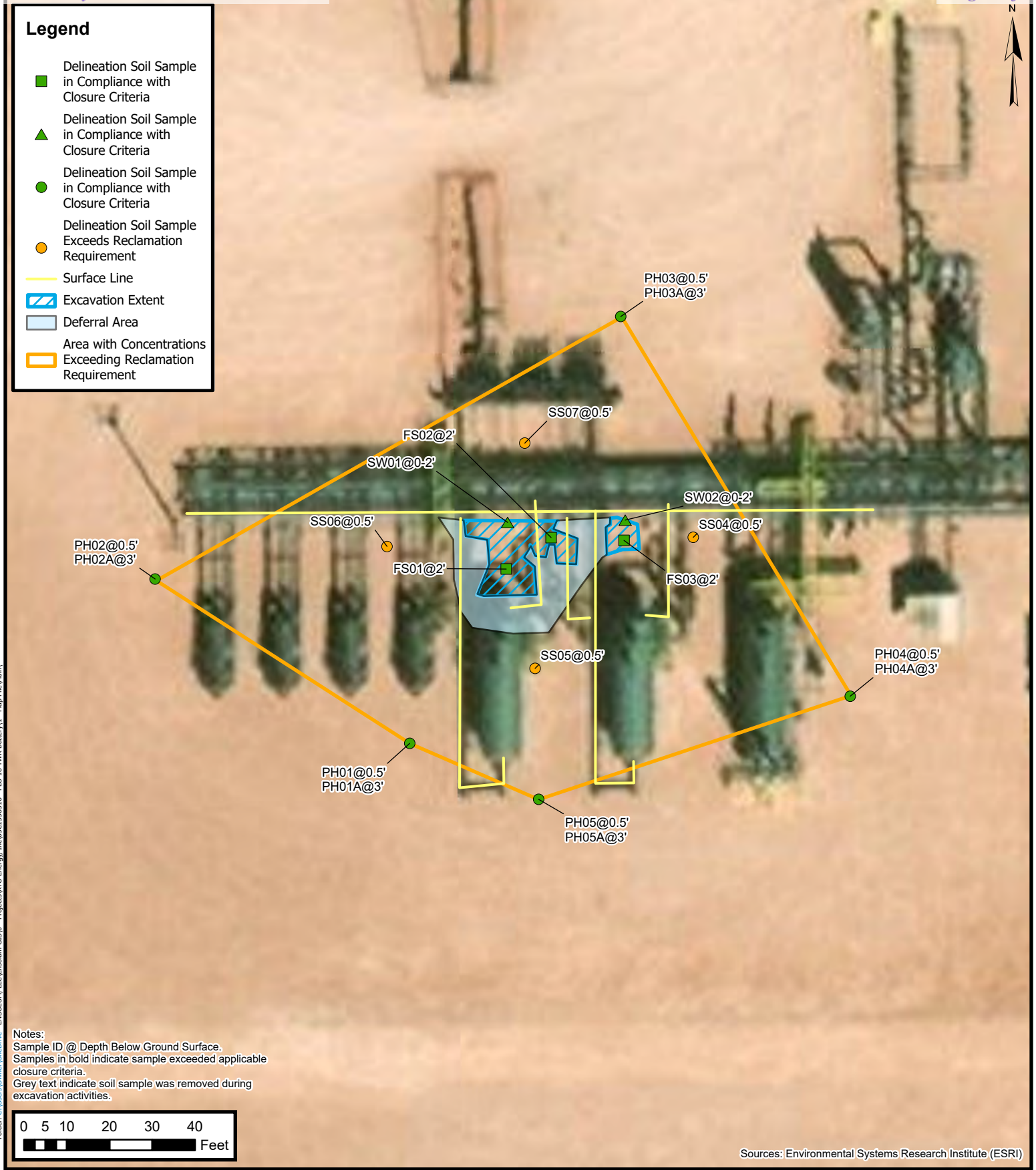


Confirmation Soil Sample Locations

XTO Energy, Inc
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Unit E, Sec 19, T24S, R31E
Eddy County, New Mexico

FIGURE

3



Deferral Area Map

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Unit E, Sec 19, T24S, R31E
Eddy County, New Mexico

FIGURE
4



TABLES

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
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Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Assessment Soil Samples										
SS01	02/21/2024	0.5	<0.00200	0.376	324	9,680	262	10,000	10,300	38,700
SS02	02/21/2024	0.5	<0.0495	10.5	1,020	11,200	272	12,200	12,500	28,900
SS03	02/21/2024	0.5	0.150	96.8	797	44,000	305	44,800	45,100	205
SS04	02/21/2024	0.5	<0.00202	<0.00404	76.3	641	53.6	717	771	94.7
SS05	02/21/2024	0.5	<0.00200	0.0908	<49.7	244	<49.7	244	244	414
SS06	02/21/2024	0.5	<0.00198	0.0123	<49.8	124	<49.8	124	124	165
SS07	02/21/2024	0.5	<0.00200	0.0115	<49.9	108	<49.9	108	108	129
Delineation Soil Samples										
PH01	03/18/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
PH01A	03/18/2024	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
PH02	03/18/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
PH02A	03/18/2024	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
PH03	03/18/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
PH03A	03/18/2024	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
PH04	03/18/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
PH04A	03/18/2024	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
PH05	03/18/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
PH05A	03/18/2024	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
Confirmation Soil Samples										
FS01	03/18/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	512
FS02	03/18/2024	2	<0.050	<0.300	<10.0	44.6	<10.0	<10.0	44.6	96.0
FS03	03/18/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	272
SW01	03/18/2024	0-2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192
SW02	03/18/2024	0-2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0

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

 ENSOLUM		Sample Name: C-04759 (BH01)		Date: 8/7/2023				
		Site Name: PLU 18 TWR SAT BATTERY						
		Incident Number: nAPP2230551957						
		Job Number: 03C1558144						
LITHOLOGIC / SOIL SAMPLING LOG								
Coordinates: 32.207892, -103.817942			Hole Diameter: 7"	Method: Air Rotary				
Total Depth: 110'								
Comments: No field screening or sampling was conducted at the site.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	SP	0-10'. Sand w/ trace caliche. Reddish brown, very fine to fine grained, subrounded to subangular, poorly graded, dry.
						10	CCHE	10-40'. Caliche w/ sand. Light brown to tan, very fine to fine grained, subrounded to subangular, poorly graded, dry.
					20			
					30			
					40			
						50	SP	40-100'. Sand w/ trace caliche. Reddish brown, very fine to fine grained, subrounded to subangular grains, poorly graded, dry. 50': Injecting/adding water & soap at 50'
					60			
					70			
					80			
					90			
					100	SC	100-110'. Clayey sand, reddish orange very fine to fine grained, poorly graded, dry.	
					110		110': stopped drilling and set casing at 110'.	
TD @ 110' bgs.								



APPENDIX B

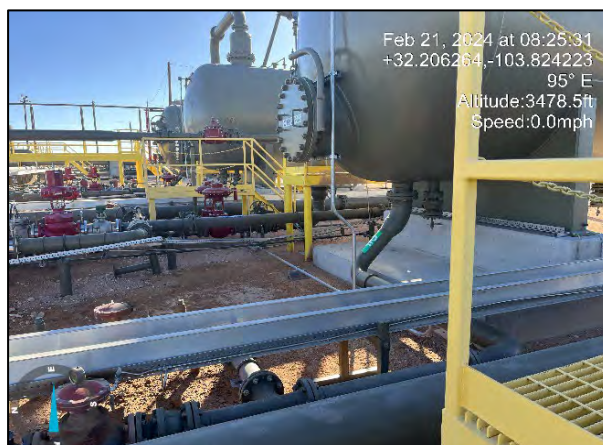
Photographic Log



Photographic Log
XTO Energy, Inc
PLU 18 TWR Battery
nAPP2400849152



Photograph: 1 Date: 2/21/2024
Description: Soil staining in release footprint
View: Northeast



Photograph: 2 Date: 2/21/2024
Description: Soil staining in release footprint
View: East



Photograph: 3 Date: 3/4/2024
Description: Excavation activities
View: Northeast



Photograph: 4 Date: 3/18/2024
Description: Delineation activities
View: Northwest



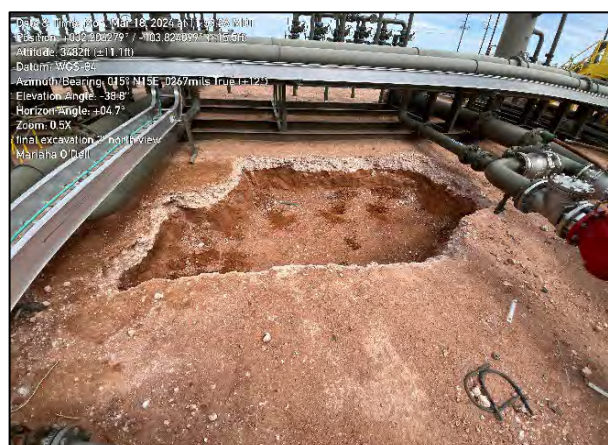
Photographic Log
XTO Energy, Inc
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Photograph: 5 Date: 3/18/2024
Description: Final excavation extent
View: Northeast



Photograph: 6 Date: 3/18/2024
Description: Final excavation extent
View: South



Photograph: 7 Date: 3/18/2024
Description: Final excavation extent
View: Northeast



Photograph: 8 Date: 3/18/2024
Description: Final excavation extent
View: North



APPENDIX C

Lithologic Soil Sampling Logs

 ENSOLUM		Sample Name: PH01		Date: 3/18/2024				
		Site Name: PLU 18 TWR Battery						
		Incident Number: NAPP2400849152						
		Job Number: 03C1558316						
LITHOLOGIC / SOIL SAMPLING LOG				Logged By: M. O'Dell		Method: Backhoe		
Coordinates: 32.206159, -103.824269				Hole Diameter: 4"		Total Depth: 3'		
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. All chloride measurements made with a +40% correction factor.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
D	<162.4	0.0	N	PH01	0.5'	0	CCHE	CCHE. Pad material
D	<162.4	0.0	N		1	1	SP	Reddish brown sand, very fine to fine grained, poorly graded, dry, no odor.
D	<162.4	0.0	N		2	2		
D	<162.4	0.0	N	PH01A	3	3		
Total Depth @ 3' bgs.								

 ENSOLUM		Sample Name: PH02		Date: 3/18/2024				
		Site Name: PLU 18 TWR Battery						
		Incident Number: NAPP2400849152						
		Job Number: 03C1558316						
LITHOLOGIC / SOIL SAMPLING LOG								
Coordinates: 32.206267, -103.824461				Hole Diameter: 4"				
				Total Depth: 3'				
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. All chloride measurements made with a +40% correction factor.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
D	<162.4	0.0	N	PH02	0.5'	0	SP	Reddish brown sand, very fine to fine grained, poorly graded, dry, no odor, trace CCHE. no CCHE.
D	<162.4	0.0	N		1	1		
D	<162.4	0.0	N		2	2		
D	<162.4	0.0	N	PH02A	3	3		
Total Depth @ 3' bgs.								

 ENSOLUM								Sample Name: PH03		Date: 3/18/2024	
								Site Name: PLU 18 TWR Battery			
								Incident Number: NAPP2400849152			
								Job Number: 03C1558316			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: M. O'Dell		Method: Backhoe	
Coordinates: 32.206433, -103.824106								Hole Diameter: 4"		Total Depth: 3'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. All chloride measurements made with a +40% correction factor.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
D	<162.4	0.0	N	PH03	0.5'	0	CCHE	Caliche. Pad material			
D	<162.4	0.0	N		1	1	SP	Reddish brown sand, very fine to fine grained, poorly graded, dry, no odor, trace CCHE.			
D	<162.4	0.0	N		2	2					
D	<162.4	0.0	N	PH03A	3	3					
Total Depth @ 3' bgs.											

 ENSOLUM								Sample Name: PH04		Date: 3/18/2024	
								Site Name: PLU 18 TWR Battery			
								Incident Number: NAPP2400849152			
								Job Number: 03C1558316			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: M. O'Dell		Method: Backhoe	
Coordinates: 32.206187, -103.823936								Hole Diameter: 4"		Total Depth: 3'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. All chloride measurements made with a +40% correction factor.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
D	<162.4	0.6	N	PH04	0.5'	0	SP	Reddish brown sand, very fine to fine grained, poorly graded, dry, no odor, trace CCHE. no CCHE.			
D	<162.4	0.0	N		1	1					
D	<162.4	0.0	N		2	2					
D	<162.4	0.0	N	PH04A	3	3					
Total Depth @ 3' bgs.											

 ENSOLUM		Sample Name: PH05		Date: 3/18/2024				
		Site Name: PLU 18 TWR Battery						
		Incident Number: NAPP2400849152						
		Job Number: 03C1558316						
LITHOLOGIC / SOIL SAMPLING LOG								
Coordinates: 32.206123, -103.824172				Hole Diameter: 4"				
				Total Depth: 3'				
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. All chloride measurements made with a +40% correction factor.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
D	<162.4	0.0	N	PH05	0.5'	0	SP	Reddish brown sand, very fine to fine grained, poorly graded, dry, no odor.
D	<162.4	0.0	N		1	1		
D	<162.4	0.0	N		2	2		
D	<162.4	0.0	N	PH05A	3	3		
Total Depth @ 3' bgs.								



APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation



Environment Testing

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

ANALYTICAL REPORT

PREPARED FOR

Attn: Tacoma Morrissey
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

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JOB DESCRIPTION

PLU 18 TWR BATTERY
03C1558316

JOB NUMBER

890-6235-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220



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Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



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Authorized for release by
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Client: Ensolum
Project/Site: PLU 18 TWR BATTERY

Laboratory Job ID: 890-6235-1
SDG: 03C1558316

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Definitions/Glossary

Client: Ensolum
Project/Site: PLU 18 TWR BATTERY

Job ID: 890-6235-1
SDG: 03C1558316

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Ensolum
Project: PLU 18 TWR BATTERY

Job ID: 890-6235-1

Job ID: 890-6235-1

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Job Narrative
890-6235-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 2/21/2024 11:50 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.4°C.

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: SS 01 (890-6235-1), SS 02 (890-6235-2), SS 03 (890-6235-3), SS 04 (890-6235-4), SS 05 (890-6235-5), SS 06 (890-6235-6) and SS 07 (890-6235-7).

GC VOA

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-74049 and analytical batch 880-74123 was outside the upper control limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: SS 02 (890-6235-2) and SS 03 (890-6235-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-74123 recovered above the upper control limit for Toluene and Ethylbenzene. An acceptable CCV was ran within the 12 hour window, therefore the data has been qualified and reported. The associated sample is impacted: (CCV 880-74123/20).

Method 8021B: The following samples were diluted due to the nature of the sample matrix: SS 02 (890-6235-2) and SS 03 (890-6235-3). Elevated reporting limits (RLs) are provided.

Method 8021B: Surrogate recovery for the following samples were outside control limits: (LCS 880-74062/1-A), (880-24332-A-2 MDLV) and (880-24332-A-3 MB). Evidence of matrix interferences is not obvious.

Method 8021B: The method blank for analytical batch 880-74231 contained Toluene and m-Xylene & p-Xylene above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8021B: Spike compounds were inadvertently omitted during the extraction process for the matrix spike duplicate (MSD); therefore, matrix spike recoveries are unavailable for preparation batch 880-74062 and analytical batch 880-74231. The associated laboratory control sample (LCS) met acceptance criteria.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-73922 and analytical batch 880-74120 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: SS 01 (890-6235-1), SS 02 (890-6235-2), SS 03 (890-6235-3), SS 04 (890-6235-4), SS 05 (890-6235-5), SS 06 (890-6235-6) and SS 07 (890-6235-7). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Batch preparation batch 880-73922 and analytical batch 880-74120 is reported without a matrix spike/matrix spike duplicate (MS/MSD). The batch MS/MSD was originally performed on another client's sample, and this test was

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Case Narrative

Client: Ensolum
Project: PLU 18 TWR BATTERY

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canceled at client request. This MS/MSD result does not have immediate bearing on any samples except for the actual sample spiked. The associated laboratory control sample (LCS) met acceptance criteria and provides long-term precision and accuracy for this batch.

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-74367 and analytical batch 880-74322 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: SS 01 (890-6235-1), SS 02 (890-6235-2), SS 03 (890-6235-3) and (880-40091-A-1-C MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The continuing calibration verification (CCV) associated with batch 880-74322 recovered above the upper control limit for Diesel Range Organics (Over C10-C28). An acceptable CCV was ran within the 12 hour window, therefore the data has been qualified and reported. The associated sample is impacted: (CCV 880-74322/58).

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: SS 03 (890-6235-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR BATTERY

Job ID: 890-6235-1
SDG: 03C1558316

Client Sample ID: SS 01

Lab Sample ID: 890-6235-1

Date Collected: 02/21/24 08:35

Matrix: Solid

Date Received: 02/21/24 11:50

Sample Depth: 0.5'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/26/24 13:52	02/28/24 03:44	1
Toluene	0.0119		0.00200	mg/Kg		02/26/24 13:52	02/28/24 03:44	1
Ethylbenzene	0.0133		0.00200	mg/Kg		02/26/24 13:52	02/28/24 03:44	1
m-Xylene & p-Xylene	0.234		0.00399	mg/Kg		02/26/24 13:52	02/28/24 03:44	1
o-Xylene	0.117		0.00200	mg/Kg		02/26/24 13:52	02/28/24 03:44	1
Xylenes, Total	0.351		0.00399	mg/Kg		02/26/24 13:52	02/28/24 03:44	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	120		70 - 130			02/26/24 13:52	02/28/24 03:44	1
1,4-Difluorobenzene (Surr)	79		70 - 130			02/26/24 13:52	02/28/24 03:44	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.376		0.00399	mg/Kg			02/28/24 03:44	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	10300		252	mg/Kg			03/01/24 00:56	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	324		50.1	mg/Kg		02/23/24 11:52	02/28/24 02:58	1
Diesel Range Organics (Over C10-C28)	9680		252	mg/Kg		02/29/24 12:42	03/01/24 00:56	5
Oil Range Organics (Over C28-C36)	262		50.1	mg/Kg		02/23/24 11:52	02/28/24 02:58	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	168	S1+	70 - 130			02/23/24 11:52	02/28/24 02:58	1
o-Terphenyl	173	S1+	70 - 130			02/23/24 11:52	02/28/24 02:58	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	38700		249	mg/Kg			02/25/24 18:12	50

Client Sample ID: SS 02

Lab Sample ID: 890-6235-2

Date Collected: 02/21/24 08:40

Matrix: Solid

Date Received: 02/21/24 11:50

Sample Depth: 0.5'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0495	U	0.0495	mg/Kg		02/26/24 13:52	02/28/24 05:06	25
Toluene	0.641		0.0495	mg/Kg		02/26/24 13:52	02/28/24 05:06	25
Ethylbenzene	0.567		0.0495	mg/Kg		02/26/24 13:52	02/28/24 05:06	25
m-Xylene & p-Xylene	6.58		0.0990	mg/Kg		02/26/24 13:52	02/28/24 05:06	25
o-Xylene	2.75		0.0495	mg/Kg		02/26/24 13:52	02/28/24 05:06	25
Xylenes, Total	9.33		0.0990	mg/Kg		02/26/24 13:52	02/28/24 05:06	25

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Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR BATTERY

Job ID: 890-6235-1
SDG: 03C1558316

Client Sample ID: SS 02

Lab Sample ID: 890-6235-2

Date Collected: 02/21/24 08:40

Matrix: Solid

Date Received: 02/21/24 11:50

Sample Depth: 0.5'

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130			02/26/24 13:52	02/28/24 05:06	25
1,4-Difluorobenzene (Surr)	54	S1-	70 - 130			02/26/24 13:52	02/28/24 05:06	25
Method: TAL SOP Total BTEX - Total BTEX Calculation								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	10.5		0.0990	mg/Kg			02/28/24 05:06	1
Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	12500		251	mg/Kg			03/01/24 01:38	1
Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	1020		50.4	mg/Kg		02/23/24 11:52	02/28/24 03:19	1
Diesel Range Organics (Over C10-C28)	11200		251	mg/Kg		02/29/24 12:42	03/01/24 01:38	5
Oil Range Organics (Over C28-C36)	272		50.4	mg/Kg		02/23/24 11:52	02/28/24 03:19	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	205	S1+	70 - 130			02/23/24 11:52	02/28/24 03:19	1
o-Terphenyl	187	S1+	70 - 130			02/23/24 11:52	02/28/24 03:19	1
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	28900		249	mg/Kg			02/25/24 18:16	50

Client Sample ID: SS 03

Lab Sample ID: 890-6235-3

Date Collected: 02/21/24 08:45

Matrix: Solid

Date Received: 02/21/24 11:50

Sample Depth: 0.5'

Method: SW846 8021B - Volatile Organic Compounds (GC)								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.150		0.0502	mg/Kg		02/26/24 13:52	02/28/24 05:26	25
Toluene	5.13		0.0502	mg/Kg		02/26/24 13:52	02/28/24 05:26	25
Ethylbenzene	2.66		0.0502	mg/Kg		02/26/24 13:52	02/28/24 05:26	25
m-Xylene & p-Xylene	74.9		0.398	mg/Kg		02/26/24 14:15	02/29/24 11:37	100
o-Xylene	14.0		0.199	mg/Kg		02/26/24 14:15	02/29/24 11:37	100
Xylenes, Total	88.9		0.398	mg/Kg		02/26/24 14:15	02/29/24 11:37	100
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	245	S1+	70 - 130			02/26/24 13:52	02/28/24 05:26	25
1,4-Difluorobenzene (Surr)	75		70 - 130			02/26/24 13:52	02/28/24 05:26	25
Method: TAL SOP Total BTEX - Total BTEX Calculation								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	96.8		0.398	mg/Kg			02/29/24 11:37	1

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Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR BATTERY

Job ID: 890-6235-1
SDG: 03C1558316

Client Sample ID: SS 03

Lab Sample ID: 890-6235-3

Date Collected: 02/21/24 08:45

Matrix: Solid

Date Received: 02/21/24 11:50

Sample Depth: 0.5'

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total TPH	45100		997	mg/Kg			03/04/24 00:08	1	
Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	797		50.5	mg/Kg		02/23/24 11:52	02/28/24 03:41	1	
Diesel Range Organics (Over C10-C28)	44000		997	mg/Kg		03/03/24 00:24	03/04/24 00:08	20	
Oil Range Organics (Over C28-C36)	305		50.5	mg/Kg		02/23/24 11:52	02/28/24 03:41	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	143	S1+	70 - 130			02/23/24 11:52	02/28/24 03:41	1	
o-Terphenyl	126		70 - 130			02/23/24 11:52	02/28/24 03:41	1	
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	205		5.00	mg/Kg			02/25/24 18:21	1	

Client Sample ID: SS 04

Lab Sample ID: 890-6235-4

Date Collected: 02/21/24 08:50

Matrix: Solid

Date Received: 02/21/24 11:50

Sample Depth: 0.5'

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	<0.00202	U	0.00202	mg/Kg		02/26/24 13:52	02/28/24 04:04	1	
Toluene	<0.00202	U	0.00202	mg/Kg		02/26/24 13:52	02/28/24 04:04	1	
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		02/26/24 13:52	02/28/24 04:04	1	
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		02/26/24 13:52	02/28/24 04:04	1	
o-Xylene	<0.00202	U	0.00202	mg/Kg		02/26/24 13:52	02/28/24 04:04	1	
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		02/26/24 13:52	02/28/24 04:04	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	112		70 - 130			02/26/24 13:52	02/28/24 04:04	1	
1,4-Difluorobenzene (Surr)	97		70 - 130			02/26/24 13:52	02/28/24 04:04	1	
Method: TAL SOP Total BTEX - Total BTEX Calculation									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total BTEX	<0.00404	U	0.00404	mg/Kg			02/28/24 04:04	1	
Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total TPH	771		50.4	mg/Kg			02/28/24 04:03	1	
Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	76.3		50.4	mg/Kg		02/23/24 11:52	02/28/24 04:03	1	
Diesel Range Organics (Over C10-C28)	641		50.4	mg/Kg		02/23/24 11:52	02/28/24 04:03	1	

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Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR BATTERY

Job ID: 890-6235-1
SDG: 03C1558316

Client Sample ID: SS 04

Lab Sample ID: 890-6235-4

Date Collected: 02/21/24 08:50

Matrix: Solid

Date Received: 02/21/24 11:50

Sample Depth: 0.5'

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Oil Range Organics (Over C28-C36)	53.6		50.4	mg/Kg	-	02/23/24 11:52	02/28/24 04:03	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	137	S1+	70 - 130			02/23/24 11:52	02/28/24 04:03	1	
o-Terphenyl	143	S1+	70 - 130			02/23/24 11:52	02/28/24 04:03	1	
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	94.7		4.97	mg/Kg	-		02/25/24 18:35	1	

Client Sample ID: SS 05

Lab Sample ID: 890-6235-5

Date Collected: 02/21/24 08:55

Matrix: Solid

Date Received: 02/21/24 11:50

Sample Depth: 0.5'

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	<0.00200	U	0.00200	mg/Kg	-	02/26/24 13:52	02/28/24 04:25	1	
Toluene	0.0177		0.00200	mg/Kg	-	02/26/24 13:52	02/28/24 04:25	1	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg	-	02/26/24 13:52	02/28/24 04:25	1	
m-Xylene & p-Xylene	0.0581		0.00399	mg/Kg	-	02/26/24 13:52	02/28/24 04:25	1	
o-Xylene	0.0150		0.00200	mg/Kg	-	02/26/24 13:52	02/28/24 04:25	1	
Xylenes, Total	0.0731		0.00399	mg/Kg	-	02/26/24 13:52	02/28/24 04:25	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	116		70 - 130			02/26/24 13:52	02/28/24 04:25	1	
1,4-Difluorobenzene (Surr)	100		70 - 130			02/26/24 13:52	02/28/24 04:25	1	
Method: TAL SOP Total BTEX - Total BTEX Calculation									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total BTEX	0.0908		0.00399	mg/Kg	-		02/28/24 04:25	1	
Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total TPH	244		49.7	mg/Kg	-		02/28/24 04:24	1	
Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7	mg/Kg	-	02/23/24 11:52	02/28/24 04:24	1	
Diesel Range Organics (Over C10-C28)	244		49.7	mg/Kg	-	02/23/24 11:52	02/28/24 04:24	1	
Oil Range Organics (Over C28-C36)	<49.7	U	49.7	mg/Kg	-	02/23/24 11:52	02/28/24 04:24	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	139	S1+	70 - 130			02/23/24 11:52	02/28/24 04:24	1	
o-Terphenyl	147	S1+	70 - 130			02/23/24 11:52	02/28/24 04:24	1	
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	414		4.96	mg/Kg	-		02/25/24 18:40	1	

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Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR BATTERY

Job ID: 890-6235-1
SDG: 03C1558316

Client Sample ID: SS 06
Date Collected: 02/21/24 09:10
Date Received: 02/21/24 11:50
Sample Depth: 0.5'

Lab Sample ID: 890-6235-6
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	<0.00198	U	0.00198	mg/Kg		02/26/24 13:52	02/28/24 04:45	1	
Toluene	0.00208		0.00198	mg/Kg		02/26/24 13:52	02/28/24 04:45	1	
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		02/26/24 13:52	02/28/24 04:45	1	
m-Xylene & p-Xylene	0.00639		0.00396	mg/Kg		02/26/24 13:52	02/28/24 04:45	1	
o-Xylene	0.00379		0.00198	mg/Kg		02/26/24 13:52	02/28/24 04:45	1	
Xylenes, Total	0.0102		0.00396	mg/Kg		02/26/24 13:52	02/28/24 04:45	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	122		70 - 130			02/26/24 13:52	02/28/24 04:45	1	
1,4-Difluorobenzene (Surr)	97		70 - 130			02/26/24 13:52	02/28/24 04:45	1	
Method: TAL SOP Total BTEX - Total BTEX Calculation									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total BTEX	0.0123		0.00396	mg/Kg			02/28/24 04:45	1	
Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total TPH	124		49.8	mg/Kg			02/28/24 04:46	1	
Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		02/23/24 11:52	02/28/24 04:46	1	
Diesel Range Organics (Over C10-C28)	124		49.8	mg/Kg		02/23/24 11:52	02/28/24 04:46	1	
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		02/23/24 11:52	02/28/24 04:46	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	122		70 - 130			02/23/24 11:52	02/28/24 04:46	1	
o-Terphenyl	132	S1+	70 - 130			02/23/24 11:52	02/28/24 04:46	1	
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	165		4.99	mg/Kg			02/25/24 18:44	1	

Client Sample ID: SS 07
Date Collected: 02/21/24 09:05
Date Received: 02/21/24 11:50
Sample Depth: 0.5'

Lab Sample ID: 890-6235-7
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	<0.00200	U	0.00200	mg/Kg		02/26/24 13:52	02/28/24 07:16	1	
Toluene	0.00288		0.00200	mg/Kg		02/26/24 13:52	02/28/24 07:16	1	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/26/24 13:52	02/28/24 07:16	1	
m-Xylene & p-Xylene	0.00579		0.00400	mg/Kg		02/26/24 13:52	02/28/24 07:16	1	
o-Xylene	0.00284		0.00200	mg/Kg		02/26/24 13:52	02/28/24 07:16	1	
Xylenes, Total	0.00863		0.00400	mg/Kg		02/26/24 13:52	02/28/24 07:16	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	92		70 - 130			02/26/24 13:52	02/28/24 07:16	1	

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Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR BATTERY

Job ID: 890-6235-1
SDG: 03C1558316

Client Sample ID: SS 07
Date Collected: 02/21/24 09:05
Date Received: 02/21/24 11:50
Sample Depth: 0.5'

Lab Sample ID: 890-6235-7
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1,4-Difluorobenzene (Surr)	105		70 - 130			02/26/24 13:52	02/28/24 07:16	1	
Method: TAL SOP Total BTEX - Total BTEX Calculation									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total BTEX	0.0115		0.00400	mg/Kg			02/28/24 07:16	1	
Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total TPH	108		49.9	mg/Kg			02/28/24 05:07	1	
Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		02/23/24 11:52	02/28/24 05:07	1	
Diesel Range Organics (Over C10-C28)	108		49.9	mg/Kg		02/23/24 11:52	02/28/24 05:07	1	
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/23/24 11:52	02/28/24 05:07	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	133	S1+	70 - 130			02/23/24 11:52	02/28/24 05:07	1	
o-Terphenyl	144	S1+	70 - 130			02/23/24 11:52	02/28/24 05:07	1	
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	129		4.99	mg/Kg			02/25/24 18:49	1	

Surrogate Summary

Client: Ensolum
Project/Site: PLU 18 TWR BATTERY

Job ID: 890-6235-1
SDG: 03C1558316

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-24332-A-3 MB	Method Blank	128	214 S1+
890-6233-A-1-C MS	Matrix Spike	124	100
890-6233-A-1-D MSD	Matrix Spike Duplicate	108	102
890-6235-1	SS 01	120	79
890-6235-2	SS 02	109	54 S1-
890-6235-3	SS 03	245 S1+	75
890-6235-4	SS 04	112	97
890-6235-5	SS 05	116	100
890-6235-6	SS 06	122	97
890-6235-7	SS 07	92	105
890-6254-A-1-B MS	Matrix Spike	112	92
890-6254-A-1-C MSD	Matrix Spike Duplicate	75	105
LCS 880-74049/1-A	Lab Control Sample	100	99
LCS 880-74062/1-A	Lab Control Sample	139 S1+	107
LCSD 880-74049/2-A	Lab Control Sample Dup	114	96
LCSD 880-74062/2-A	Lab Control Sample Dup	126	118
MB 880-74021/5-A	Method Blank	129	129
MB 880-74049/5-A	Method Blank	135 S1+	130
MB 880-74062/5-A	Method Blank	72	127
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-40091-A-1-B MS	Matrix Spike	118	117
880-40091-A-1-C MSD	Matrix Spike Duplicate	141 S1+	141 S1+
890-6235-1	SS 01	168 S1+	173 S1+
890-6235-2	SS 02	205 S1+	187 S1+
890-6235-3	SS 03	143 S1+	126
890-6235-4	SS 04	137 S1+	143 S1+
890-6235-5	SS 05	139 S1+	147 S1+
890-6235-6	SS 06	122	132 S1+
890-6235-7	SS 07	133 S1+	144 S1+
890-6285-A-39-D MS	Matrix Spike	119	96
890-6285-A-39-E MSD	Matrix Spike Duplicate	118	97
LCS 880-73922/2-A	Lab Control Sample	103	105
LCS 880-74367/2-A	Lab Control Sample	100	103
LCS 880-74527/2-A	Lab Control Sample	83	71
LCSD 880-73922/3-A	Lab Control Sample Dup	103	106
LCSD 880-74367/3-A	Lab Control Sample Dup	94	99
LCSD 880-74527/3-A	Lab Control Sample Dup	97	84
MB 880-73922/1-A	Method Blank	181 S1+	203 S1+
MB 880-74367/1-A	Method Blank	157 S1+	175 S1+
MB 880-74527/1-A	Method Blank	107	97

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Surrogate Summary

Client: Ensolum
Project/Site: PLU 18 TWR BATTERY

Job ID: 890-6235-1
SDG: 03C1558316

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR BATTERY

Job ID: 890-6235-1
SDG: 03C1558316

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-74021/5-A						Client Sample ID: Method Blank			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 74123						Prep Batch: 74021			
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	<0.00200	U	0.00200	mg/Kg		02/26/24 11:29	02/27/24 14:15	1	
Toluene	<0.00200	U	0.00200	mg/Kg		02/26/24 11:29	02/27/24 14:15	1	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/26/24 11:29	02/27/24 14:15	1	
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/26/24 11:29	02/27/24 14:15	1	
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/26/24 11:29	02/27/24 14:15	1	
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		02/26/24 11:29	02/27/24 14:15	1	
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	129		70 - 130			02/26/24 11:29	02/27/24 14:15	1	
1,4-Difluorobenzene (Surr)	129		70 - 130			02/26/24 11:29	02/27/24 14:15	1	

Lab Sample ID: MB 880-74049/5-A						Client Sample ID: Method Blank			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 74123						Prep Batch: 74049			
	MB	MB							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	<0.00200	U	0.00200	mg/Kg		02/26/24 13:52	02/28/24 01:53	1	
Toluene	<0.00200	U	0.00200	mg/Kg		02/26/24 13:52	02/28/24 01:53	1	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/26/24 13:52	02/28/24 01:53	1	
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/26/24 13:52	02/28/24 01:53	1	
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/26/24 13:52	02/28/24 01:53	1	
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		02/26/24 13:52	02/28/24 01:53	1	
	MB	MB							
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	135	S1+	70 - 130			02/26/24 13:52	02/28/24 01:53	1	
1,4-Difluorobenzene (Surr)	130		70 - 130			02/26/24 13:52	02/28/24 01:53	1	

Lab Sample ID: LCS 880-74049/1-A					Client Sample ID: Lab Control Sample				
Matrix: Solid					Prep Type: Total/NA				
Analysis Batch: 74123					Prep Batch: 74049				
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec		
							Limits		
Benzene	0.100	0.1160		mg/Kg		116	70 - 130		
Toluene	0.100	0.1063		mg/Kg		106	70 - 130		
Ethylbenzene	0.100	0.1247		mg/Kg		125	70 - 130		
m-Xylene & p-Xylene	0.200	0.2118		mg/Kg		106	70 - 130		
o-Xylene	0.100	0.1039		mg/Kg		104	70 - 130		
Surrogate	LCS	LCS	Limits						
	%Recovery	Qualifier							
4-Bromofluorobenzene (Surr)	100		70 - 130						
1,4-Difluorobenzene (Surr)	99		70 - 130						

Lab Sample ID: LCSD 880-74049/2-A						Client Sample ID: Lab Control Sample Dup			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 74123						Prep Batch: 74049			
Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Benzene	0.100	0.1153		mg/Kg		115	70 - 130	1	35

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QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR BATTERY

Job ID: 890-6235-1
SDG: 03C1558316

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-74049/2-A						Client Sample ID: Lab Control Sample Dup					
Matrix: Solid						Prep Type: Total/NA					
Analysis Batch: 74123						Prep Batch: 74049					
Analyte	Spike			LCSD	LCSD	Unit	D	%Rec	%Rec		RPD
	Added	Result	Qualifier		Limits				RPD	Limit	
Toluene	0.100	0.1097		mg/Kg				110	70 - 130	3	35
Ethylbenzene	0.100	0.1165		mg/Kg				116	70 - 130	7	35
m-Xylene & p-Xylene	0.200	0.2037		mg/Kg				102	70 - 130	4	35
o-Xylene	0.100	0.1155		mg/Kg				116	70 - 130	11	35
Surrogate	LCSD	LCSD	Qualifier	Limits							
	%Recovery										
4-Bromofluorobenzene (Surr)	114			70 - 130							
1,4-Difluorobenzene (Surr)	96			70 - 130							

Lab Sample ID: 890-6233-A-1-C MS							Client Sample ID: Matrix Spike				
Matrix: Solid							Prep Type: Total/NA				
Analysis Batch: 74123							Prep Batch: 74049				
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Benzene	<0.00199	U	0.101	0.09725		mg/Kg		96	70 - 130		
Toluene	<0.00199	U	0.101	0.09650		mg/Kg		96	70 - 130		
Ethylbenzene	<0.00199	U	0.101	0.1129		mg/Kg		112	70 - 130		
m-Xylene & p-Xylene	<0.00398	U	0.202	0.2162		mg/Kg		107	70 - 130		
o-Xylene	<0.00199	U	0.101	0.09884		mg/Kg		98	70 - 130		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	124		70 - 130								
1,4-Difluorobenzene (Surr)	100		70 - 130								

Lab Sample ID: 890-6233-A-1-D MSD						Client Sample ID: Matrix Spike Duplicate					
Matrix: Solid						Prep Type: Total/NA					
Analysis Batch: 74123						Prep Batch: 74049					
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00199	U	0.100	0.1073		mg/Kg		107	70 - 130	10	35
Toluene	<0.00199	U	0.100	0.1022		mg/Kg		102	70 - 130	6	35
Ethylbenzene	<0.00199	U	0.100	0.1029		mg/Kg		103	70 - 130	9	35
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1780		mg/Kg		89	70 - 130	19	35
o-Xylene	<0.00199	U	0.100	0.09361		mg/Kg		93	70 - 130	5	35
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	108		70 - 130								
1,4-Difluorobenzene (Surr)	102		70 - 130								

Lab Sample ID: MB 880-74062/5-A				Client Sample ID: Method Blank							
Matrix: Solid				Prep Type: Total/NA							
Analysis Batch: 74231				Prep Batch: 74062							
Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil	Fac		
	Result	Qualifier									
Benzene	<0.00200	U	0.00200	mg/Kg		02/26/24 14:15	02/29/24 02:30	1			
Toluene	<0.00200	U	0.00200	mg/Kg		02/26/24 14:15	02/29/24 02:30	1			
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/26/24 14:15	02/29/24 02:30	1			
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/26/24 14:15	02/29/24 02:30	1			

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QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR BATTERY

Job ID: 890-6235-1
SDG: 03C1558316

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: MB 880-74062/5-A

Matrix: Solid

Analysis Batch: 74231

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 74062

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/26/24 14:15	02/29/24 02:30	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		02/26/24 14:15	02/29/24 02:30	1
Surrogate	MB	MB	Limits			Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier						
4-Bromofluorobenzene (Surr)	72		70 - 130			02/26/24 14:15	02/29/24 02:30	1
1,4-Difluorobenzene (Surr)	127		70 - 130			02/26/24 14:15	02/29/24 02:30	1

Lab Sample ID: LCS 880-74062/1-A

Matrix: Solid

Analysis Batch: 74231

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 74062

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1181		mg/Kg		118	70 - 130
Toluene	0.100	0.07869		mg/Kg		79	70 - 130
Ethylbenzene	0.100	0.1054		mg/Kg		105	70 - 130
m-Xylene & p-Xylene	0.200	0.2134		mg/Kg		107	70 - 130
o-Xylene	0.100	0.1016		mg/Kg		102	70 - 130
Surrogate	LCS	LCS	Limits				
	%Recovery	Qualifier					
4-Bromofluorobenzene (Surr)	139	S1+	70 - 130				
1,4-Difluorobenzene (Surr)	107		70 - 130				

Lab Sample ID: LCSD 880-74062/2-A

Matrix: Solid

Analysis Batch: 74231

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 74062

			Spike	LCSD	LCSD				%Rec	RPD	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene			0.100	0.1161		mg/Kg		116	70 - 130	2	35
Toluene			0.100	0.08760		mg/Kg		88	70 - 130	11	35
Ethylbenzene			0.100	0.08255		mg/Kg		83	70 - 130	24	35
m-Xylene & p-Xylene			0.200	0.2139		mg/Kg		107	70 - 130	0	35
o-Xylene			0.100	0.08656		mg/Kg		87	70 - 130	16	35
			LCSD	LCSD							
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	126		70 - 130								
1,4-Difluorobenzene (Surr)	118		70 - 130								

Lab Sample ID: 890-6254-A-1-B MS

Matrix: Solid

Analysis Batch: 74231

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 74062

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier		Result	Qualifier				
Benzene	<0.00199	U F1	0.101	0.09880		mg/Kg		98	70 - 130
Toluene	<0.00199	U F1	0.101	0.08019		mg/Kg		80	70 - 130
Ethylbenzene	<0.00199	U F1	0.101	0.09586		mg/Kg		95	70 - 130
m-Xylene & p-Xylene	<0.00398	U F1	0.202	0.1873		mg/Kg		93	70 - 130
o-Xylene	<0.00199	U F1	0.101	0.08689		mg/Kg		86	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR BATTERY

Job ID: 890-6235-1
SDG: 03C1558316

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 890-6254-A-1-B MS
Matrix: Solid
Analysis Batch: 74231

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 74062

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	112		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

Lab Sample ID: 890-6254-A-1-C MSD
Matrix: Solid
Analysis Batch: 74231

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 74062

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U F1	0.100	<0.00200	U F1	mg/Kg		0	70 - 130	NC	35
Toluene	<0.00199	U F1	0.100	<0.00200	U F1	mg/Kg		0	70 - 130	NC	35
Ethylbenzene	<0.00199	U F1	0.100	<0.00200	U F1	mg/Kg		0	70 - 130	NC	35
m-Xylene & p-Xylene	<0.00398	U F1	0.200	<0.00400	U F1	mg/Kg		0	70 - 130	NC	35
o-Xylene	<0.00199	U F1	0.100	<0.00200	U F1	mg/Kg		0	70 - 130	NC	35

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	75		70 - 130
1,4-Difluorobenzene (Surr)	105		70 - 130

Lab Sample ID: 880-24332-A-3 MB
Matrix: Solid
Analysis Batch: 74231

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg			02/28/24 22:42	1
Toluene	<0.00200	U	0.00200	mg/Kg			02/28/24 22:42	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg			02/28/24 22:42	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg			02/28/24 22:42	1
o-Xylene	<0.00200	U	0.00200	mg/Kg			02/28/24 22:42	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg			02/28/24 22:42	1

	MB	MB						
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac		
4-Bromofluorobenzene (Surr)	128		70 - 130		02/28/24 22:42	1		
1,4-Difluorobenzene (Surr)	214	S1+	70 - 130		02/28/24 22:42	1		

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-73922/1-A
Matrix: Solid
Analysis Batch: 74120

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 73922

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		02/23/24 11:52	02/27/24 20:00	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		02/23/24 11:52	02/27/24 20:00	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/23/24 11:52	02/27/24 20:00	1

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QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR BATTERY

Job ID: 890-6235-1
SDG: 03C1558316

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 880-73922/1-A
Matrix: Solid
Analysis Batch: 74120

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 73922

Surrogate	MB MB		Limits	Prepared		Dil Fac
	%Recovery	Qualifier			Analyzed	
1-Chlorooctane	181	S1+	70 - 130	02/23/24 11:52	02/27/24 20:00	1
o-Terphenyl	203	S1+	70 - 130	02/23/24 11:52	02/27/24 20:00	1

Lab Sample ID: LCS 880-73922/2-A
Matrix: Solid
Analysis Batch: 74120

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 73922

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	
Gasoline Range Organics (GRO)-C6-C10	1000	1012		mg/Kg		101	70 - 130	
Diesel Range Organics (Over C10-C28)	1000	1201		mg/Kg		120	70 - 130	
Surrogate	LCS LCS		Limits					
	%Recovery	Qualifier						
1-Chlorooctane	103		70 - 130					
o-Terphenyl	105		70 - 130					

Lab Sample ID: LCSD 880-73922/3-A
Matrix: Solid
Analysis Batch: 74120

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 73922

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits			
Gasoline Range Organics (GRO)-C6-C10	1000	1012		mg/Kg		101	70 - 130	0		20
Diesel Range Organics (Over C10-C28)	1000	1214		mg/Kg		121	70 - 130	1		20
Surrogate	LCSD LCSD		Limits							
	%Recovery	Qualifier								
1-Chlorooctane	103		70 - 130							
o-Terphenyl	106		70 - 130							

Lab Sample ID: MB 880-74367/1-A
Matrix: Solid
Analysis Batch: 74322

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 74367

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		02/29/24 12:42	02/29/24 20:03	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		02/29/24 12:42	02/29/24 20:03	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/29/24 12:42	02/29/24 20:03	1
Surrogate	MB MB		Limits					
	%Recovery	Qualifier						
1-Chlorooctane	157	S1+	70 - 130					
o-Terphenyl	175	S1+	70 - 130					

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QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR BATTERY

Job ID: 890-6235-1
SDG: 03C1558316

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 880-74367/2-A
Matrix: Solid
Analysis Batch: 74322

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 74367

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	963.9		mg/Kg		96	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1152		mg/Kg		115	70 - 130
Surrogate		LCS %Recovery	LCS Qualifier	Limits			
1-Chlorooctane		100		70 - 130			
o-Terphenyl		103		70 - 130			

Lab Sample ID: LCSD 880-74367/3-A
Matrix: Solid
Analysis Batch: 74322

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 74367

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	932.7		mg/Kg		93	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	1000	1092		mg/Kg		109	70 - 130	5	20
Surrogate		LCSD %Recovery	LCSD Qualifier	Limits					
1-Chlorooctane		94		70 - 130					
o-Terphenyl		99		70 - 130					

Lab Sample ID: 880-40091-A-1-B MS
Matrix: Solid
Analysis Batch: 74322

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 74367

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	1010	970.6		mg/Kg		92	70 - 130
Diesel Range Organics (Over C10-C28)	102		1010	1044		mg/Kg		93	70 - 130
Surrogate		MS %Recovery	MS Qualifier	Limits					
1-Chlorooctane		118		70 - 130					
o-Terphenyl		117		70 - 130					

Lab Sample ID: 880-40091-A-1-C MSD
Matrix: Solid
Analysis Batch: 74322

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 74367

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	1010	1183		mg/Kg		113	70 - 130	20	20
Diesel Range Organics (Over C10-C28)	102		1010	1272		mg/Kg		116	70 - 130	20	20
Surrogate		MSD %Recovery	MSD Qualifier	Limits							
1-Chlorooctane		141	S1+	70 - 130							

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QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR BATTERY

Job ID: 890-6235-1
SDG: 03C1558316

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 880-40091-A-1-C MSD
Matrix: Solid
Analysis Batch: 74322

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 74367

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
<i>o</i> -Terphenyl	141	S1+	70 - 130

Lab Sample ID: MB 880-74527/1-A
Matrix: Solid
Analysis Batch: 74540

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 74527

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		03/03/24 00:24	03/03/24 20:56	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		03/03/24 00:24	03/03/24 20:56	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/03/24 00:24	03/03/24 20:56	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	107		70 - 130			03/03/24 00:24	03/03/24 20:56	1
<i>o</i> -Terphenyl	97		70 - 130			03/03/24 00:24	03/03/24 20:56	1

Lab Sample ID: LCS 880-74527/2-A
Matrix: Solid
Analysis Batch: 74540

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 74527

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	761.7		mg/Kg		76	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1023		mg/Kg		102	70 - 130
Surrogate		LCS %Recovery	LCS Qualifier	Limits			
1-Chlorooctane		83		70 - 130			
<i>o</i> -Terphenyl		71		70 - 130			

Lab Sample ID: LCSD 880-74527/3-A
Matrix: Solid
Analysis Batch: 74540

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 74527

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	805.8		mg/Kg		81	70 - 130	6	20
Diesel Range Organics (Over C10-C28)	1000	1218		mg/Kg		122	70 - 130	17	20
Surrogate		LCSD %Recovery	LCSD Qualifier	Limits					
1-Chlorooctane		97		70 - 130					
<i>o</i> -Terphenyl		84		70 - 130					

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QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR BATTERY

Job ID: 890-6235-1
SDG: 03C1558316

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 890-6285-A-39-D MS

Matrix: Solid

Analysis Batch: 74540

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 74527

	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	1000	906.2		mg/Kg		86	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.6	U	1000	1062		mg/Kg		102	70 - 130		
Surrogate	MS %Recovery	MS Qualifier	Limits								
1-Chlorooctane	119		70 - 130								
o-Terphenyl	96		70 - 130								

Lab Sample ID: 890-6285-A-39-E MSD

Matrix: Solid

Analysis Batch: 74540

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 74527

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	1000	923.7		mg/Kg		88	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<49.6	U	1000	1070		mg/Kg		103	70 - 130	1	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	118		70 - 130								
o-Terphenyl	97		70 - 130								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-73849/1-A

Matrix: Solid

Analysis Batch: 73933

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Chloride	<5.00	U	5.00	mg/Kg			02/25/24 17:39	1

Lab Sample ID: LCS 880-73849/2-A

Matrix: Solid

Analysis Batch: 73933

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec
							Limits
Chloride	250	234.8		mg/Kg		94	90 - 110

Lab Sample ID: LCSD 880-73849/3-A

Matrix: Solid

Analysis Batch: 73933

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

			Spike	LCSD	LCSD				%Rec	RPD	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limits
Chloride			250	236.9		mg/Kg		95	90 - 110	1	20

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QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR BATTERY

Job ID: 890-6235-1
SDG: 03C1558316

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-39775-A-1-B MS

Client Sample ID: Matrix Spike

Matrix: Solid

Prep Type: Soluble

Analysis Batch: 73933

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	51.5		249	300.6		mg/Kg		100	90 - 110		

Lab Sample ID: 880-39775-A-1-C MSD

Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Prep Type: Soluble

Analysis Batch: 73933

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	51.5		249	300.7		mg/Kg		100	90 - 110	0	20

Lab Sample ID: 890-6233-A-3-B MS

Client Sample ID: Matrix Spike

Matrix: Solid

Prep Type: Soluble

Analysis Batch: 73933

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	6520		2480	8969		mg/Kg		99	90 - 110		

Lab Sample ID: 890-6233-A-3-C MSD

Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Prep Type: Soluble

Analysis Batch: 73933

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	6520		2480	8982		mg/Kg		100	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWR BATTERY

Job ID: 890-6235-1
SDG: 03C1558316

GC VOA

Prep Batch: 74021

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-74021/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 74049

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6235-1	SS 01	Total/NA	Solid	5035	
890-6235-2	SS 02	Total/NA	Solid	5035	
890-6235-3	SS 03	Total/NA	Solid	5035	
890-6235-4	SS 04	Total/NA	Solid	5035	
890-6235-5	SS 05	Total/NA	Solid	5035	
890-6235-6	SS 06	Total/NA	Solid	5035	
890-6235-7	SS 07	Total/NA	Solid	5035	
MB 880-74049/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-74049/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-74049/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-6233-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-6233-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 74062

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6235-3	SS 03	Total/NA	Solid	5035	
MB 880-74062/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-74062/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-74062/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-6254-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
890-6254-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 74123

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6235-1	SS 01	Total/NA	Solid	8021B	74049
890-6235-2	SS 02	Total/NA	Solid	8021B	74049
890-6235-3	SS 03	Total/NA	Solid	8021B	74049
890-6235-4	SS 04	Total/NA	Solid	8021B	74049
890-6235-5	SS 05	Total/NA	Solid	8021B	74049
890-6235-6	SS 06	Total/NA	Solid	8021B	74049
890-6235-7	SS 07	Total/NA	Solid	8021B	74049
MB 880-74021/5-A	Method Blank	Total/NA	Solid	8021B	74021
MB 880-74049/5-A	Method Blank	Total/NA	Solid	8021B	74049
LCS 880-74049/1-A	Lab Control Sample	Total/NA	Solid	8021B	74049
LCSD 880-74049/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	74049
890-6233-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	74049
890-6233-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	74049

Analysis Batch: 74231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6235-3	SS 03	Total/NA	Solid	8021B	74062
880-24332-A-3 MB	Method Blank	Total/NA	Solid	8021B	
MB 880-74062/5-A	Method Blank	Total/NA	Solid	8021B	74062
LCS 880-74062/1-A	Lab Control Sample	Total/NA	Solid	8021B	74062
LCSD 880-74062/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	74062
890-6254-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	74062
890-6254-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	74062

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QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWR BATTERY

Job ID: 890-6235-1
SDG: 03C1558316

GC VOA

Analysis Batch: 74282

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6235-1	SS 01	Total/NA	Solid	Total BTEX	
890-6235-2	SS 02	Total/NA	Solid	Total BTEX	
890-6235-3	SS 03	Total/NA	Solid	Total BTEX	
890-6235-4	SS 04	Total/NA	Solid	Total BTEX	
890-6235-5	SS 05	Total/NA	Solid	Total BTEX	
890-6235-6	SS 06	Total/NA	Solid	Total BTEX	
890-6235-7	SS 07	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 73922

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6235-1	SS 01	Total/NA	Solid	8015NM Prep	
890-6235-2	SS 02	Total/NA	Solid	8015NM Prep	
890-6235-3	SS 03	Total/NA	Solid	8015NM Prep	
890-6235-4	SS 04	Total/NA	Solid	8015NM Prep	
890-6235-5	SS 05	Total/NA	Solid	8015NM Prep	
890-6235-6	SS 06	Total/NA	Solid	8015NM Prep	
890-6235-7	SS 07	Total/NA	Solid	8015NM Prep	
MB 880-73922/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-73922/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-73922/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 74120

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6235-1	SS 01	Total/NA	Solid	8015B NM	73922
890-6235-2	SS 02	Total/NA	Solid	8015B NM	73922
890-6235-3	SS 03	Total/NA	Solid	8015B NM	73922
890-6235-4	SS 04	Total/NA	Solid	8015B NM	73922
890-6235-5	SS 05	Total/NA	Solid	8015B NM	73922
890-6235-6	SS 06	Total/NA	Solid	8015B NM	73922
890-6235-7	SS 07	Total/NA	Solid	8015B NM	73922
MB 880-73922/1-A	Method Blank	Total/NA	Solid	8015B NM	73922
LCS 880-73922/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	73922
LCSD 880-73922/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	73922

Analysis Batch: 74271

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6235-1	SS 01	Total/NA	Solid	8015 NM	
890-6235-2	SS 02	Total/NA	Solid	8015 NM	
890-6235-3	SS 03	Total/NA	Solid	8015 NM	
890-6235-4	SS 04	Total/NA	Solid	8015 NM	
890-6235-5	SS 05	Total/NA	Solid	8015 NM	
890-6235-6	SS 06	Total/NA	Solid	8015 NM	
890-6235-7	SS 07	Total/NA	Solid	8015 NM	

Analysis Batch: 74322

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6235-1	SS 01	Total/NA	Solid	8015B NM	74367
890-6235-2	SS 02	Total/NA	Solid	8015B NM	74367
MB 880-74367/1-A	Method Blank	Total/NA	Solid	8015B NM	74367

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QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWR BATTERY

Job ID: 890-6235-1
SDG: 03C1558316

GC Semi VOA (Continued)

Analysis Batch: 74322 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-74367/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	74367
LCSD 880-74367/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	74367
880-40091-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	74367
880-40091-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	74367

Prep Batch: 74367

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6235-1	SS 01	Total/NA	Solid	8015NM Prep	
890-6235-2	SS 02	Total/NA	Solid	8015NM Prep	
MB 880-74367/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-74367/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-74367/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-40091-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-40091-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Prep Batch: 74527

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6235-3	SS 03	Total/NA	Solid	8015NM Prep	
MB 880-74527/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-74527/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-74527/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-6285-A-39-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-6285-A-39-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 74540

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6235-3	SS 03	Total/NA	Solid	8015B NM	74527
MB 880-74527/1-A	Method Blank	Total/NA	Solid	8015B NM	74527
LCS 880-74527/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	74527
LCSD 880-74527/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	74527
890-6285-A-39-D MS	Matrix Spike	Total/NA	Solid	8015B NM	74527
890-6285-A-39-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	74527

HPLC/IC

Leach Batch: 73849

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6235-1	SS 01	Soluble	Solid	DI Leach	
890-6235-2	SS 02	Soluble	Solid	DI Leach	
890-6235-3	SS 03	Soluble	Solid	DI Leach	
890-6235-4	SS 04	Soluble	Solid	DI Leach	
890-6235-5	SS 05	Soluble	Solid	DI Leach	
890-6235-6	SS 06	Soluble	Solid	DI Leach	
890-6235-7	SS 07	Soluble	Solid	DI Leach	
MB 880-73849/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-73849/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-73849/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-39775-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-39775-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
890-6233-A-3-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-6233-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Eurofins Carlsbad

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWR BATTERY

Job ID: 890-6235-1
SDG: 03C1558316

HPLC/IC

Analysis Batch: 73933

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6235-1	SS 01	Soluble	Solid	300.0	73849
890-6235-2	SS 02	Soluble	Solid	300.0	73849
890-6235-3	SS 03	Soluble	Solid	300.0	73849
890-6235-4	SS 04	Soluble	Solid	300.0	73849
890-6235-5	SS 05	Soluble	Solid	300.0	73849
890-6235-6	SS 06	Soluble	Solid	300.0	73849
890-6235-7	SS 07	Soluble	Solid	300.0	73849
MB 880-73849/1-A	Method Blank	Soluble	Solid	300.0	73849
LCS 880-73849/2-A	Lab Control Sample	Soluble	Solid	300.0	73849
LCSD 880-73849/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	73849
880-39775-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	73849
880-39775-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	73849
890-6233-A-3-B MS	Matrix Spike	Soluble	Solid	300.0	73849
890-6233-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	73849

Lab Chronicle

Client: Ensolum
Project/Site: PLU 18 TWR BATTERY

Job ID: 890-6235-1
SDG: 03C1558316

Client Sample ID: SS 01
Date Collected: 02/21/24 08:35
Date Received: 02/21/24 11:50

Lab Sample ID: 890-6235-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	74049	02/26/24 13:52	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	74123	02/28/24 03:44	SM	EET MID
Total/NA	Analysis	Total BTEX		1			74282	02/28/24 03:44	SM	EET MID
Total/NA	Analysis	8015 NM		1			74271	03/01/24 00:56	SM	EET MID
Total/NA	Prep	8015NM Prep			9.99 g	10 mL	73922	02/23/24 11:52	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	74120	02/28/24 02:58	SM	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	74367	02/29/24 12:42	TKC	EET MID
Total/NA	Analysis	8015B NM		5	1 uL	1 uL	74322	03/01/24 00:56	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	73849	02/22/24 12:30	SMC	EET MID
Soluble	Analysis	300.0		50			73933	02/25/24 18:12	CH	EET MID

Client Sample ID: SS 02
Date Collected: 02/21/24 08:40
Date Received: 02/21/24 11:50

Lab Sample ID: 890-6235-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	74049	02/26/24 13:52	MNR	EET MID
Total/NA	Analysis	8021B		25	5 mL	5 mL	74123	02/28/24 05:06	SM	EET MID
Total/NA	Analysis	Total BTEX		1			74282	02/28/24 05:06	SM	EET MID
Total/NA	Analysis	8015 NM		1			74271	03/01/24 01:38	SM	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	73922	02/23/24 11:52	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	74120	02/28/24 03:19	SM	EET MID
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	74367	02/29/24 12:42	TKC	EET MID
Total/NA	Analysis	8015B NM		5	1 uL	1 uL	74322	03/01/24 01:38	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	73849	02/22/24 12:30	SMC	EET MID
Soluble	Analysis	300.0		50			73933	02/25/24 18:16	CH	EET MID

Client Sample ID: SS 03
Date Collected: 02/21/24 08:45
Date Received: 02/21/24 11:50

Lab Sample ID: 890-6235-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	74049	02/26/24 13:52	MNR	EET MID
Total/NA	Analysis	8021B		25	5 mL	5 mL	74123	02/28/24 05:26	SM	EET MID
Total/NA	Prep	5035			5.03 g	5 mL	74062	02/26/24 14:15	MNR	EET MID
Total/NA	Analysis	8021B		100	5 mL	5 mL	74231	02/29/24 11:37	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			74282	02/29/24 11:37	SM	EET MID
Total/NA	Analysis	8015 NM		1			74271	03/04/24 00:08	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	74527	03/03/24 00:24	TKC	EET MID
Total/NA	Analysis	8015B NM		20	1 uL	1 uL	74540	03/04/24 00:08	SM	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	73922	02/23/24 11:52	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	74120	02/28/24 03:41	SM	EET MID
Soluble	Leach	DI Leach			5.00 g	50 mL	73849	02/22/24 12:30	SMC	EET MID
Soluble	Analysis	300.0		1			73933	02/25/24 18:21	CH	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: PLU 18 TWR BATTERY

Job ID: 890-6235-1
SDG: 03C1558316

Client Sample ID: SS 04
Date Collected: 02/21/24 08:50
Date Received: 02/21/24 11:50

Lab Sample ID: 890-6235-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	74049	02/26/24 13:52	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	74123	02/28/24 04:04	SM	EET MID
Total/NA	Analysis	Total BTEX		1			74282	02/28/24 04:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			74271	02/28/24 04:03	SM	EET MID
Total/NA	Prep	8015NM Prep			9.93 g	10 mL	73922	02/23/24 11:52	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	74120	02/28/24 04:03	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	73849	02/22/24 12:30	SMC	EET MID
Soluble	Analysis	300.0		1			73933	02/25/24 18:35	CH	EET MID

Client Sample ID: SS 05
Date Collected: 02/21/24 08:55
Date Received: 02/21/24 11:50

Lab Sample ID: 890-6235-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	74049	02/26/24 13:52	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	74123	02/28/24 04:25	SM	EET MID
Total/NA	Analysis	Total BTEX		1			74282	02/28/24 04:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			74271	02/28/24 04:24	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	73922	02/23/24 11:52	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	74120	02/28/24 04:24	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	73849	02/22/24 12:30	SMC	EET MID
Soluble	Analysis	300.0		1			73933	02/25/24 18:40	CH	EET MID

Client Sample ID: SS 06
Date Collected: 02/21/24 09:10
Date Received: 02/21/24 11:50

Lab Sample ID: 890-6235-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	74049	02/26/24 13:52	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	74123	02/28/24 04:45	SM	EET MID
Total/NA	Analysis	Total BTEX		1			74282	02/28/24 04:45	SM	EET MID
Total/NA	Analysis	8015 NM		1			74271	02/28/24 04:46	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	73922	02/23/24 11:52	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	74120	02/28/24 04:46	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	73849	02/22/24 12:30	SMC	EET MID
Soluble	Analysis	300.0		1			73933	02/25/24 18:44	CH	EET MID

Client Sample ID: SS 07
Date Collected: 02/21/24 09:05
Date Received: 02/21/24 11:50

Lab Sample ID: 890-6235-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	74049	02/26/24 13:52	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	74123	02/28/24 07:16	SM	EET MID
Total/NA	Analysis	Total BTEX		1			74282	02/28/24 07:16	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: PLU 18 TWR BATTERY

Job ID: 890-6235-1
SDG: 03C1558316

Client Sample ID: SS 07

Date Collected: 02/21/24 09:05

Date Received: 02/21/24 11:50

Lab Sample ID: 890-6235-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			74271	02/28/24 05:07	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	73922	02/23/24 11:52	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	74120	02/28/24 05:07	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	73849	02/22/24 12:30	SMC	EET MID
Soluble	Analysis	300.0		1			73933	02/25/24 18:49	CH	EET MID

Laboratory References:
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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Accreditation/Certification Summary

Client: Ensolum
Project/Site: PLU 18 TWR BATTERY

Job ID: 890-6235-1
SDG: 03C1558316

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum
Project/Site: PLU 18 TWR BATTERY

Job ID: 890-6235-1
SDG: 03C1558316

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

- ASTM = ASTM International
- EPA = US Environmental Protection Agency
- SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
- TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

- EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Ensolum
Project/Site: PLU 18 TWR BATTERY

Job ID: 890-6235-1
SDG: 03C1558316

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-6235-1	SS 01	Solid	02/21/24 08:35	02/21/24 11:50	0.5'
890-6235-2	SS 02	Solid	02/21/24 08:40	02/21/24 11:50	0.5'
890-6235-3	SS 03	Solid	02/21/24 08:45	02/21/24 11:50	0.5'
890-6235-4	SS 04	Solid	02/21/24 08:50	02/21/24 11:50	0.5'
890-6235-5	SS 05	Solid	02/21/24 08:55	02/21/24 11:50	0.5'
890-6235-6	SS 06	Solid	02/21/24 09:10	02/21/24 11:50	0.5'
890-6235-7	SS 07	Solid	02/21/24 09:05	02/21/24 11:50	0.5'

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Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Environment Testing

Xenco



Work Order No:

www.xenco.com Page of

Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy
Address:	3122 Nat'l Parks Hwy	Address:	3104 E Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	337-257-8307	Email:	tmorrissey@ensolum.com

Project Name:	PLU 18 TWR BATTERY	Turn Around	☒ Routine ☐ Rush
Project Number:	03C1558316	Due Date:	
Project Location:	32-00628-103.82416	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Meredith Roberts		
PO #:			

SAMPLE RECEIPT Samples Received Intact: ☒ Yes ☒ No Cooler Custody Seals: Yes ☒ No ☒ N/A Sample Custody Seals: Yes ☒ No ☒ N/A Total Containers: 0.24	Parameters Wet Ice: ☒ Yes ☒ No Thermometer ID: 11000 Correction Factor: -0.2 Temperature Reading: 0.6 Corrected Temperature: 0.4
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Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Pres. Code	ANALYSIS REQUEST	Preservative Codes
SS01	S	4/21/24	0835	0.5'	G	1			None: NO Cool: Cool HCL: HC H ₂ SO ₄ : H ₂ H ₃ PO ₄ : HP NaHSO ₄ : NABIS Na ₂ S ₂ O ₃ : NaSO ₃ Zn Acetate+NaOH: Zn NaOH+Ascorbic Acid: SAPC
SS02			0840						
SS03			0845						
SS04			0850						
SS05			0855						
SS06			0910						
SS07			0905						

Total 200.7/6010	200.8/6020:	8RCRA 13PPM Texas 11	Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO ₂ Na Sr Ti Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed	TCLP / SPLP 6010 : 8RCRA	Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U	Hg: 1631 / 245.1 / 7470 / 7471

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
1. [Signature]	[Signature]	2. [Signature]	[Signature]
3. [Signature]		4. [Signature]	
5. [Signature]		6. [Signature]	

Revised Date 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-6235-1

SDG Number: 03C1558316

Login Number: 6235

List Source: Eurofins Carlsbad

List Number: 1

Creator: Bruns, Shannon

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-6235-1
SDG Number: 03C1558316

Login Number: 6235
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 02/22/24 11:22 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	



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

March 22, 2024

TACOMA MORRISSEY

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: PLU 18 TWR BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 03/18/24 14:38.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received: 03/18/2024
Reported: 03/22/2024
Project Name: PLU 18 TWR BATTERY
Project Number: 03C1558316
Project Location: XTO 32.20628, -103.82416

Sampling Date: 03/18/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Dionica Hinojos

Sample ID: PH 01 0.5' (H241389-01)

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	03/20/2024	ND	2.12	106	2.00	2.54	
Toluene*	<0.050	0.050	03/20/2024	ND	2.15	107	2.00	7.48	
Ethylbenzene*	<0.050	0.050	03/20/2024	ND	2.19	109	2.00	11.2	
Total Xylenes*	<0.150	0.150	03/20/2024	ND	6.50	108	6.00	11.8	
Total BTEX	<0.300	0.300	03/20/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	03/20/2024	ND	416	104	400	7.41	

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	03/19/2024	ND	192	96.0	200	2.82	
DRO >C10-C28*	<10.0	10.0	03/19/2024	ND	200	99.8	200	6.32	
EXT DRO >C28-C36	<10.0	10.0	03/19/2024	ND					

Surrogate: 1-Chlorooctane 74.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 69.2 % 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
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received: 03/18/2024
Reported: 03/22/2024
Project Name: PLU 18 TWR BATTERY
Project Number: 03C1558316
Project Location: XTO 32.20628, -103.82416

Sampling Date: 03/18/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Dionica Hinojos

Sample ID: PH 01A 3' (H241389-02)

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	03/20/2024	ND	2.12	106	2.00	2.54		
Toluene*	<0.050	0.050	03/20/2024	ND	2.15	107	2.00	7.48		
Ethylbenzene*	<0.050	0.050	03/20/2024	ND	2.19	109	2.00	11.2		
Total Xylenes*	<0.150	0.150	03/20/2024	ND	6.50	108	6.00	11.8		
Total BTEX	<0.300	0.300	03/20/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	03/20/2024	ND	416	104	400	7.41		

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	03/19/2024	ND	192	96.0	200	2.82	
DRO >C10-C28*	<10.0	10.0	03/19/2024	ND	200	99.8	200	6.32	
EXT DRO >C28-C36	<10.0	10.0	03/19/2024	ND					

Surrogate: 1-Chlorooctane 91.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received: 03/18/2024
Reported: 03/22/2024
Project Name: PLU 18 TWR BATTERY
Project Number: 03C1558316
Project Location: XTO 32.20628, -103.82416

Sampling Date: 03/18/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Dionica Hinojos

Sample ID: PH 02 0.5' (H241389-03)

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	03/19/2024	ND	2.18	109	2.00	1.81		
Toluene*	<0.050	0.050	03/19/2024	ND	2.11	106	2.00	1.60		
Ethylbenzene*	<0.050	0.050	03/19/2024	ND	2.15	107	2.00	0.908		
Total Xylenes*	<0.150	0.150	03/19/2024	ND	6.40	107	6.00	0.807		
Total BTEx	<0.300	0.300	03/19/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 125 % 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	64.0	16.0	03/20/2024	ND	416	104	400	7.41		

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	03/19/2024	ND	192	96.0	200	2.82	
DRO >C10-C28*	<10.0	10.0	03/19/2024	ND	200	99.8	200	6.32	
EXT DRO >C28-C36	<10.0	10.0	03/19/2024	ND					

Surrogate: 1-Chlorooctane 94.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 85.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received: 03/18/2024
Reported: 03/22/2024
Project Name: PLU 18 TWR BATTERY
Project Number: 03C1558316
Project Location: XTO 32.20628, -103.82416

Sampling Date: 03/18/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Dionica Hinojos

Sample ID: PH 02A 3' (H241389-04)

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	03/19/2024	ND	2.18	109	2.00	1.81		
Toluene*	<0.050	0.050	03/19/2024	ND	2.11	106	2.00	1.60		
Ethylbenzene*	<0.050	0.050	03/19/2024	ND	2.15	107	2.00	0.908		
Total Xylenes*	<0.150	0.150	03/19/2024	ND	6.40	107	6.00	0.807		
Total BTEX	<0.300	0.300	03/19/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 115 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	03/20/2024	ND	416	104	400	7.41		

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	03/19/2024	ND	192	96.0	200	2.82	
DRO >C10-C28*	<10.0	10.0	03/19/2024	ND	200	99.8	200	6.32	
EXT DRO >C28-C36	<10.0	10.0	03/19/2024	ND					

Surrogate: 1-Chlorooctane 87.9 % 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
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received: 03/18/2024
Reported: 03/22/2024
Project Name: PLU 18 TWR BATTERY
Project Number: 03C1558316
Project Location: XTO 32.20628, -103.82416

Sampling Date: 03/18/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Dionica Hinojos

Sample ID: PH 03 0.5' (H241389-05)

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	03/19/2024	ND	2.18	109	2.00	1.81	
Toluene*	<0.050	0.050	03/19/2024	ND	2.11	106	2.00	1.60	
Ethylbenzene*	<0.050	0.050	03/19/2024	ND	2.15	107	2.00	0.908	
Total Xylenes*	<0.150	0.150	03/19/2024	ND	6.40	107	6.00	0.807	
Total BTEx	<0.300	0.300	03/19/2024	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	03/20/2024	ND	416	104	400	7.41	

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	03/19/2024	ND	192	96.0	200	2.82	
DRO >C10-C28*	<10.0	10.0	03/19/2024	ND	200	99.8	200	6.32	
EXT DRO >C28-C36	<10.0	10.0	03/19/2024	ND					

Surrogate: 1-Chlorooctane 90.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 81.9 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received: 03/18/2024
Reported: 03/22/2024
Project Name: PLU 18 TWR BATTERY
Project Number: 03C1558316
Project Location: XTO 32.20628, -103.82416

Sampling Date: 03/18/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Dionica Hinojos

Sample ID: PH 03A 3' (H241389-06)

BTX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/19/2024	ND	2.18	109	2.00	1.81	
Toluene*	<0.050	0.050	03/19/2024	ND	2.11	106	2.00	1.60	
Ethylbenzene*	<0.050	0.050	03/19/2024	ND	2.15	107	2.00	0.908	
Total Xylenes*	<0.150	0.150	03/19/2024	ND	6.40	107	6.00	0.807	
Total BTX	<0.300	0.300	03/19/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 121 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	03/20/2024	ND	416	104	400	7.41		

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	03/19/2024	ND	192	96.0	200	2.82	
DRO >C10-C28*	<10.0	10.0	03/19/2024	ND	200	99.8	200	6.32	
EXT DRO >C28-C36	<10.0	10.0	03/19/2024	ND					

Surrogate: 1-Chlorooctane 85.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 77.0 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received: 03/18/2024
Reported: 03/22/2024
Project Name: PLU 18 TWR BATTERY
Project Number: 03C1558316
Project Location: XTO 32.20628, -103.82416

Sampling Date: 03/18/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Dionica Hinojos

Sample ID: PH 04 0.5' (H241389-07)

BTX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/19/2024	ND	2.18	109	2.00	1.81	
Toluene*	<0.050	0.050	03/19/2024	ND	2.11	106	2.00	1.60	
Ethylbenzene*	<0.050	0.050	03/19/2024	ND	2.15	107	2.00	0.908	
Total Xylenes*	<0.150	0.150	03/19/2024	ND	6.40	107	6.00	0.807	
Total BTX	<0.300	0.300	03/19/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 125 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	03/20/2024	ND	416	104	400	7.41		

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	03/19/2024	ND	192	96.0	200	2.82	
DRO >C10-C28*	<10.0	10.0	03/19/2024	ND	200	99.8	200	6.32	
EXT DRO >C28-C36	<10.0	10.0	03/19/2024	ND					

Surrogate: 1-Chlorooctane 93.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.0 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received: 03/18/2024
Reported: 03/22/2024
Project Name: PLU 18 TWR BATTERY
Project Number: 03C1558316
Project Location: XTO 32.20628, -103.82416

Sampling Date: 03/18/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Dionica Hinojos

Sample ID: PH 04A 3' (H241389-08)

BTX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/19/2024	ND	2.18	109	2.00	1.81	
Toluene*	<0.050	0.050	03/19/2024	ND	2.11	106	2.00	1.60	
Ethylbenzene*	<0.050	0.050	03/19/2024	ND	2.15	107	2.00	0.908	
Total Xylenes*	<0.150	0.150	03/19/2024	ND	6.40	107	6.00	0.807	
Total BTX	<0.300	0.300	03/19/2024	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	03/20/2024	ND	416	104	400	7.41		

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	03/19/2024	ND	206	103	200	0.762	
DRO >C10-C28*	<10.0	10.0	03/19/2024	ND	206	103	200	7.46	
EXT DRO >C28-C36	<10.0	10.0	03/19/2024	ND					

Surrogate: 1-Chlorooctane 99.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 89.5 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received: 03/18/2024
Reported: 03/22/2024
Project Name: PLU 18 TWR BATTERY
Project Number: 03C1558316
Project Location: XTO 32.20628, -103.82416

Sampling Date: 03/18/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Dionica Hinojos

Sample ID: PH 05 0.5' (H241389-09)

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	03/19/2024	ND	2.18	109	2.00	1.81		
Toluene*	<0.050	0.050	03/19/2024	ND	2.11	106	2.00	1.60		
Ethylbenzene*	<0.050	0.050	03/19/2024	ND	2.15	107	2.00	0.908		
Total Xylenes*	<0.150	0.150	03/19/2024	ND	6.40	107	6.00	0.807		
Total BTEx	<0.300	0.300	03/19/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 119 % 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	80.0	16.0	03/20/2024	ND	416	104	400	7.41		

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	03/19/2024	ND	206	103	200	0.762	
DRO >C10-C28*	<10.0	10.0	03/19/2024	ND	206	103	200	7.46	
EXT DRO >C28-C36	<10.0	10.0	03/19/2024	ND					

Surrogate: 1-Chlorooctane 73.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 65.6 % 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
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received: 03/18/2024
Reported: 03/22/2024
Project Name: PLU 18 TWR BATTERY
Project Number: 03C1558316
Project Location: XTO 32.20628, -103.82416

Sampling Date: 03/18/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Dionica Hinojos

Sample ID: PH 05A 3' (H241389-10)

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	03/19/2024	ND	2.18	109	2.00	1.81		
Toluene*	<0.050	0.050	03/19/2024	ND	2.11	106	2.00	1.60		
Ethylbenzene*	<0.050	0.050	03/19/2024	ND	2.15	107	2.00	0.908		
Total Xylenes*	<0.150	0.150	03/19/2024	ND	6.40	107	6.00	0.807		
Total BTEx	<0.300	0.300	03/19/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	03/20/2024	ND	416	104	400	7.41		

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	03/19/2024	ND	206	103	200	0.762	
DRO >C10-C28*	<10.0	10.0	03/19/2024	ND	206	103	200	7.46	
EXT DRO >C28-C36	<10.0	10.0	03/19/2024	ND					

Surrogate: 1-Chlorooctane 92.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.7 % 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



1 of 1

Page 13 of 13



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

March 22, 2024

TACOMA MORRISSEY

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: PLU 18 TWR BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 03/18/24 14:38.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received: 03/18/2024
Reported: 03/22/2024
Project Name: PLU 18 TWR BATTERY
Project Number: 03C1558316
Project Location: XTO 32.20628, -103.82416

Sampling Date: 03/18/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Dionica Hinojos

Sample ID: FS 01 2' (H241392-01)

BTX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/20/2024	ND	2.18	109	2.00	1.81	
Toluene*	<0.050	0.050	03/20/2024	ND	2.11	106	2.00	1.60	
Ethylbenzene*	<0.050	0.050	03/20/2024	ND	2.15	107	2.00	0.908	
Total Xylenes*	<0.150	0.150	03/20/2024	ND	6.40	107	6.00	0.807	
Total BTX	<0.300	0.300	03/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 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	512	16.0	03/20/2024	ND	416	104	400	7.41	

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	03/19/2024	ND	206	103	200	0.762	
DRO >C10-C28*	<10.0	10.0	03/19/2024	ND	206	103	200	7.46	
EXT DRO >C28-C36	<10.0	10.0	03/19/2024	ND					

Surrogate: 1-Chlorooctane 92.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.9 % 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
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received: 03/18/2024
Reported: 03/22/2024
Project Name: PLU 18 TWR BATTERY
Project Number: 03C1558316
Project Location: XTO 32.20628, -103.82416

Sampling Date: 03/18/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Dionica Hinojos

Sample ID: FS 02 2' (H241392-02)

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	03/20/2024	ND	2.18	109	2.00	1.81	
Toluene*	<0.050	0.050	03/20/2024	ND	2.11	106	2.00	1.60	
Ethylbenzene*	<0.050	0.050	03/20/2024	ND	2.15	107	2.00	0.908	
Total Xylenes*	<0.150	0.150	03/20/2024	ND	6.40	107	6.00	0.807	
Total BTEX	<0.300	0.300	03/20/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	03/20/2024	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	03/19/2024	ND	206	103	200	0.762	
DRO >C10-C28*	44.6	10.0	03/19/2024	ND	206	103	200	7.46	
EXT DRO >C28-C36	<10.0	10.0	03/19/2024	ND					

Surrogate: 1-Chlorooctane 95.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 87.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received: 03/18/2024
Reported: 03/22/2024
Project Name: PLU 18 TWR BATTERY
Project Number: 03C1558316
Project Location: XTO 32.20628, -103.82416

Sampling Date: 03/18/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Dionica Hinojos

Sample ID: FS 03 2' (H241392-03)

BTX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/20/2024	ND	2.18	109	2.00	1.81	
Toluene*	<0.050	0.050	03/20/2024	ND	2.11	106	2.00	1.60	
Ethylbenzene*	<0.050	0.050	03/20/2024	ND	2.15	107	2.00	0.908	
Total Xylenes*	<0.150	0.150	03/20/2024	ND	6.40	107	6.00	0.807	
Total BTX	<0.300	0.300	03/20/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	03/20/2024	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	03/19/2024	ND	206	103	200	0.762	
DRO >C10-C28*	<10.0	10.0	03/19/2024	ND	206	103	200	7.46	
EXT DRO >C28-C36	<10.0	10.0	03/19/2024	ND					

Surrogate: 1-Chlorooctane 99.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 90.3 % 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
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received: 03/18/2024
Reported: 03/22/2024
Project Name: PLU 18 TWR BATTERY
Project Number: 03C1558316
Project Location: XTO 32.20628, -103.82416

Sampling Date: 03/18/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Dionica Hinojos

Sample ID: SW 01 0-2' (H241392-04)

BTX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/20/2024	ND	2.18	109	2.00	1.81	
Toluene*	<0.050	0.050	03/20/2024	ND	2.11	106	2.00	1.60	
Ethylbenzene*	<0.050	0.050	03/20/2024	ND	2.15	107	2.00	0.908	
Total Xylenes*	<0.150	0.150	03/20/2024	ND	6.40	107	6.00	0.807	
Total BTX	<0.300	0.300	03/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 124 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	03/20/2024	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	03/19/2024	ND	206	103	200	0.762	
DRO >C10-C28*	<10.0	10.0	03/19/2024	ND	206	103	200	7.46	
EXT DRO >C28-C36	<10.0	10.0	03/19/2024	ND					

Surrogate: 1-Chlorooctane 89.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 81.8 % 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
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received: 03/18/2024
Reported: 03/22/2024
Project Name: PLU 18 TWR BATTERY
Project Number: 03C1558316
Project Location: XTO 32.20628, -103.82416

Sampling Date: 03/18/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Dionica Hinojos

Sample ID: SW 02 0-2' (H241392-05)

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/20/2024	ND	2.18	109	2.00	1.81		
Toluene*	<0.050	0.050	03/20/2024	ND	2.11	106	2.00	1.60		
Ethylbenzene*	<0.050	0.050	03/20/2024	ND	2.15	107	2.00	0.908		
Total Xylenes*	<0.150	0.150	03/20/2024	ND	6.40	107	6.00	0.807		
Total BTX	<0.300	0.300	03/20/2024	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	03/20/2024	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	03/19/2024	ND	206	103	200	0.762	
DRO >C10-C28*	<10.0	10.0	03/19/2024	ND	206	103	200	7.46	
EXT DRO >C28-C36	<10.0	10.0	03/19/2024	ND					

Surrogate: 1-Chlorooctane 94.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.6 % 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

Notes and Definitions

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

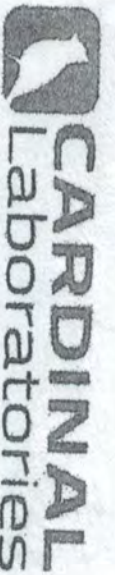
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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC

Project Manager: TACOMA MORRISSEY

Address: 3122 National Parks Hwy

City: CARLSBAD State: NM Zip: 88220

Phone #: 337-257-8307 Fax #:

Project #: 03C1558316 Project Owner:

Project Name: PLY 18 TWR BATTERY

Project Location: 32.20028, -103.82416

Sampler Name: Mariana O'Dell

FOR LAB USE ONLY

Lab I.D. #241398

Sample I.D.

Depth (feet)

(G)RAB OR (C)OMP.

CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE COOL

OTHER :

DATE

TIME

Chloride

TPH

BTEX

BILL TO

P.O. #:

Company: XTO Energy

Attn: Amy Ruth

Address: 3104 E. Greer St

City: CARLSBAD

State: NM Zip: 88220

Phone #:

Fax #:

PRESERV

SAMPLING

DATE

TIME

Chloride

TPH

BTEX

Chloride

TPH

BTEX

Chloride

TPH

BTEX

Chloride

TPH

BTEX

Chloride

TPH

BTEX

ANALYSIS REQUEST

1 of 1

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Relinquished By: [Signature] Date: 3/18/24 Time: 13:05

Relinquished By: [Signature] Date: 3/18/24 Time: 14:38

Delivered By: (Circle One) Sampler - UPS - Bus - Other: Corrected Temp. °C #140

Sample Condition Cool Intact Yes No

CHECKED BY: [Signature] (Initials)

Turnaround Time: 5 days Standard Rush

Bacteria (only) Sample Condition Cool Intact Yes No

Corrected Temp. °C

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

All Results are emailed. Please provide Email address:

t.morrissey@ensolum.com, m.delleville@ensolum.com

REMARKS: Incident #: NAPP2400849152

Center: PENDING

Correction Factor: 0.95

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

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

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

QUESTIONS

Action 355495

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:
	5380
	Action Number: 355495
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2400849152
Incident Name	NAPP2400849152 PLU 18 TWR 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	PLU 18 TWR Battery
Date Release Discovered	12/23/2023
Surface Owner	Federal

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	Cause: Corrosion Valve Crude Oil Released: 7 BBL Recovered: 6 BBL Lost: 1 BBL.
Produced Water Released (bbls) Details	Cause: Corrosion Valve Produced Water Released: 16 BBL Recovered: 14 BBL Lost: 2 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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Action 355495

QUESTIONS (continued)

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QUESTIONS

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

Initial Response

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

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

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

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

I hereby agree and sign off to the above statement	Name: Garrett Green Title: SHE Coordinator Email: garrett.green@exxonmobil.com Date: 01/08/2024
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Action 355495

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:	5380
	Action Number:	355495
	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 ½ and 1 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Greater than 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between ½ and 1 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Between ½ and 1 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan

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

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

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

Chloride	(EPA 300.0 or SM4500 Cl B)	414
TPH (GRO+DRO+MRO)	(EPA SW-846 Method 8015M)	771
GRO+DRO	(EPA SW-846 Method 8015M)	717
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	02/21/2024
On what date will (or did) the final sampling or liner inspection occur	03/18/2024
On what date will (or was) the remediation complete(d)	03/18/2024
What is the estimated surface area (in square feet) that will be reclaimed	8750
What is the estimated volume (in cubic yards) that will be reclaimed	650
What is the estimated surface area (in square feet) that will be remediated	340
What is the estimated volume (in cubic yards) that will be remediated	30

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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Action 355495

QUESTIONS (continued)

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QUESTIONS

Remediation Plan (continued)	
<i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
<i>(Select all answers below that apply.)</i>	
(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.
<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: Alan Romero Title: Regulatory Analyst Email: alan.romero1@exxonmobil.com Date: 06/18/2024
<i>The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.</i>	

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QUESTIONS, Page 5

Action 355495

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:	5380
	Action Number:	355495
	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	XTO is requesting deferral of final remediation due to the presence of active production equipment and process piping preventing full excavation of impacted soil. The estimated area of remaining impacted soil measures an area of 510 square feet, and a total of approximately 40 cubic yards of impacted soil remains in place, assuming a depth of 2 feet bgs based on confirmation soil sample laboratory analytical results. 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 100 feet, and the entirety of the release remained on pad.
What is the remaining surface area (in square feet) that will still need to be remediated if a deferral is granted	510
What is the remaining volume (in cubic yards) that will still need to be remediated if a deferral is granted	40
<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 (F#) on which this deferral should be granted	PLU 18 TWIN WELLS RANCH WEST [fAPP2126740996]
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: Alan Romero Title: Regulatory Analyst Email: alan.romero1@exxonmobil.com Date: 06/18/2024

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Action 355495

QUESTIONS (continued)

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

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	323168
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	03/18/2024
What was the (estimated) number of samples that were to be gathered	14
What was the sampling surface area in square feet	2800

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 355495

CONDITIONS

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

CONDITIONS

Created By	Condition	Condition Date
rhamlet	XTO's deferral requests final remediation for (Incident Number NAPP2400849152) until final reclamation of the well pad or major construction, whichever comes first. Ensolum and XTO do not believe deferment will result in imminent risk to human health, the environment, or groundwater. The impacted soil is the area in blue on figure 4 that is limited to the area beneath active production equipment and surface piping where remediation would require major facility deconstruction. At this time, OCD approves this request. The Deferral Request and C-141 will be accepted for record and marked accordingly. The release will remain open in OCD database files and reflect an open environmental issue.	6/26/2024