



April 19, 2024

New Mexico Oil Conservation Division

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

**Re: Closure Request
Big Eddy Unit DI 29 Battery
Incident Number NAPP2331049960
Lea County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum) on behalf of XTO Energy, Inc. (XTO), has prepared this *Closure Request* to document site assessment, excavation, and soil sampling activities at the Big Eddy Unit DI 29 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 condensate. Based on field observations, field screening activities, and soil sample laboratory analytical results, XTO is submitting this *Closure Request*, describing Site assessment, delineation, and excavation activities that have occurred and requesting no further remediation for Incident Number NAPP2331049960. Reclamation and revegetation activities will be completed during pad abandonment.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit D, Section 21, Township 20 South, Range 32 East, in Lea County, New Mexico (32.56470°, -103.77843°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On October 23, 2023, a diaphragm pump failed causing condensate fluids to release out of the low-pressure flare. Approximately 0.06 barrels (bbls) of condensate fluids released out of the flare and ignited on the surface of the well pad. The fire extinguished by itself, and no injuries were reported. No released fluids were recovered. XTO immediately reported the release to the New Mexico Oil Conservation Division (NMOCD) via email and submitted a Release Notification Form C-141 (Form C-141) on November 6, 2023. The release was assigned Incident Number NAPP2331049960.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

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

Depth to groundwater at the Site is estimated to be less than 50 feet below ground surface (bgs) based on a soil boring drilled for determination of regional groundwater depth. On October 26, 2021, a soil boring permitted by New Mexico Office of the State Engineer (OSE) as CP-1891 was advanced

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approximately 0.12 miles north of the Site. The boring was drilled to a total depth of 55 feet bgs. A field geologist logged and described soils continuously. Groundwater was encountered at a depth of 33 feet bgs. Following drilling activities, the borehole was properly abandoned utilizing Type I/II neat cement from 55 feet bgs to surface. 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 525 feet northwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Potential Site receptors are identified on Figure 1.

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

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

SITE ASSESSMENT ACTIVITIES AND ANALYTICAL RESULTS

On January 10, 2024, Site assessment activities were conducted by Ensolum to evaluate the release extent based on information provided on the Form-C141 and visual observations. Seven delineation soil samples (SS01 through SS07) were collected from a depth of 0.5 feet bgs. Delineation soil samples SS01 through SS03 were collected within the release extent and SS04 through SS07 were collected outside of the release extent to define the edge of the release. The delineation soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The release extent and delineation soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was collected and a photographic log is included in Appendix B.

The delineation soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to 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-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0. Soil samples delivered to the laboratory the same day they were collected may not have equilibrated to the 6 degrees Celsius required for shipment and long-term storage but are considered to have been received in acceptable condition by the laboratory.

Laboratory analytical results from delineation soil sample SS02 indicate TPH concentrations exceeded the Closure Criteria. Soil samples SS01, SS03, and soil samples collected outside of the release extent (SS05 through SS07) exhibited COC concentrations in compliance with the Closure Criteria and successfully defined the lateral extent of the release. Based on laboratory analytical results from SS02, additional delineation and excavation of impacted soil appeared warranted.

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DELINEATION AND EXCAVATION SOIL SAMPLING ACTIVITIES

On January 19, 2024, Ensolum personnel were at the Site to oversee delineation and excavation activities. Three potholes (PH01 through PH03) were advanced via backhoe within the release extent to assess the vertical extent of the release. The potholes were completed in the vicinity of delineation soil samples SS01 through SS03, respectively, and advanced to a total depth of 2 feet bgs. Delineation soil samples were collected from each pothole at 2 feet bgs. Soil from the potholes were field screened, handled, and submitted for the same COCs as described above. Field screening results and observations for the potholes were logged on lithologic soil sampling logs, which are included in Appendix C. The potholes and delineation soil sample locations are depicted on Figure 3.

Upon completion of delineation activities, impacted soil was excavated from the release area as indicated by laboratory analytical results from soil sample SS02. Excavation activities were performed using a backhoe and transport vehicle and the entirety of the excavation occurred on pad. To direct excavation activities, soil was screened as described above. The excavation was completed to a depth of 1-foot bgs. Photographic documentation of the excavation activities is included in Appendix B.

Following removal of the impacted soil, 5-point composite soil samples were collected at least every 200 square feet from the release extent area and the sidewall and floor of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil sample FS01 was collected from the floor of the excavation at a depth of 1-foot bgs. Composite soil sample SW01 was collected from the sidewall of the excavation from depths ranging from the ground surface to 1-foot bgs. Composite soil samples FS02 through FS08 were collected from the release extent area, on the surface of the pad at approximately 0.25 feet bgs. Since confirmation soil samples FS02 through FS08 were collected on the surface of the pad and not within an excavated area, sidewall soil samples were unnecessary. The soil samples were collected, handled, and analyzed following the same procedures as described above. The excavation extent, release extent/confirmation soil sampling area, and confirmation soil sample locations are presented on Figure 3.

The release extent/confirmation soil sampling area measured approximately 1,330 square feet and the excavation area measured approximately 170 square feet (combined 1,500 square feet). A total of approximately 10 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Landfill Disposal Facility in Hobbs, New Mexico.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for all confirmation soil samples collected indicated all COC concentrations were compliant with the Site Closure Criteria. Delineation soil sample SS02, collected at 0.5 feet bgs, was the only soil sample with concentrations exceeding Closure Criteria, but the soil represented by that sample was removed during excavation activities. Laboratory analytical results are summarized in Table 1 and complete laboratory analytical reports are included in Appendix D.

CLOSURE REQUEST

Site assessment, delineation, and excavation activities were conducted at the Site to address the October 23, 2023, release of condensate. Laboratory analytical results for confirmation soil samples collected from the release extent/confirmation soil sampling area and excavation extent indicated that all COC concentrations were compliant with the Site Closure Criteria. Based on laboratory analytical

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results, no further remediation is required. The excavation is scheduled to be backfilled the week of April 22, 2024, with material purchased locally and the area recontoured to match pre-existing Site conditions.

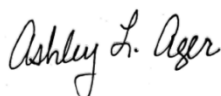
Excavation of impacted soil has mitigated impacts at this Site. Based on laboratory analytical results compliant with Closure Criteria, no further remediation appears to be needed at this time. As such, XTO respectfully requests closure for the remediation of Incident Number NAPP2331049960.

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

Sincerely,
Ensolum, LLC



Benjamin J. Belill
Senior Geologist



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

cc: Amy Ruth, XTO
Amanda Garcia, XTO
BLM

Appendices:

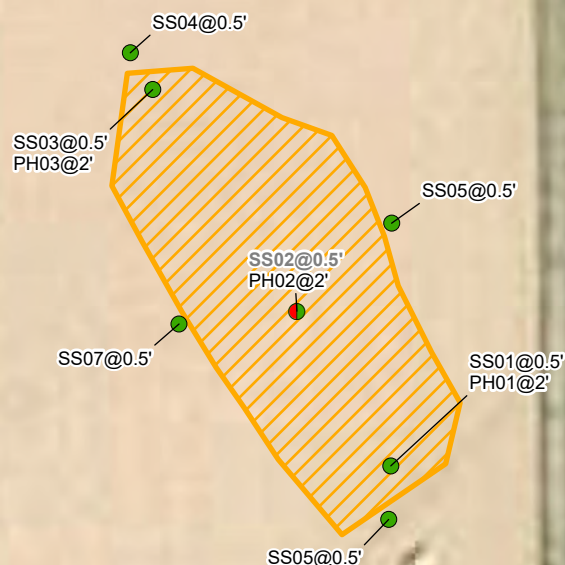
Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Figure 3	Confirmation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Referenced Well Records
Appendix B	Photographic Log
Appendix C	Lithologic / Soil Sampling Logs
Appendix D	Laboratory Analytical Reports &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



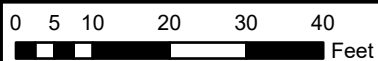
FIGURES

Legend

- Delineation Soil Sample in Compliance with Closure Criteria
- Delineation Soil Sample with Concentrations Previously Exceeding Closure Criteria
- ▲ Release Point
- Release Extent



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



Sources: Environmental Systems Research Institute (ESRI)

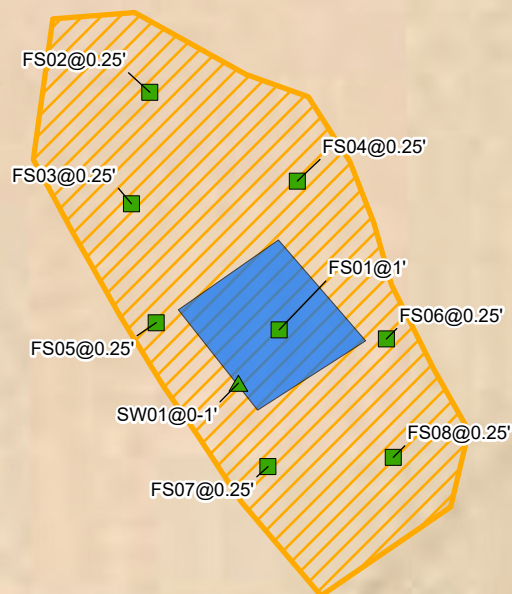
**Delineation Soil Sample Locations**

XTO Energy, Inc
 Big Eddy Unit DI 29 Battery
 Incident Number: NAPP2331049960
 Unit D, Section 21, T20S, R32E
 Eddy County, New Mexico

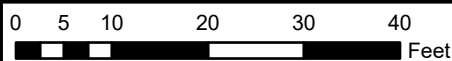
FIGURE
2

Legend

- Confirmation soil Sample in Compliance with Closure Criteria
- ▲ Excavation Sidewall Sample in Compliance with Closure Criteria
- ▲ Release Point
- Release Extent/ Confirmation Soil Sampling Area
- Excavation Extent



Notes:
Sample ID @ Depth Below Ground Surface.



Sources: Environmental Systems Research Institute (ESRI)



Confirmation Soil Sample Locations

XTO Energy, Inc
Big Eddy Unit DI 29 Battery
Incident Number: NAPP2331049960
Unit D, Section 21, T20S, R32E
Eddy County, New Mexico

FIGURE

3



TABLES



TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
 Big Eddy Unit DI 29 Battery
 XTO Energy, Inc
 Lea County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
Delineation Soil Samples										
SS01	01/10/2024	0.5	<0.00201	<0.00402	<50.2	85.5	<50.2	85.5	85.5	217
PH01	01/19/2024	2	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	222
SS02	01/10/2024	0.5	<0.00202	0.00758	<50.4	118	<50.4	118	118	35.5
PH02	01/19/2024	2	<0.00199	<0.00398	<50.5	<50.5	<50.5	<50.5	<50.5	190
SS03	01/10/2024	0.5	<0.00200	<0.00399	<50.5	85.3	<50.5	85.3	85.3	83.0
PH03	01/19/2024	2	<0.00200	<0.00401	<50.1	<50.1	<50.1	<50.1	<50.1	142
SS04	01/10/2024	0.5	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	84.0
SS05	01/10/2024	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	18.2
SS06	01/10/2024	0.5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	19.8
SS07	01/10/2024	0.5	<0.00200	<0.00401	<49.7	<49.7	<49.7	<49.7	<49.7	17.4
Confirmation Soil Samples										
FS01	01/19/2024	1	<0.00202	<0.00404	<49.8	<49.8	<49.8	<49.8	<49.8	126
FS02	01/19/2024	0.25	<0.00199	<0.00398	<49.6	<49.6	<49.6	<49.6	<49.6	33.8
FS03	01/19/2024	0.25	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	30.1
FS04	01/19/2024	0.25	<0.00200	<0.00399	<50.4	<50.4	<50.4	<50.4	<50.4	156
FS05	01/19/2024	0.25	<0.00201	<0.00402	<50.5	<50.5	<50.5	<50.5	<50.5	164
FS06	01/19/2024	0.25	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	61.8
FS07	01/19/2024	0.25	<0.00199	<0.00398	<50.2	<50.2	<50.2	<50.2	<50.2	71.5
FS08	01/19/2024	0.25	<0.00199	<0.00398	<50.4	<50.4	<50.4	<50.4	<50.4	98.5
SW01	01/19/2024	0-1	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	117

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



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER


www.ose.state.nm.us

1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO.) POD1 (BH-01)		WELL TAG ID NO. n/a		OSE FILE NO(S). CP-1891			
	WELL OWNER NAME(S) XTO Energy (Adrian Baker)				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS 6401 Holiday Hill Dr.				CITY Midland	STATE TX	ZIP 79707	
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 33	SECONDS 59.48 N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND			
		LONGITUDE 103	46	41.34 W	* DATUM REQUIRED: WGS 84			
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE SE SE Unit M Sec16 T20S R32E, NMPM								
2. DRILLING & CASING INFORMATION	LICENSE NO. 1249		NAME OF LICENSED DRILLER Jackie D. Atkins			NAME OF WELL DRILLING COMPANY Atkins Engineering Associates, Inc.		
	DRILLING STARTED 10/26/2021		DRILLING ENDED 10/26/2021		DEPTH OF COMPLETED WELL (FT) temporary well material	BORE HOLE DEPTH (FT) 55	DEPTH WATER FIRST ENCOUNTERED (FT) ±33	
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input type="checkbox"/> DRY HOLE <input checked="" type="checkbox"/> SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT) 33.20		
	DRILLING FLUID: <input type="checkbox"/> AIR <input type="checkbox"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input checked="" type="checkbox"/> OTHER - SPECIFY: Hollow Stem Auger							
	DEPTH (feet bgl) FROM TO		BORE HOLE DIAM. (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	0 55		±8.5	Boring- HSA	--	--	--	--
3. ANNULAR MATERIAL	DEPTH (feet bgl) FROM TO		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL		AMOUNT (cubic feet)	METHOD OF PLACEMENT	

FOR OSE INTERNAL USE

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

FILE NO. CP-1891	POD NO. 1	TRN NO. 709444
LOCATION 20S.32E.14.333	WELL TAG ID NO.	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL	DEPTH (feet bgl)		THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER- BEARING ZONES (gpm)
	FROM	TO				
	0	4	4	Caliche, Mod. Consolidated, Tan, Dry	Y ✓ N	
	4	8	4	Sand, fine-very grained, poorly graded, Brown, moist	Y ✓ N	
	8	16	8	Sand, fine-very grained, poorly graded, with gravel Pinkish Brown, moist	Y ✓ N	
	16	20	4	Sand, fine-very grained, poorly graded, with clayey gravel, Light Brown, moist	Y ✓ N	
	20	26	6	Clayey Sand, very fine grained, poorly graded, caliche gravel, Tan , moist	Y ✓ N	
	26	36	10	Clayey Sand, med-fine grained, poorly graded, caliche gravel, Brown , moist	✓ Y N	
	36	49	13	Sandstone, mod consolidated, with increasing clay Reddish Brown, Moist	✓ Y N	
	49	55	6	Claystone, low plasticity, cohesive, Dark Brown, moist	✓ Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:					TOTAL ESTIMATED WELL YIELD (gpm): 0.00	
<input type="checkbox"/> PUMP <input type="checkbox"/> AIR LIFT <input type="checkbox"/> BAILER <input type="checkbox"/> OTHER - SPECIFY:						
5. TEST; RIG SUPERVISION	WELL TEST	TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.				
	MISCELLANEOUS INFORMATION: Temporary well materials removed and the soil boring plugged using Type I/II neat cement from total depth to surface with augers as tremie. Logs adapted from WSP on-site geologist.					
	PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE: Shane Eldridge					
6. SIGNATURE	THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING: <div style="display: flex; justify-content: space-between;"> <div>  SIGNATURE OF DRILLER / PRINT SIGNEE NAME </div> <div> Jackie D. Atkins DATE </div> </div>					

FOR OSE INTERNAL USE

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

FILE NO.	POD NO.	TRN NO.
LOCATION	WELL TAG ID NO.	PAGE 2 OF 2



APPENDIX B

Photographic Log



Photographic Log

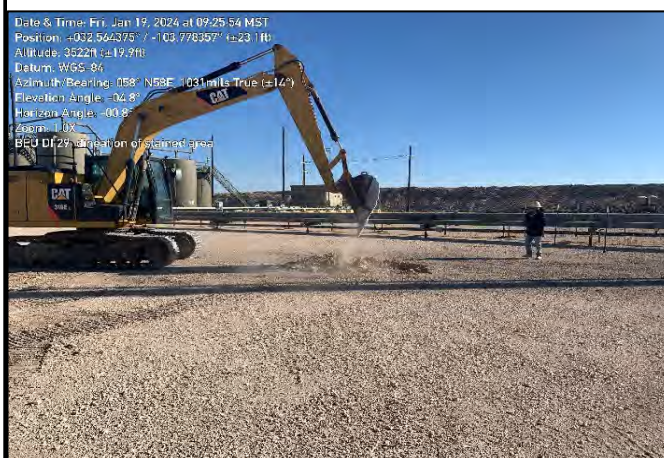
XTO Energy Inc.

Big Eddy Unit DI 29 Battery

Incident Number NAPP2331049960



Photograph: 1 Date: 1/10/2024
Description: Site assessment, release extent area.
View: Southeast



Photograph: 2 Date: 1/19/2024
Description: Delineation activities, PH02.
View: Northeast



Photograph: 3 Date: 1/19/2024
Description: Final excavation extent.
View: Southeast





Photograph: 4 Date: 1/19/2024
Description: Final excavation extent.
View: Northeast




APPENDIX C

Lithologic Soil Sampling Logs

								Sample Name: PH01		Date: 1/19/2024	
								Site Name: Big Eddy Unit DI 29 Battery			
								Incident Number: Napp2331049960			
								Job Number: 03C1558310			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: Connor Whitman		Method: Trackhoe	
Coordinates: 32.564513, -103.778337								Hole Diameter: ~2'		Total Depth: 2' bgs	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. +40% correction factor included for Chloride calculations.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
N	201	0.5	Y	SS01	0.5	0	CCHE	CALICHE, white/tan, well consolidated, trace hydrocarbon odor and light brown staining. 1'-2' -No stain or odor.			
N	<168	0.5	N			1					
N	201	0.0	N	PH01	2	2					
Total Depth @ 2 feet bgs.											

		Sample Name: PH02		Date: 1/19/2024				
		Site Name: Big Eddy Unit DI 29 Battery						
		Incident Number: Napp2331049960						
		Job Number: 03C1558310						
LITHOLOGIC / SOIL SAMPLING LOG				Logged By: Connor Whitman		Method: Trackhoe		
Coordinates: 32.564432, -103.778277				Hole Diameter: ~2'		Total Depth: 2' bgs		
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. +40% correction factor included for Chloride calculations.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
N	<168	0.2	Y	SS02	0.5	0	CCHE	CALICHE, white/tan, well consolidated, trace hydrocarbon odor and light brown staining. 1'-2' -No stain or odor.
N	<168	0.5	N			1		
N	<168	0.3	N	PH02	2	2		
Total depth @ 2 feet bgs.								
<div style="position: absolute; top: 0; right: 0; width: 100%; height: 100%; border-left: 1px solid black; border-bottom: 1px solid black;"></div>								

 ENSOLUM		Sample Name: PH03		Date: 1/19/2024				
		Site Name: Big Eddy Unit DI 29 Battery						
		Incident Number: Napp2331049960						
		Job Number: 03C1558310						
LITHOLOGIC / SOIL SAMPLING LOG				Logged By: Connor Whitman		Method: Trackhoe		
Coordinates: 32.564513, -103.778337				Hole Diameter: ~2'		Total Depth: 2' bgs		
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. +40% correction factor included for Chloride calculations.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
N	<168	0.1	Y	SS03	0.5	0	CCHE	CALICHE, white/tan, well consolidated, trace hydrocarbon odor and light brown staining. 1'-2' -No stain or odor.
N	<168	0.3	N			1		
N	<168	0.0	N	PH03	2	2		
Total Depth @ 2 feet bgs.								
<div style="position: absolute; top: 0; right: 0; width: 100%; height: 100%; border-left: 1px solid black; border-bottom: 1px solid black;"></div>								



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: Ben Belill

Ensolum

601 N. Marienfeld St.

Suite 400

Midland, Texas 79701

Generated 1/15/2024 5:53:58 PM

JOB DESCRIPTION

BIG EDDY UNIT D1 29 BATTERY

03C1558310

JOB NUMBER

890-5944-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Eurofins Carlsbad

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: BIG EDDY UNIT D1 29 BATTERY

Laboratory Job ID: 890-5944-1
SDG: 03C1558310

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Definitions/Glossary

Client: Ensolum
Project/Site: BIG EDDY UNIT D1 29 BATTERY

Job ID: 890-5944-1
SDG: 03C1558310

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
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.
α	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: BIG EDDY UNIT D1 29 BATTERY

Job ID: 890-5944-1

Job ID: 890-5944-1

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Job Narrative 890-5944-1

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 1/10/2024 2:53 PM. 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 (890-5944-1), SS 02 (890-5944-2) and SS 03 (890-5944-3).

GC VOA

Method 8021B: Surrogate recovery for the following samples were outside control limits: SS 01 (890-5944-1), SS 02 (890-5944-2) and SS 03 (890-5944-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The method blank for preparation batch 880-70783 and analytical batch 880-70807 contained o-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.

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 880-70792 and analytical batch 880-70811 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (880-37809-A-21-D), (880-37809-A-21-E MS) and (880-37809-A-21-F MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-70792 and analytical batch 880-70811 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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: BIG EDDY UNIT D1 29 BATTERY

Job ID: 890-5944-1
SDG: 03C1558310

Client Sample ID: SS 01

Lab Sample ID: 890-5944-1

Date Collected: 01/10/24 10:40

Matrix: Solid

Date Received: 01/10/24 14:53

Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		01/12/24 15:10	01/14/24 02:04	1
Toluene	<0.00201	U	0.00201	mg/Kg		01/12/24 15:10	01/14/24 02:04	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		01/12/24 15:10	01/14/24 02:04	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		01/12/24 15:10	01/14/24 02:04	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		01/12/24 15:10	01/14/24 02:04	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		01/12/24 15:10	01/14/24 02:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	187	S1+	70 - 130	01/12/24 15:10	01/14/24 02:04	1
1,4-Difluorobenzene (Surr)	113		70 - 130	01/12/24 15:10	01/14/24 02:04	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			01/14/24 02:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	85.5		50.2	mg/Kg			01/14/24 14:14	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	<50.2	U	50.2	mg/Kg		01/12/24 17:11	01/14/24 14:14	1
Diesel Range Organics (Over C10-C28)	85.5		50.2	mg/Kg		01/12/24 17:11	01/14/24 14:14	1
Oil Range Organics (Over C28-C36)	<50.2	U	50.2	mg/Kg		01/12/24 17:11	01/14/24 14:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	129		70 - 130	01/12/24 17:11	01/14/24 14:14	1
o-Terphenyl	102		70 - 130	01/12/24 17:11	01/14/24 14:14	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	217		5.04	mg/Kg			01/13/24 05:26	1

Client Sample ID: SS 02

Lab Sample ID: 890-5944-2

Date Collected: 01/10/24 10:45

Matrix: Solid

Date Received: 01/10/24 14:53

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		01/12/24 15:10	01/14/24 02:24	1
Toluene	<0.00202	U	0.00202	mg/Kg		01/12/24 15:10	01/14/24 02:24	1
Ethylbenzene	0.00297		0.00202	mg/Kg		01/12/24 15:10	01/14/24 02:24	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		01/12/24 15:10	01/14/24 02:24	1
o-Xylene	0.00461		0.00202	mg/Kg		01/12/24 15:10	01/14/24 02:24	1
Xylenes, Total	0.00461		0.00404	mg/Kg		01/12/24 15:10	01/14/24 02:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	310	S1+	70 - 130	01/12/24 15:10	01/14/24 02:24	1

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Client Sample Results

Client: Ensolum
Project/Site: BIG EDDY UNIT D1 29 BATTERY

Job ID: 890-5944-1
SDG: 03C1558310

Client Sample ID: SS 02

Lab Sample ID: 890-5944-2

Date Collected: 01/10/24 10:45

Matrix: Solid

Date Received: 01/10/24 14:53

Sample Depth: 0.5'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	84		70 - 130	01/12/24 15:10	01/14/24 02:24	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.00758		0.00404	mg/Kg			01/14/24 02:24	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	118		50.4	mg/Kg			01/14/24 14:36	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	<50.4	U	50.4	mg/Kg		01/12/24 17:11	01/14/24 14:36	1
Diesel Range Organics (Over C10-C28)	118		50.4	mg/Kg		01/12/24 17:11	01/14/24 14:36	1
Oil Range Organics (Over C28-C36)	<50.4	U	50.4	mg/Kg		01/12/24 17:11	01/14/24 14:36	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	123		70 - 130			01/12/24 17:11	01/14/24 14:36	1
o-Terphenyl	97		70 - 130			01/12/24 17:11	01/14/24 14:36	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	35.5		4.99	mg/Kg			01/13/24 05:31	1

Client Sample ID: SS 03

Lab Sample ID: 890-5944-3

Date Collected: 01/10/24 10:50

Matrix: Solid

Date Received: 01/10/24 14:53

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		01/12/24 15:10	01/14/24 02:45	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/12/24 15:10	01/14/24 02:45	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/12/24 15:10	01/14/24 02:45	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		01/12/24 15:10	01/14/24 02:45	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/12/24 15:10	01/14/24 02:45	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		01/12/24 15:10	01/14/24 02:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	123		70 - 130	01/12/24 15:10	01/14/24 02:45	1
1,4-Difluorobenzene (Surr)	134	S1+	70 - 130	01/12/24 15:10	01/14/24 02:45	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			01/14/24 02:45	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	85.3		50.5	mg/Kg			01/14/24 14:57	1

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Client Sample Results

Client: Ensolum
Project/Site: BIG EDDY UNIT D1 29 BATTERY

Job ID: 890-5944-1
SDG: 03C1558310

Client Sample ID: SS 03
Date Collected: 01/10/24 10:50
Date Received: 01/10/24 14:53
Sample Depth: 0.5'

Lab Sample ID: 890-5944-3
Matrix: Solid

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	<50.5	U	50.5	mg/Kg		01/12/24 17:11	01/14/24 14:57	1	
Diesel Range Organics (Over C10-C28)	85.3		50.5	mg/Kg		01/12/24 17:11	01/14/24 14:57	1	
OII Range Organics (Over C28-C36)	<50.5	U	50.5	mg/Kg		01/12/24 17:11	01/14/24 14:57	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	125		70 - 130			01/12/24 17:11	01/14/24 14:57	1	
o-Terphenyl	101		70 - 130			01/12/24 17:11	01/14/24 14:57	1	
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	83.0		4.96	mg/Kg			01/13/24 05:46	1	

Surrogate Summary

Client: Ensolum
Project/Site: BIG EDDY UNIT D1 29 BATTERY

Job ID: 890-5944-1
SDG: 03C1558310

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)
880-37820-A-1-C MS	Matrix Spike	105	99
880-37820-A-1-D MSD	Matrix Spike Duplicate	116	120
890-5944-1	SS 01	187 S1+	113
890-5944-2	SS 02	310 S1+	84
890-5944-3	SS 03	123	134 S1+
LCS 880-70783/1-A	Lab Control Sample	77	117
LCSD 880-70783/2-A	Lab Control Sample Dup	101	108
MB 880-70783/5-A	Method Blank	107	122
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)
880-37809-A-21-E MS	Matrix Spike	158 S1+	117
880-37809-A-21-F MSD	Matrix Spike Duplicate	158 S1+	118
890-5944-1	SS 01	129	102
890-5944-2	SS 02	123	97
890-5944-3	SS 03	125	101
LCS 880-70792/2-A	Lab Control Sample	88	90
LCSD 880-70792/3-A	Lab Control Sample Dup	99	104
MB 880-70792/1-A	Method Blank	170 S1+	172 S1+
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

QC Sample Results

Client: Ensolum
Project/Site: BIG EDDY UNIT D1 29 BATTERY

Job ID: 890-5944-1
SDG: 03C1558310

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-70783/5-A

Matrix: Solid

Analysis Batch: 70807

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 70783

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/12/24 15:10	01/13/24 19:19	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/12/24 15:10	01/13/24 19:19	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/12/24 15:10	01/13/24 19:19	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/12/24 15:10	01/13/24 19:19	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/12/24 15:10	01/13/24 19:19	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/12/24 15:10	01/13/24 19:19	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130	01/12/24 15:10	01/13/24 19:19	1
1,4-Difluorobenzene (Surr)	122		70 - 130	01/12/24 15:10	01/13/24 19:19	1

Lab Sample ID: LCS 880-70783/1-A

Matrix: Solid

Analysis Batch: 70807

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 70783

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1072		mg/Kg		107	70 - 130
Toluene	0.100	0.09783		mg/Kg		98	70 - 130
Ethylbenzene	0.100	0.08429		mg/Kg		84	70 - 130
m-Xylene & p-Xylene	0.200	0.1853		mg/Kg		93	70 - 130
o-Xylene	0.100	0.09331		mg/Kg		93	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	77		70 - 130
1,4-Difluorobenzene (Surr)	117		70 - 130

Lab Sample ID: LCSD 880-70783/2-A

Matrix: Solid

Analysis Batch: 70807

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 70783

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1251		mg/Kg		125	70 - 130	15	35
Toluene	0.100	0.1007		mg/Kg		101	70 - 130	3	35
Ethylbenzene	0.100	0.1034		mg/Kg		103	70 - 130	20	35
m-Xylene & p-Xylene	0.200	0.2147		mg/Kg		107	70 - 130	15	35
o-Xylene	0.100	0.1078		mg/Kg		108	70 - 130	14	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	108		70 - 130

Lab Sample ID: 880-37820-A-1-C MS

Matrix: Solid

Analysis Batch: 70807

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 70783

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00198	U	0.100	0.1111		mg/Kg		111	70 - 130
Toluene	<0.00198	U	0.100	0.09664		mg/Kg		96	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: BIG EDDY UNIT D1 29 BATTERY

Job ID: 890-5944-1
SDG: 03C1558310

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

Lab Sample ID: 880-37820-A-1-C MS
Matrix: Solid
Analysis Batch: 70807

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 70783

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00198	U	0.100	0.09823		mg/Kg		98	70 - 130
m-Xylene & p-Xylene	<0.00396	U	0.201	0.2071		mg/Kg		103	70 - 130
o-Xylene	<0.00198	U	0.100	0.1071		mg/Kg		107	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	105		70 - 130						
1,4-Difluorobenzene (Surr)	99		70 - 130						

Lab Sample ID: 880-37820-A-1-D MSD
Matrix: Solid
Analysis Batch: 70807

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 70783

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00198	U	0.101	0.1149		mg/Kg		114	70 - 130	3	35
Toluene	<0.00198	U	0.101	0.07986		mg/Kg		79	70 - 130	19	35
Ethylbenzene	<0.00198	U	0.101	0.07243		mg/Kg		72	70 - 130	30	35
m-Xylene & p-Xylene	<0.00396	U	0.202	0.2054		mg/Kg		102	70 - 130	1	35
o-Xylene	<0.00198	U	0.101	0.1065		mg/Kg		106	70 - 130	1	35
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
4-Bromofluorobenzene (Surr)	116		70 - 130								
1,4-Difluorobenzene (Surr)	120		70 - 130								

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

Lab Sample ID: MB 880-70792/1-A
Matrix: Solid
Analysis Batch: 70811

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 70792

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		01/12/24 17:11	01/14/24 09:00	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/12/24 17:11	01/14/24 09:00	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/12/24 17:11	01/14/24 09:00	1
Surrogate	MB %Recovery	MB Qualifier	Limits					
1-Chlorooctane	170	S1+	70 - 130					
o-Terphenyl	172	S1+	70 - 130					

Lab Sample ID: LCS 880-70792/2-A
Matrix: Solid
Analysis Batch: 70811

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 70792

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1087		mg/Kg		109	70 - 130
Diesel Range Organics (Over C10-C28)	1000	929.5		mg/Kg		93	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: BIG EDDY UNIT D1 29 BATTERY

Job ID: 890-5944-1
SDG: 03C1558310

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

Lab Sample ID: LCS 880-70792/2-A
Matrix: Solid
Analysis Batch: 70811

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 70792

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	88		70 - 130
o-Terphenyl	90		70 - 130

Lab Sample ID: LCSD 880-70792/3-A
Matrix: Solid
Analysis Batch: 70811

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 70792

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1046		mg/Kg		105	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			1000	904.7		mg/Kg		90	70 - 130	3	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	99		70 - 130
o-Terphenyl	104		70 - 130

Lab Sample ID: 880-37809-A-21-E MS
Matrix: Solid
Analysis Batch: 70811

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 70792

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F1	1010	1410	F1	mg/Kg		136	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U F1	1010	1452	F1	mg/Kg		139	70 - 130		

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	158	S1+	70 - 130
o-Terphenyl	117		70 - 130

Lab Sample ID: 880-37809-A-21-F MSD
Matrix: Solid
Analysis Batch: 70811

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 70792

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	<49.9	U F1	1010	1373	F1	mg/Kg		132	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<49.9	U F1	1010	1493	F1	mg/Kg		143	70 - 130	3	20

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	158	S1+	70 - 130
o-Terphenyl	118		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: BIG EDDY UNIT D1 29 BATTERY

Job ID: 890-5944-1
SDG: 03C1558310

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-70717/1-A										Client Sample ID: Method Blank	
Matrix: Solid										Prep Type: Soluble	
Analysis Batch: 70796											
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac			
Chloride	<5.00	U	5.00	mg/Kg			01/13/24 04:04	1			
Lab Sample ID: LCS 880-70717/2-A										Client Sample ID: Lab Control Sample	
Matrix: Solid										Prep Type: Soluble	
Analysis Batch: 70796											
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	251.9		mg/Kg		101	90 - 110		
Lab Sample ID: LCSD 880-70717/3-A										Client Sample ID: Lab Control Sample Dup	
Matrix: Solid										Prep Type: Soluble	
Analysis Batch: 70796											
Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	255.1		mg/Kg		102	90 - 110	1	20
Lab Sample ID: 890-5944-2 MS										Client Sample ID: SS 02	
Matrix: Solid										Prep Type: Soluble	
Analysis Batch: 70796											
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	35.5		250	296.2		mg/Kg		104	90 - 110		
Lab Sample ID: 890-5944-2 MSD										Client Sample ID: SS 02	
Matrix: Solid										Prep Type: Soluble	
Analysis Batch: 70796											
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	35.5		250	296.9		mg/Kg		105	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: BIG EDDY UNIT D1 29 BATTERY

Job ID: 890-5944-1
SDG: 03C1558310

GC VOA

Prep Batch: 70783

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5944-1	SS 01	Total/NA	Solid	5035	
890-5944-2	SS 02	Total/NA	Solid	5035	
890-5944-3	SS 03	Total/NA	Solid	5035	
MB 880-70783/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-70783/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-70783/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-37820-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
880-37820-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 70807

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5944-1	SS 01	Total/NA	Solid	8021B	70783
890-5944-2	SS 02	Total/NA	Solid	8021B	70783
890-5944-3	SS 03	Total/NA	Solid	8021B	70783
MB 880-70783/5-A	Method Blank	Total/NA	Solid	8021B	70783
LCS 880-70783/1-A	Lab Control Sample	Total/NA	Solid	8021B	70783
LCSD 880-70783/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	70783
880-37820-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	70783
880-37820-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	70783

Analysis Batch: 70958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5944-1	SS 01	Total/NA	Solid	Total BTEX	
890-5944-2	SS 02	Total/NA	Solid	Total BTEX	
890-5944-3	SS 03	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 70792

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5944-1	SS 01	Total/NA	Solid	8015NM Prep	
890-5944-2	SS 02	Total/NA	Solid	8015NM Prep	
890-5944-3	SS 03	Total/NA	Solid	8015NM Prep	
MB 880-70792/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-70792/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-70792/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-37809-A-21-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-37809-A-21-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 70811

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5944-1	SS 01	Total/NA	Solid	8015B NM	70792
890-5944-2	SS 02	Total/NA	Solid	8015B NM	70792
890-5944-3	SS 03	Total/NA	Solid	8015B NM	70792
MB 880-70792/1-A	Method Blank	Total/NA	Solid	8015B NM	70792
LCS 880-70792/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	70792
LCSD 880-70792/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	70792
880-37809-A-21-E MS	Matrix Spike	Total/NA	Solid	8015B NM	70792
880-37809-A-21-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	70792

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QC Association Summary

Client: Ensolum
Project/Site: BIG EDDY UNIT D1 29 BATTERY

Job ID: 890-5944-1
SDG: 03C1558310

GC Semi VOA

Analysis Batch: 70915

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5944-1	SS 01	Total/NA	Solid	8015 NM	
890-5944-2	SS 02	Total/NA	Solid	8015 NM	
890-5944-3	SS 03	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 70717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5944-1	SS 01	Soluble	Solid	DI Leach	
890-5944-2	SS 02	Soluble	Solid	DI Leach	
890-5944-3	SS 03	Soluble	Solid	DI Leach	
MB 880-70717/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-70717/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-70717/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5944-2 MS	SS 02	Soluble	Solid	DI Leach	
890-5944-2 MSD	SS 02	Soluble	Solid	DI Leach	

Analysis Batch: 70796

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5944-1	SS 01	Soluble	Solid	300.0	70717
890-5944-2	SS 02	Soluble	Solid	300.0	70717
890-5944-3	SS 03	Soluble	Solid	300.0	70717
MB 880-70717/1-A	Method Blank	Soluble	Solid	300.0	70717
LCS 880-70717/2-A	Lab Control Sample	Soluble	Solid	300.0	70717
LCSD 880-70717/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	70717
890-5944-2 MS	SS 02	Soluble	Solid	300.0	70717
890-5944-2 MSD	SS 02	Soluble	Solid	300.0	70717

Lab Chronicle

Client: Ensolum
Project/Site: BIG EDDY UNIT D1 29 BATTERY

Job ID: 890-5944-1
SDG: 03C1558310

Client Sample ID: SS 01

Lab Sample ID: 890-5944-1

Date Collected: 01/10/24 10:40

Matrix: Solid

Date Received: 01/10/24 14:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	70783	01/12/24 15:10	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	70807	01/14/24 02:04	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			70958	01/14/24 02:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			70915	01/14/24 14:14	SM	EET MID
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	70792	01/12/24 17:11	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	70811	01/14/24 14:14	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	70717	01/12/24 08:10	CH	EET MID
Soluble	Analysis	300.0		1			70796	01/13/24 05:26	CH	EET MID

Client Sample ID: SS 02

Lab Sample ID: 890-5944-2

Date Collected: 01/10/24 10:45

Matrix: Solid

Date Received: 01/10/24 14:53

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	70783	01/12/24 15:10	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	70807	01/14/24 02:24	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			70958	01/14/24 02:24	SM	EET MID
Total/NA	Analysis	8015 NM		1			70915	01/14/24 14:36	SM	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	70792	01/12/24 17:11	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	70811	01/14/24 14:36	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	70717	01/12/24 08:10	CH	EET MID
Soluble	Analysis	300.0		1			70796	01/13/24 05:31	CH	EET MID

Client Sample ID: SS 03

Lab Sample ID: 890-5944-3

Date Collected: 01/10/24 10:50

Matrix: Solid

Date Received: 01/10/24 14:53

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	70783	01/12/24 15:10	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	70807	01/14/24 02:45	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			70958	01/14/24 02:45	SM	EET MID
Total/NA	Analysis	8015 NM		1			70915	01/14/24 14:57	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	70792	01/12/24 17:11	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	70811	01/14/24 14:57	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	70717	01/12/24 08:10	CH	EET MID
Soluble	Analysis	300.0		1			70796	01/13/24 05:46	CH	EET MID

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: BIG EDDY UNIT D1 29 BATTERY

Job ID: 890-5944-1
SDG: 03C1558310

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: BIG EDDY UNIT D1 29 BATTERY

Job ID: 890-5944-1
SDG: 03C1558310

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: BIG EDDY UNIT D1 29 BATTERY

Job ID: 890-5944-1
SDG: 03C1558310

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5944-1	SS 01	Solid	01/10/24 10:40	01/10/24 14:53	0.5'
890-5944-2	SS 02	Solid	01/10/24 10:45	01/10/24 14:53	0.5'
890-5944-3	SS 03	Solid	01/10/24 10:50	01/10/24 14:53	0.5'

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Environment Testing

Xenco

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Ben Beill	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:	989.854.0852	Email:	bbeill@ensolum.com

Work Order Comments					
Program:	UST/PST <input type="checkbox"/>	PRP <input type="checkbox"/>	Brownfields <input type="checkbox"/>	RRC <input type="checkbox"/>	Superfund <input type="checkbox"/>
State of Project:					
Reporting:	Level II <input type="checkbox"/>	Level III <input type="checkbox"/>	PST/UST <input type="checkbox"/>	TRRP <input type="checkbox"/>	Level IV <input type="checkbox"/>
Deliverables:	EDD <input type="checkbox"/>	ADaPT <input type="checkbox"/>	Other:		

[illegible]

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 Tl 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 Tl 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)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	10/24 1453			

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5944-1

SDG Number: 03C1558310

Login Number: 5944
List Number: 1
Creator: Bruns, Shannon

List Source: Eurofins Carlsbad

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: 890-5944-1

SDG Number: 03C1558310

Login Number: 5944
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Midland
List Creation: 01/12/24 12:32 PM

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.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
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	



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Ben Belill

Ensolum

601 N. Marienfeld St.

Suite 400

Midland, Texas 79701

Generated 1/18/2024 10:44:21 AM

JOB DESCRIPTION

BIG EDDY UNIT D1 29 BATTERY

03C1558310

JOB NUMBER

890-5945-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

Eurofins Carlsbad

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



Generated
1/18/2024 10:44:21 AM

Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Client: Ensolum
Project/Site: BIG EDDY UNIT D1 29 BATTERY

Laboratory Job ID: 890-5945-1
SDG: 03C1558310

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Definitions/Glossary

Client: Ensolum
Project/Site: BIG EDDY UNIT D1 29 BATTERY

Job ID: 890-5945-1
SDG: 03C1558310

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
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: BIG EDDY UNIT D1 29 BATTERY

Job ID: 890-5945-1

Job ID: 890-5945-1

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Job Narrative 890-5945-1

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 1/10/2024 2:53 PM. 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 0.0°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: SS 04 (890-5945-1), SS 05 (890-5945-2), SS 06 (890-5945-3) and SS 07 (890-5945-4).

GC VOA

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-71001 and analytical batch 880-71037 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

Method 8021B: Surrogate recovery for the following sample was outside control limits: SS 07 (890-5945-4). 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.

GC Semi VOA

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-70792 and analytical batch 880-70811 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: SS 07 (890-5945-4), (880-37809-A-21-D), (880-37809-A-21-E MS) and (880-37809-A-21-F MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-70792 and analytical batch 880-70811 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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: BIG EDDY UNIT D1 29 BATTERY

Job ID: 890-5945-1
SDG: 03C1558310

Client Sample ID: SS 04

Lab Sample ID: 890-5945-1

Date Collected: 01/10/24 10:55

Matrix: Solid

Date Received: 01/10/24 14:53

Sample Depth: 0.5'

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		01/16/24 13:33	01/17/24 14:42	1
Toluene	<0.00198	U	0.00198	mg/Kg		01/16/24 13:33	01/17/24 14:42	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		01/16/24 13:33	01/17/24 14:42	1
m-Xylene & p-Xylene	<0.00396	U **	0.00396	mg/Kg		01/16/24 13:33	01/17/24 14:42	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		01/16/24 13:33	01/17/24 14:42	1
Xylenes, Total	<0.00396	U **	0.00396	mg/Kg		01/16/24 13:33	01/17/24 14:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	81		70 - 130	01/16/24 13:33	01/17/24 14:42	1
1,4-Difluorobenzene (Surr)	85		70 - 130	01/16/24 13:33	01/17/24 14:42	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396	mg/Kg			01/17/24 14:42	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			01/14/24 15:19	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		01/12/24 17:11	01/14/24 15:19	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		01/12/24 17:11	01/14/24 15:19	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/12/24 17:11	01/14/24 15:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	114		70 - 130	01/12/24 17:11	01/14/24 15:19	1
o-Terphenyl	94		70 - 130	01/12/24 17:11	01/14/24 15:19	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	84.0		5.04	mg/Kg			01/13/24 05:51	1

Client Sample ID: SS 05

Lab Sample ID: 890-5945-2

Date Collected: 01/10/24 11:00

Matrix: Solid

Date Received: 01/10/24 14:53

Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/16/24 13:33	01/17/24 11:58	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/16/24 13:33	01/17/24 11:58	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/16/24 13:33	01/17/24 11:58	1
m-Xylene & p-Xylene	<0.00398	U **	0.00398	mg/Kg		01/16/24 13:33	01/17/24 11:58	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/16/24 13:33	01/17/24 11:58	1
Xylenes, Total	<0.00398	U **	0.00398	mg/Kg		01/16/24 13:33	01/17/24 11:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	79		70 - 130	01/16/24 13:33	01/17/24 11:58	1

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Client Sample Results

Client: Ensolum
Project/Site: BIG EDDY UNIT D1 29 BATTERY

Job ID: 890-5945-1
SDG: 03C1558310

Client Sample ID: SS 05

Lab Sample ID: 890-5945-2

Date Collected: 01/10/24 11:00

Matrix: Solid

Date Received: 01/10/24 14:53

Sample Depth: 0.5'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	84		70 - 130	01/16/24 13:33	01/17/24 11:58	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			01/17/24 11:58	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			01/14/24 15:40	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	<50.0	U	50.0	mg/Kg		01/12/24 17:11	01/14/24 15:40	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/12/24 17:11	01/14/24 15:40	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/12/24 17:11	01/14/24 15:40	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	123		70 - 130			01/12/24 17:11	01/14/24 15:40	1
o-Terphenyl	100		70 - 130			01/12/24 17:11	01/14/24 15:40	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	18.2		4.98	mg/Kg			01/13/24 06:07	1

Client Sample ID: SS 06

Lab Sample ID: 890-5945-3

Date Collected: 01/10/24 11:15

Matrix: Solid

Date Received: 01/10/24 14:53

Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		01/16/24 13:33	01/17/24 12:19	1
Toluene	<0.00201	U	0.00201	mg/Kg		01/16/24 13:33	01/17/24 12:19	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		01/16/24 13:33	01/17/24 12:19	1
m-Xylene & p-Xylene	<0.00402	U **	0.00402	mg/Kg		01/16/24 13:33	01/17/24 12:19	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		01/16/24 13:33	01/17/24 12:19	1
Xylenes, Total	<0.00402	U **	0.00402	mg/Kg		01/16/24 13:33	01/17/24 12:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		70 - 130	01/16/24 13:33	01/17/24 12:19	1
1,4-Difluorobenzene (Surr)	80		70 - 130	01/16/24 13:33	01/17/24 12:19	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			01/17/24 12:19	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			01/14/24 16:02	1

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Client Sample Results

Client: Ensolum
Project/Site: BIG EDDY UNIT D1 29 BATTERY

Job ID: 890-5945-1
SDG: 03C1558310

Client Sample ID: SS 06
Date Collected: 01/10/24 11:15
Date Received: 01/10/24 14:53
Sample Depth: 0.5'

Lab Sample ID: 890-5945-3
Matrix: Solid

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	<50.0	U	50.0	mg/Kg		01/12/24 17:11	01/14/24 16:02	1	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/12/24 17:11	01/14/24 16:02	1	
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/12/24 17:11	01/14/24 16:02	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	120		70 - 130			01/12/24 17:11	01/14/24 16:02	1	
o-Terphenyl	96		70 - 130			01/12/24 17:11	01/14/24 16:02	1	

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	19.8		4.95	mg/Kg			01/13/24 06:12	1	

Client Sample ID: SS 07
Date Collected: 01/10/24 11:10
Date Received: 01/10/24 14:53
Sample Depth: 0.5'

Lab Sample ID: 890-5945-4
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		01/16/24 13:33	01/17/24 12:39	1	
Toluene	<0.00200	U	0.00200	mg/Kg		01/16/24 13:33	01/17/24 12:39	1	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/16/24 13:33	01/17/24 12:39	1	
m-Xylene & p-Xylene	<0.00401	U **	0.00401	mg/Kg		01/16/24 13:33	01/17/24 12:39	1	
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/16/24 13:33	01/17/24 12:39	1	
Xylenes, Total	<0.00401	U **	0.00401	mg/Kg		01/16/24 13:33	01/17/24 12:39	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	83		70 - 130			01/16/24 13:33	01/17/24 12:39	1	
1,4-Difluorobenzene (Surr)	65	S1-	70 - 130			01/16/24 13:33	01/17/24 12:39	1	

Method: TAL SOP Total BTEX - Total BTEX Calculation									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total BTEX	<0.00401	U	0.00401	mg/Kg			01/17/24 12:39	1	

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total TPH	<49.7	U	49.7	mg/Kg			01/14/24 16:45	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		01/12/24 17:11	01/14/24 16:45	1	
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7	mg/Kg		01/12/24 17:11	01/14/24 16:45	1	
Oil Range Organics (Over C28-C36)	<49.7	U	49.7	mg/Kg		01/12/24 17:11	01/14/24 16:45	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	137	S1+	70 - 130			01/12/24 17:11	01/14/24 16:45	1	
o-Terphenyl	105		70 - 130			01/12/24 17:11	01/14/24 16:45	1	

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Client Sample Results

Client: Ensolum
Project/Site: BIG EDDY UNIT D1 29 BATTERY

Job ID: 890-5945-1
SDG: 03C1558310

Client Sample ID: SS 07
Date Collected: 01/10/24 11:10
Date Received: 01/10/24 14:53
Sample Depth: 0.5'

Lab Sample ID: 890-5945-4
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	17.4		4.97	mg/Kg			01/13/24 06:17	1	

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

Surrogate Summary

Client: Ensolum
Project/Site: BIG EDDY UNIT D1 29 BATTERY

Job ID: 890-5945-1
SDG: 03C1558310

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)
890-5945-1	SS 04	81	85
890-5945-1 MS	SS 04	118	117
890-5945-1 MSD	SS 04	113	105
890-5945-2	SS 05	79	84
890-5945-3	SS 06	88	80
890-5945-4	SS 07	83	65 S1-
LCS 880-71001/1-A	Lab Control Sample	110	113
LCSD 880-71001/2-A	Lab Control Sample Dup	115	94
MB 880-71001/5-A	Method Blank	71	89
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)
880-37809-A-21-E MS	Matrix Spike	158 S1+	117
880-37809-A-21-F MSD	Matrix Spike Duplicate	158 S1+	118
890-5945-1	SS 04	114	94
890-5945-2	SS 05	123	100
890-5945-3	SS 06	120	96
890-5945-4	SS 07	137 S1+	105
LCS 880-70792/2-A	Lab Control Sample	88	90
LCSD 880-70792/3-A	Lab Control Sample Dup	99	104
MB 880-70792/1-A	Method Blank	170 S1+	172 S1+
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

QC Sample Results

Client: Ensolum
Project/Site: BIG EDDY UNIT D1 29 BATTERY

Job ID: 890-5945-1
SDG: 03C1558310

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-71001/5-A

Matrix: Solid

Analysis Batch: 71037

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 71001

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/16/24 13:33	01/17/24 11:16	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/16/24 13:33	01/17/24 11:16	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/16/24 13:33	01/17/24 11:16	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/16/24 13:33	01/17/24 11:16	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/16/24 13:33	01/17/24 11:16	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/16/24 13:33	01/17/24 11:16	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	71		70 - 130	01/16/24 13:33	01/17/24 11:16	1
1,4-Difluorobenzene (Surr)	89		70 - 130	01/16/24 13:33	01/17/24 11:16	1

Lab Sample ID: LCS 880-71001/1-A

Matrix: Solid

Analysis Batch: 71037

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 71001

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1294		mg/Kg		129	70 - 130
Toluene	0.100	0.1127		mg/Kg		113	70 - 130
Ethylbenzene	0.100	0.1239		mg/Kg		124	70 - 130
m-Xylene & p-Xylene	0.200	0.2698	*+	mg/Kg		135	70 - 130
o-Xylene	0.100	0.1268		mg/Kg		127	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	110		70 - 130
1,4-Difluorobenzene (Surr)	113		70 - 130

Lab Sample ID: LCSD 880-71001/2-A

Matrix: Solid

Analysis Batch: 71037

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 71001

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1281		mg/Kg		128	70 - 130	1	35
Toluene	0.100	0.1178		mg/Kg		118	70 - 130	4	35
Ethylbenzene	0.100	0.1260		mg/Kg		126	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.2731	*+	mg/Kg		137	70 - 130	1	35
o-Xylene	0.100	0.1285		mg/Kg		129	70 - 130	1	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	115		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

Lab Sample ID: 890-5945-1 MS

Matrix: Solid

Analysis Batch: 71037

Client Sample ID: SS 04

Prep Type: Total/NA

Prep Batch: 71001

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00198		0.100	0.1220		mg/Kg		114	70 - 130
Toluene	<0.00198		0.100	0.1055		mg/Kg		73	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: BIG EDDY UNIT D1 29 BATTERY

Job ID: 890-5945-1
SDG: 03C1558310

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

Lab Sample ID: 890-5945-1 MS
Matrix: Solid
Analysis Batch: 71037

Client Sample ID: SS 04
Prep Type: Total/NA
Prep Batch: 71001

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00198		0.100	0.1207		mg/Kg		104	70 - 130
m-Xylene & p-Xylene	<0.00396		0.201	0.2560		mg/Kg		99	70 - 130
o-Xylene	<0.00198		0.100	0.1198		mg/Kg		89	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	118		70 - 130						
1,4-Difluorobenzene (Surr)	117		70 - 130						

Lab Sample ID: 890-5945-1 MSD
Matrix: Solid
Analysis Batch: 71037

Client Sample ID: SS 04
Prep Type: Total/NA
Prep Batch: 71001

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00198	U	0.101	0.1143		mg/Kg		113	70 - 130	7	35
Toluene	<0.00198	U	0.101	0.1019		mg/Kg		101	70 - 130	3	35
Ethylbenzene	<0.00198	U	0.101	0.1098		mg/Kg		109	70 - 130	9	35
m-Xylene & p-Xylene	<0.00396	U *	0.202	0.2321		mg/Kg		115	70 - 130	10	35
o-Xylene	<0.00198	U	0.101	0.1097		mg/Kg		109	70 - 130	9	35
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
4-Bromofluorobenzene (Surr)	113		70 - 130								
1,4-Difluorobenzene (Surr)	105		70 - 130								

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

Lab Sample ID: MB 880-70792/1-A
Matrix: Solid
Analysis Batch: 70811

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 70792

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		01/12/24 17:11	01/14/24 09:00	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/12/24 17:11	01/14/24 09:00	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/12/24 17:11	01/14/24 09:00	1
Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac		
1-Chlorooctane	170	S1+	70 - 130	01/12/24 17:11	01/14/24 09:00	1		
o-Terphenyl	172	S1+	70 - 130	01/12/24 17:11	01/14/24 09:00	1		

Lab Sample ID: LCS 880-70792/2-A
Matrix: Solid
Analysis Batch: 70811

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 70792

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1087		mg/Kg		109	70 - 130
Diesel Range Organics (Over C10-C28)	1000	929.5		mg/Kg		93	70 - 130

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: BIG EDDY UNIT D1 29 BATTERY

Job ID: 890-5945-1
SDG: 03C1558310

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

Lab Sample ID: LCS 880-70792/2-A
Matrix: Solid
Analysis Batch: 70811

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 70792

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	88		70 - 130
o-Terphenyl	90		70 - 130

Lab Sample ID: LCSD 880-70792/3-A
Matrix: Solid
Analysis Batch: 70811

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 70792

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1046		mg/Kg		105	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			1000	904.7		mg/Kg		90	70 - 130	3	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	99		70 - 130
o-Terphenyl	104		70 - 130

Lab Sample ID: 880-37809-A-21-E MS
Matrix: Solid
Analysis Batch: 70811

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 70792

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F1	1010	1410	F1	mg/Kg		136	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U F1	1010	1452	F1	mg/Kg		139	70 - 130		

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	158	S1+	70 - 130
o-Terphenyl	117		70 - 130

Lab Sample ID: 880-37809-A-21-F MSD
Matrix: Solid
Analysis Batch: 70811

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 70792

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	<49.9	U F1	1010	1373	F1	mg/Kg		132	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<49.9	U F1	1010	1493	F1	mg/Kg		143	70 - 130	3	20

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	158	S1+	70 - 130
o-Terphenyl	118		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: BIG EDDY UNIT D1 29 BATTERY

Job ID: 890-5945-1
SDG: 03C1558310

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-70717/1-A Matrix: Solid Analysis Batch: 70796										Client Sample ID: Method Blank Prep Type: Soluble	
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac			
Chloride	<5.00	U	5.00	mg/Kg			01/13/24 04:04	1			

Lab Sample ID: LCS 880-70717/2-A Matrix: Solid Analysis Batch: 70796										Client Sample ID: Lab Control Sample Prep Type: Soluble	
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	251.9		mg/Kg		101	90 - 110		

Lab Sample ID: LCSD 880-70717/3-A Matrix: Solid Analysis Batch: 70796										Client Sample ID: Lab Control Sample Dup Prep Type: Soluble	
Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	255.1		mg/Kg		102	90 - 110	1	20

Lab Sample ID: 890-5944-A-2-B MS Matrix: Solid Analysis Batch: 70796										Client Sample ID: Matrix Spike Prep Type: Soluble	
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	35.5		250	296.2		mg/Kg		104	90 - 110		

Lab Sample ID: 890-5944-A-2-C MSD Matrix: Solid Analysis Batch: 70796										Client Sample ID: Matrix Spike Duplicate Prep Type: Soluble	
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	35.5		250	296.9		mg/Kg		105	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: BIG EDDY UNIT D1 29 BATTERY

Job ID: 890-5945-1
SDG: 03C1558310

GC VOA

Prep Batch: 71001

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5945-1	SS 04	Total/NA	Solid	5035	
890-5945-2	SS 05	Total/NA	Solid	5035	
890-5945-3	SS 06	Total/NA	Solid	5035	
890-5945-4	SS 07	Total/NA	Solid	5035	
MB 880-71001/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-71001/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-71001/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5945-1 MS	SS 04	Total/NA	Solid	5035	
890-5945-1 MSD	SS 04	Total/NA	Solid	5035	

Analysis Batch: 71037

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5945-1	SS 04	Total/NA	Solid	8021B	71001
890-5945-2	SS 05	Total/NA	Solid	8021B	71001
890-5945-3	SS 06	Total/NA	Solid	8021B	71001
890-5945-4	SS 07	Total/NA	Solid	8021B	71001
MB 880-71001/5-A	Method Blank	Total/NA	Solid	8021B	71001
LCS 880-71001/1-A	Lab Control Sample	Total/NA	Solid	8021B	71001
LCSD 880-71001/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	71001
890-5945-1 MS	SS 04	Total/NA	Solid	8021B	71001
890-5945-1 MSD	SS 04	Total/NA	Solid	8021B	71001

Analysis Batch: 71100

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5945-1	SS 04	Total/NA	Solid	Total BTEX	
890-5945-2	SS 05	Total/NA	Solid	Total BTEX	
890-5945-3	SS 06	Total/NA	Solid	Total BTEX	
890-5945-4	SS 07	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 70792

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5945-1	SS 04	Total/NA	Solid	8015NM Prep	
890-5945-2	SS 05	Total/NA	Solid	8015NM Prep	
890-5945-3	SS 06	Total/NA	Solid	8015NM Prep	
890-5945-4	SS 07	Total/NA	Solid	8015NM Prep	
MB 880-70792/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-70792/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-70792/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-37809-A-21-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-37809-A-21-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 70811

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5945-1	SS 04	Total/NA	Solid	8015B NM	70792
890-5945-2	SS 05	Total/NA	Solid	8015B NM	70792
890-5945-3	SS 06	Total/NA	Solid	8015B NM	70792
890-5945-4	SS 07	Total/NA	Solid	8015B NM	70792
MB 880-70792/1-A	Method Blank	Total/NA	Solid	8015B NM	70792
LCS 880-70792/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	70792

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QC Association Summary

Client: Ensolum
Project/Site: BIG EDDY UNIT D1 29 BATTERY

Job ID: 890-5945-1
SDG: 03C1558310

GC Semi VOA (Continued)

Analysis Batch: 70811 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-70792/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	70792
880-37809-A-21-E MS	Matrix Spike	Total/NA	Solid	8015B NM	70792
880-37809-A-21-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	70792

Analysis Batch: 70916

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5945-1	SS 04	Total/NA	Solid	8015 NM	
890-5945-2	SS 05	Total/NA	Solid	8015 NM	
890-5945-3	SS 06	Total/NA	Solid	8015 NM	
890-5945-4	SS 07	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 70717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5945-1	SS 04	Soluble	Solid	DI Leach	
890-5945-2	SS 05	Soluble	Solid	DI Leach	
890-5945-3	SS 06	Soluble	Solid	DI Leach	
890-5945-4	SS 07	Soluble	Solid	DI Leach	
MB 880-70717/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-70717/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-70717/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5944-A-2-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-5944-A-2-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 70796

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5945-1	SS 04	Soluble	Solid	300.0	70717
890-5945-2	SS 05	Soluble	Solid	300.0	70717
890-5945-3	SS 06	Soluble	Solid	300.0	70717
890-5945-4	SS 07	Soluble	Solid	300.0	70717
MB 880-70717/1-A	Method Blank	Soluble	Solid	300.0	70717
LCS 880-70717/2-A	Lab Control Sample	Soluble	Solid	300.0	70717
LCSD 880-70717/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	70717
890-5944-A-2-B MS	Matrix Spike	Soluble	Solid	300.0	70717
890-5944-A-2-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	70717

Lab Chronicle

Client: Ensolum
Project/Site: BIG EDDY UNIT D1 29 BATTERY

Job ID: 890-5945-1
SDG: 03C1558310

Client Sample ID: SS 04

Date Collected: 01/10/24 10:55

Date Received: 01/10/24 14:53

Lab Sample ID: 890-5945-1

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			5.05 g	5 mL	71001	01/16/24 13:33	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71037	01/17/24 14:42	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71100	01/17/24 14:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			70916	01/14/24 15:19	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	70792	01/12/24 17:11	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	70811	01/14/24 15:19	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	70717	01/12/24 08:10	CH	EET MID
Soluble	Analysis	300.0		1			70796	01/13/24 05:51	CH	EET MID

Client Sample ID: SS 05

Date Collected: 01/10/24 11:00

Date Received: 01/10/24 14:53

Lab Sample ID: 890-5945-2

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			5.02 g	5 mL	71001	01/16/24 13:33	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71037	01/17/24 11:58	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71100	01/17/24 11:58	SM	EET MID
Total/NA	Analysis	8015 NM		1			70916	01/14/24 15:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	70792	01/12/24 17:11	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	70811	01/14/24 15:40	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	70717	01/12/24 08:10	CH	EET MID
Soluble	Analysis	300.0		1			70796	01/13/24 06:07	CH	EET MID

Client Sample ID: SS 06

Date Collected: 01/10/24 11:15

Date Received: 01/10/24 14:53

Lab Sample ID: 890-5945-3

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			4.97 g	5 mL	71001	01/16/24 13:33	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71037	01/17/24 12:19	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71100	01/17/24 12:19	SM	EET MID
Total/NA	Analysis	8015 NM		1			70916	01/14/24 16:02	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	70792	01/12/24 17:11	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	70811	01/14/24 16:02	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	70717	01/12/24 08:10	CH	EET MID
Soluble	Analysis	300.0		1			70796	01/13/24 06:12	CH	EET MID

Client Sample ID: SS 07

Date Collected: 01/10/24 11:10

Date Received: 01/10/24 14:53

Lab Sample ID: 890-5945-4

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			4.99 g	5 mL	71001	01/16/24 13:33	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71037	01/17/24 12:39	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71100	01/17/24 12:39	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: BIG EDDY UNIT D1 29 BATTERY

Job ID: 890-5945-1
SDG: 03C1558310

Client Sample ID: SS 07

Date Collected: 01/10/24 11:10

Date Received: 01/10/24 14:53

Lab Sample ID: 890-5945-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			70916	01/14/24 16:45	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	70792	01/12/24 17:11	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	70811	01/14/24 16:45	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	70717	01/12/24 08:10	CH	EET MID
Soluble	Analysis	300.0		1			70796	01/13/24 06:17	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: BIG EDDY UNIT D1 29 BATTERY

Job ID: 890-5945-1
SDG: 03C1558310

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: BIG EDDY UNIT D1 29 BATTERY

Job ID: 890-5945-1
SDG: 03C1558310

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: BIG EDDY UNIT D1 29 BATTERY

Job ID: 890-5945-1
SDG: 03C1558310

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5945-1	SS 04	Solid	01/10/24 10:55	01/10/24 14:53	0.5'
890-5945-2	SS 05	Solid	01/10/24 11:00	01/10/24 14:53	0.5'
890-5945-3	SS 06	Solid	01/10/24 11:15	01/10/24 14:53	0.5'
890-5945-4	SS 07	Solid	01/10/24 11:10	01/10/24 14:53	0.5'

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Environment Testing
Xenco

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

Work Order No: _____

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Project Manager:	Ben Beall	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:	989-854-0852	Email:	bbeall@ensolum.com

Work Order Comments	
Program:	UST/PST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRC <input type="checkbox"/> Superfund <input type="checkbox"/>
State of Project:	
Reporting:	Level II <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> TRRP <input type="checkbox"/> Level IV <input type="checkbox"/>
Deliverables:	EDD <input type="checkbox"/> ADaPT <input type="checkbox"/> Other: _____

Project Name:		BIG EDDY UNIT DI 29 BATTERY		m Around		ANALYSIS REQUEST		Preservative Codes	
Project Number:		03C1558310		<input checked="" type="checkbox"/> Routine <input type="checkbox"/> Rush		Pres. Code		None: NO DI Water: H ₂ O	
Project Location:		32-5647, -103-77843		Due Date:		Barcode		Cool: Cool MeOH: Me	
Sampler's Name:		Meredith Roberts		TAT starts the day received by the lab, if received by 4:30pm		890-5945 Chain of Custody		HCL: HC HNO ₃ : HN	
PO #:								H ₂ SO ₄ : H ₂ NaOH: Na	
SAMPLE RECEIPT		Temp Blank: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Wet Ice: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Parameters		H ₃ PO ₄ : HP	
Samples Received Intact:		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Thermometer ID:		BTEX		NaHSO ₄ : NABIS	
Cooler Custody Seals:		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		Correction Factor:		Chlorides		Na ₂ S ₂ O ₃ : NaSO ₃	
Sample Custody Seals:		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		Temperature Reading:		TPH		Zn Acetate+NaOH: Zn	
Total Containers:				Corrected Temperature:				NaOH+Ascorbic Acid: SAPC	
Sample Identification		Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Sample Comments	
SS04	S	1/10/24	1055	0.5'	G	1	X	X	Incident #:
SS05	↓	↓	1100	↓	↓	↓	↓	↓	Napp 233i 0499160
SS06	↓	↓	1115	↓	↓	↓	↓	↓	
SS07	↓	↓	1110	↓	↓	↓	↓	↓	COST CENTER:
									PENDING
									mroberts@ensolum.com

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)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	2	1/10/24 1453	3	4	
3	5		6		
5					

Revised Date: 08/25/2020 Rev. 2020.2

1089 N Canal St
Carlsbad, NM 88220
Phone: 575-988-3199 Fax 575-988-3199

Chain of Custody Record



Environment Testing

1/18/2024

Client Information (Sub Contract Lab)				Sampler		Lab PM: Kramer, Jessica		Carrier Tracking No(s)		COC No: 890-2229 1																					
Client Contact: Shipping/Receiving				Phone:		E-Mail: Jessica.Kramer@et.eurofinsus.com		State of Origin: New Mexico		Page Page 1 of 1																					
Company: Eurofins Environment Testing South Centr						Accreditations Required (See note): NELAP - Texas				Job #: 890-5945-1																					
Address: 1211 W Florida Ave,				Due Date Requested 1/16/2024		Analysis Requested						Preservation Codes A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Y - Trizma Z - other (specify)																			
City: Midland		TAT Requested (days):		PO #:																											
State Zip: TX, 79701				WO #:																											
Phone: 432-704-5440(Tel)				Project #: 89000093																											
Email:				SSOW#:																											
Project Name: BIG EDDY UNIT D1 29 BATTERY																															
Site																															
Sample Identification - Client ID (Lab ID)				Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=tissue, A=air)		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		8016MOD_NMI/8016NM_S_Prep (MOD) Full TPH		8016MOD_Calc		300_ORGFM_28/DI_LEACH Chloride		8021B/6035FP_Calc (MOD) BTEX		Total_BTEX_GCV		Total Number of containers		Special Instructions/Note:			
SS 04 (890-5945-1)				1/10/24		10 55 Mountain		Solid		Solid						X		X		X		X		X				1			
SS 05 (890-5945-2)				1/10/24		11 00 Mountain		Solid		Solid						X		X		X		X		X				1			
SS 06 (890-5945-3)				1/10/24		11 15 Mountain		Solid		Solid						X		X		X		X		X				1			
SS 07 (890-5945-4)				1/10/24		11 10 Mountain		Solid		Solid						X		X		X		X		X				1			

Ver 06/08/2021

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Released to Imaging: 5/15/2024 10:58:53 AM

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5945-1

SDG Number: 03C1558310

Login Number: 5945
List Number: 1
Creator: Bruns, Shannon

List Source: Eurofins Carlsbad

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: 890-5945-1

SDG Number: 03C1558310

Login Number: 5945
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Midland
List Creation: 01/12/24 12:32 PM

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.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
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	



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Ben Belill

Ensolum

601 N. Marienfeld St.

Suite 400

Midland, Texas 79701

Generated 1/30/2024 10:23:58 AM

JOB DESCRIPTION

Big Eddy Unit DI 29 Battery

03C1558310

JOB NUMBER

890-5996-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

Eurofins Carlsbad

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



Generated
1/30/2024 10:23:58 AM

Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Client: Ensolum
Project/Site: Big Eddy Unit DI 29 Battery

Laboratory Job ID: 890-5996-1
SDG: 03C1558310

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Definitions/Glossary

Client: Ensolum
Project/Site: Big Eddy Unit DI 29 Battery

Job ID: 890-5996-1
SDG: 03C1558310

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
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: Big Eddy Unit DI 29 Battery

Job ID: 890-5996-1

Job ID: 890-5996-1

Eurofins Carlsbad

Job Narrative 890-5996-1

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 1/19/2024 1:56 PM. 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 0.2°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: PH03 (890-5996-1), PH02 (890-5996-2), PH01 (890-5996-3), SW01 (890-5996-4) and FS01 (890-5996-5).

GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: PH01 (890-5996-3). 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 880-71764 recovered under the lower control limit for Benzene and o-Xylene. The samples associated with this CCV were ran within 12 hours of passing CCV; therefore, the data have been reported.

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 880-71570 and analytical batch 880-71727 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: PH02 (890-5996-2), PH01 (890-5996-3) and SW01 (890-5996-4). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The method blank for preparation batch 880-71570 and analytical batch 880-71727 contained Diesel Range Organics (Over C10-C28) 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 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-71570 and analytical batch 880-71727 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10.

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

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-71373 and analytical batch 880-71576 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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: Big Eddy Unit DI 29 Battery

Job ID: 890-5996-1
SDG: 03C1558310

Client Sample ID: PH03

Lab Sample ID: 890-5996-1

Date Collected: 01/19/24 09:25

Matrix: Solid

Date Received: 01/19/24 13:56

Sample Depth: 2'

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		01/26/24 11:23	01/29/24 05:31	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/26/24 11:23	01/29/24 05:31	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/26/24 11:23	01/29/24 05:31	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		01/26/24 11:23	01/29/24 05:31	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/26/24 11:23	01/29/24 05:31	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		01/26/24 11:23	01/29/24 05:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	74		70 - 130	01/26/24 11:23	01/29/24 05:31	1
1,4-Difluorobenzene (Surr)	88		70 - 130	01/26/24 11:23	01/29/24 05:31	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			01/29/24 05:31	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1	mg/Kg			01/27/24 17:36	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	<50.1	U *1	50.1	mg/Kg		01/25/24 09:22	01/27/24 17:36	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1	mg/Kg		01/25/24 09:22	01/27/24 17:36	1
Oil Range Organics (Over C28-C36)	<50.1	U	50.1	mg/Kg		01/25/24 09:22	01/27/24 17:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	126		70 - 130	01/25/24 09:22	01/27/24 17:36	1
o-Terphenyl	101		70 - 130	01/25/24 09:22	01/27/24 17:36	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	142	F1	4.98	mg/Kg			01/26/24 14:15	1

Client Sample ID: PH02

Lab Sample ID: 890-5996-2

Date Collected: 01/19/24 09:35

Matrix: Solid

Date Received: 01/19/24 13:56

Sample Depth: 2'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/26/24 11:23	01/29/24 05:51	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/26/24 11:23	01/29/24 05:51	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/26/24 11:23	01/29/24 05:51	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/26/24 11:23	01/29/24 05:51	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/26/24 11:23	01/29/24 05:51	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/26/24 11:23	01/29/24 05:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	79		70 - 130	01/26/24 11:23	01/29/24 05:51	1

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Client Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit DI 29 Battery

Job ID: 890-5996-1
SDG: 03C1558310

Client Sample ID: PH02

Lab Sample ID: 890-5996-2

Date Collected: 01/19/24 09:35

Matrix: Solid

Date Received: 01/19/24 13:56

Sample Depth: 2'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	81		70 - 130	01/26/24 11:23	01/29/24 05:51	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			01/29/24 05:51	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5	mg/Kg			01/27/24 17:57	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	<50.5	U *1	50.5	mg/Kg		01/25/24 09:22	01/27/24 17:57	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5	mg/Kg		01/25/24 09:22	01/27/24 17:57	1
Oil Range Organics (Over C28-C36)	<50.5	U	50.5	mg/Kg		01/25/24 09:22	01/27/24 17:57	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	139	S1+	70 - 130			01/25/24 09:22	01/27/24 17:57	1
o-Terphenyl	112		70 - 130			01/25/24 09:22	01/27/24 17:57	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	190		5.00	mg/Kg			01/26/24 14:29	1

Client Sample ID: PH01

Lab Sample ID: 890-5996-3

Date Collected: 01/19/24 09:45

Matrix: Solid

Date Received: 01/19/24 13:56

Sample Depth: 2'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/26/24 11:23	01/29/24 06:12	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/26/24 11:23	01/29/24 06:12	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/26/24 11:23	01/29/24 06:12	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/26/24 11:23	01/29/24 06:12	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/26/24 11:23	01/29/24 06:12	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/26/24 11:23	01/29/24 06:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		70 - 130	01/26/24 11:23	01/29/24 06:12	1
1,4-Difluorobenzene (Surr)	65	S1-	70 - 130	01/26/24 11:23	01/29/24 06:12	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			01/29/24 06:12	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			01/27/24 18:18	1

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Client Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit DI 29 Battery

Job ID: 890-5996-1
SDG: 03C1558310

Client Sample ID: PH01

Lab Sample ID: 890-5996-3

Date Collected: 01/19/24 09:45

Matrix: Solid

Date Received: 01/19/24 13:56

Sample Depth: 2'

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	<50.0	U *1	50.0	mg/Kg		01/25/24 09:22	01/27/24 18:18	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/25/24 09:22	01/27/24 18:18	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/25/24 09:22	01/27/24 18:18	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	131	S1+	70 - 130			01/25/24 09:22	01/27/24 18:18	1
o-Terphenyl	106		70 - 130			01/25/24 09:22	01/27/24 18:18	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	222		4.95	mg/Kg			01/26/24 14:34	1

Client Sample ID: SW01

Lab Sample ID: 890-5996-4

Date Collected: 01/19/24 10:05

Matrix: Solid

Date Received: 01/19/24 13:56

Sample Depth: 0-1'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		01/26/24 11:23	01/29/24 06:32	1
Toluene	<0.00201	U	0.00201	mg/Kg		01/26/24 11:23	01/29/24 06:32	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		01/26/24 11:23	01/29/24 06:32	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		01/26/24 11:23	01/29/24 06:32	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		01/26/24 11:23	01/29/24 06:32	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		01/26/24 11:23	01/29/24 06:32	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	82		70 - 130			01/26/24 11:23	01/29/24 06:32	1
1,4-Difluorobenzene (Surr)	75		70 - 130			01/26/24 11:23	01/29/24 06:32	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			01/29/24 06:32	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			01/27/24 18:40	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 *1	49.8	mg/Kg		01/25/24 09:22	01/27/24 18:40	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		01/25/24 09:22	01/27/24 18:40	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		01/25/24 09:22	01/27/24 18:40	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	144	S1+	70 - 130			01/25/24 09:22	01/27/24 18:40	1
o-Terphenyl	120		70 - 130			01/25/24 09:22	01/27/24 18:40	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit DI 29 Battery

Job ID: 890-5996-1
SDG: 03C1558310

Client Sample ID: SW01

Lab Sample ID: 890-5996-4

Date Collected: 01/19/24 10:05

Matrix: Solid

Date Received: 01/19/24 13:56

Sample Depth: 0-1'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	117		4.99	mg/Kg			01/26/24 14:39	1

Client Sample ID: FS01

Lab Sample ID: 890-5996-5

Date Collected: 01/19/24 10:10

Matrix: Solid

Date Received: 01/19/24 13:56

Sample Depth: 1'

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		01/26/24 11:23	01/29/24 06:52	1
Toluene	<0.00202	U	0.00202	mg/Kg		01/26/24 11:23	01/29/24 06:52	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		01/26/24 11:23	01/29/24 06:52	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		01/26/24 11:23	01/29/24 06:52	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		01/26/24 11:23	01/29/24 06:52	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		01/26/24 11:23	01/29/24 06:52	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	77		70 - 130			01/26/24 11:23	01/29/24 06:52	1
1,4-Difluorobenzene (Surr)	80		70 - 130			01/26/24 11:23	01/29/24 06:52	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			01/29/24 06:52	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			01/27/24 19:01	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 *1	49.8	mg/Kg		01/25/24 09:22	01/27/24 19:01	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		01/25/24 09:22	01/27/24 19:01	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		01/25/24 09:22	01/27/24 19:01	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	129		70 - 130			01/25/24 09:22	01/27/24 19:01	1
o-Terphenyl	104		70 - 130			01/25/24 09:22	01/27/24 19:01	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	126		5.04	mg/Kg			01/26/24 14:44	1

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Surrogate Summary

Client: Ensolum
Project/Site: Big Eddy Unit DI 29 Battery

Job ID: 890-5996-1
SDG: 03C1558310

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)
880-38523-A-1-A MS	Matrix Spike	109	106
880-38523-A-1-B MSD	Matrix Spike Duplicate	108	99
890-5996-1	PH03	74	88
890-5996-2	PH02	79	81
890-5996-3	PH01	83	65 S1-
890-5996-4	SW01	82	75
890-5996-5	FS01	77	80
LCS 880-71690/1-A	Lab Control Sample	101	96
LCSD 880-71690/2-A	Lab Control Sample Dup	107	99
MB 880-71690/5-A	Method Blank	76	79
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)
880-38323-A-2-C MS	Matrix Spike	129	91
880-38323-A-2-D MSD	Matrix Spike Duplicate	130	89
890-5996-1	PH03	126	101
890-5996-2	PH02	139 S1+	112
890-5996-3	PH01	131 S1+	106
890-5996-4	SW01	144 S1+	120
890-5996-5	FS01	129	104
LCS 880-71570/2-A	Lab Control Sample	86	76
LCSD 880-71570/3-A	Lab Control Sample Dup	95	90
MB 880-71570/1-A	Method Blank	167 S1+	139 S1+
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

QC Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit DI 29 Battery

Job ID: 890-5996-1
SDG: 03C1558310

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-71690/5-A					Client Sample ID: Method Blank				
Matrix: Solid					Prep Type: Total/NA				
Analysis Batch: 71764					Prep Batch: 71690				
Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac	
	Result	Qualifier							
Benzene	<0.00200	U	0.00200	mg/Kg		01/26/24 11:23	01/28/24 23:01	1	
Toluene	<0.00200	U	0.00200	mg/Kg		01/26/24 11:23	01/28/24 23:01	1	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/26/24 11:23	01/28/24 23:01	1	
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/26/24 11:23	01/28/24 23:01	1	
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/26/24 11:23	01/28/24 23:01	1	
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/26/24 11:23	01/28/24 23:01	1	
Surrogate	MB	MB	Limits			Prepared	Analyzed	Dil Fac	
	%Recovery	Qualifier							
4-Bromofluorobenzene (Surr)	76		70 - 130			01/26/24 11:23	01/28/24 23:01	1	
1,4-Difluorobenzene (Surr)	79		70 - 130			01/26/24 11:23	01/28/24 23:01	1	

Lab Sample ID: LCS 880-71690/1-A						Client Sample ID: Lab Control Sample			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 71764						Prep Batch: 71690			
Analyte		Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Benzene		0.100	0.09301		mg/Kg		93	70 - 130	
Toluene		0.100	0.09535		mg/Kg		95	70 - 130	
Ethylbenzene		0.100	0.1044		mg/Kg		104	70 - 130	
m-Xylene & p-Xylene		0.200	0.1961		mg/Kg		98	70 - 130	
o-Xylene		0.100	0.1177		mg/Kg		118	70 - 130	
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	101		70 - 130						
1,4-Difluorobenzene (Surr)	96		70 - 130						

Lab Sample ID: LCSD 880-71690/2-A						Client Sample ID: Lab Control Sample Dup				
Matrix: Solid						Prep Type: Total/NA				
Analysis Batch: 71764						Prep Batch: 71690				
Analyte		Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Benzene		0.100	0.09511		mg/Kg		95	70 - 130	2	35
Toluene		0.100	0.1015		mg/Kg		101	70 - 130	6	35
Ethylbenzene		0.100	0.1094		mg/Kg		109	70 - 130	5	35
m-Xylene & p-Xylene		0.200	0.2236		mg/Kg		112	70 - 130	13	35
o-Xylene		0.100	0.1174		mg/Kg		117	70 - 130	0	35
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits							
4-Bromofluorobenzene (Surr)	107		70 - 130							
1,4-Difluorobenzene (Surr)	99		70 - 130							

Lab Sample ID: 880-38523-A-1-A MS						Client Sample ID: Matrix Spike			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 71764						Prep Batch: 71690			
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U	0.0996	0.09197		mg/Kg		92	70 - 130
Toluene	<0.00201	U	0.0996	0.09604		mg/Kg		96	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit DI 29 Battery

Job ID: 890-5996-1
SDG: 03C1558310

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

Lab Sample ID: 880-38523-A-1-A MS					Client Sample ID: Matrix Spike						
Matrix: Solid					Prep Type: Total/NA						
Analysis Batch: 71764					Prep Batch: 71690						
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Ethylbenzene	<0.00201	U	0.0996	0.1030		mg/Kg		103	70 - 130		
m-Xylene & p-Xylene	<0.00402	U	0.199	0.2081		mg/Kg		104	70 - 130		
o-Xylene	<0.00201	U	0.0996	0.1053		mg/Kg		105	70 - 130		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	109		70 - 130								
1,4-Difluorobenzene (Surr)	106		70 - 130								

Lab Sample ID: 880-38523-A-1-B MSD						Client Sample ID: Matrix Spike Duplicate					
Matrix: Solid						Prep Type: Total/NA					
Analysis Batch: 71764						Prep Batch: 71690					
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00201	U	0.0990	0.09055		mg/Kg		91	70 - 130	2	35
Toluene	<0.00201	U	0.0990	0.1004		mg/Kg		101	70 - 130	4	35
Ethylbenzene	<0.00201	U	0.0990	0.1148		mg/Kg		116	70 - 130	11	35
m-Xylene & p-Xylene	<0.00402	U	0.198	0.2240		mg/Kg		113	70 - 130	7	35
o-Xylene	<0.00201	U	0.0990	0.1109		mg/Kg		112	70 - 130	5	35

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

Lab Sample ID: MB 880-71570/1-A						Client Sample ID: Method Blank			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 71727						Prep Batch: 71570			
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		01/25/24 09:22	01/27/24 08:06	1	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/25/24 09:22	01/27/24 08:06	1	
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/25/24 09:22	01/27/24 08:06	1	
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	167	S1+	70 - 130			01/25/24 09:22	01/27/24 08:06	1	
o-Terphenyl	139	S1+	70 - 130			01/25/24 09:22	01/27/24 08:06	1	

Lab Sample ID: LCS 880-71570/2-A				Client Sample ID: Lab Control Sample						
Matrix: Solid				Prep Type: Total/NA						
Analysis Batch: 71727				Prep Batch: 71570						
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits			
Gasoline Range Organics (GRO)-C6-C10	1000	921.3		mg/Kg		92	70 - 130			
Diesel Range Organics (Over C10-C28)	1000	916.2		mg/Kg		92	70 - 130			

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QC Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit DI 29 Battery

Job ID: 890-5996-1
SDG: 03C1558310

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

Lab Sample ID: LCS 880-71570/2-A

Matrix: Solid

Analysis Batch: 71727

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 71570

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	86		70 - 130
o-Terphenyl	76		70 - 130

Lab Sample ID: LCSD 880-71570/3-A

Matrix: Solid

Analysis Batch: 71727

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 71570

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1162	*1	mg/Kg		116	70 - 130	23	20
Diesel Range Organics (Over C10-C28)	1000	920.9		mg/Kg		92	70 - 130	1	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	95		70 - 130
o-Terphenyl	90		70 - 130

Lab Sample ID: 880-38323-A-2-C MS

Matrix: Solid

Analysis Batch: 71727

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 71570

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	992	895.0		mg/Kg		89	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	992	1189		mg/Kg		117	70 - 130

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	129		70 - 130
o-Terphenyl	91		70 - 130

Lab Sample ID: 880-38323-A-2-D MSD

Matrix: Solid

Analysis Batch: 71727

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 71570

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	<49.9	U *1	992	918.0		mg/Kg		91	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<49.9	U	992	1187		mg/Kg		116	70 - 130	0	20

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	130		70 - 130
o-Terphenyl	89		70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit DI 29 Battery

Job ID: 890-5996-1
SDG: 03C1558310

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-71373/1-A										Client Sample ID: Method Blank	
Matrix: Solid										Prep Type: Soluble	
Analysis Batch: 71576											
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac			
Chloride	<5.00	U	5.00	mg/Kg			01/26/24 14:00	1			
Lab Sample ID: LCS 880-71373/2-A										Client Sample ID: Lab Control Sample	
Matrix: Solid										Prep Type: Soluble	
Analysis Batch: 71576											
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits				
Chloride	250	240.2		mg/Kg		96	90 - 110				
Lab Sample ID: LCSD 880-71373/3-A										Client Sample ID: Lab Control Sample Dup	
Matrix: Solid										Prep Type: Soluble	
Analysis Batch: 71576											
Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit		
Chloride	250	265.5		mg/Kg		106	90 - 110	10	20		
Lab Sample ID: 890-5996-1 MS										Client Sample ID: PH03	
Matrix: Solid										Prep Type: Soluble	
Analysis Batch: 71576											
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	142	F1	249	390.8		mg/Kg		100	90 - 110		
Lab Sample ID: 890-5996-1 MSD										Client Sample ID: PH03	
Matrix: Solid										Prep Type: Soluble	
Analysis Batch: 71576											
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	142	F1	249	423.9	F1	mg/Kg		113	90 - 110	8	20

QC Association Summary

Client: Ensolum
Project/Site: Big Eddy Unit DI 29 Battery

Job ID: 890-5996-1
SDG: 03C1558310

GC VOA

Prep Batch: 71690

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5996-1	PH03	Total/NA	Solid	5035	
890-5996-2	PH02	Total/NA	Solid	5035	
890-5996-3	PH01	Total/NA	Solid	5035	
890-5996-4	SW01	Total/NA	Solid	5035	
890-5996-5	FS01	Total/NA	Solid	5035	
MB 880-71690/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-71690/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-71690/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-38523-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-38523-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 71764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5996-1	PH03	Total/NA	Solid	8021B	71690
890-5996-2	PH02	Total/NA	Solid	8021B	71690
890-5996-3	PH01	Total/NA	Solid	8021B	71690
890-5996-4	SW01	Total/NA	Solid	8021B	71690
890-5996-5	FS01	Total/NA	Solid	8021B	71690
MB 880-71690/5-A	Method Blank	Total/NA	Solid	8021B	71690
LCS 880-71690/1-A	Lab Control Sample	Total/NA	Solid	8021B	71690
LCSD 880-71690/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	71690
880-38523-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	71690
880-38523-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	71690

Analysis Batch: 71827

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5996-1	PH03	Total/NA	Solid	Total BTEX	
890-5996-2	PH02	Total/NA	Solid	Total BTEX	
890-5996-3	PH01	Total/NA	Solid	Total BTEX	
890-5996-4	SW01	Total/NA	Solid	Total BTEX	
890-5996-5	FS01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 71570

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5996-1	PH03	Total/NA	Solid	8015NM Prep	
890-5996-2	PH02	Total/NA	Solid	8015NM Prep	
890-5996-3	PH01	Total/NA	Solid	8015NM Prep	
890-5996-4	SW01	Total/NA	Solid	8015NM Prep	
890-5996-5	FS01	Total/NA	Solid	8015NM Prep	
MB 880-71570/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-71570/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-71570/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-38323-A-2-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-38323-A-2-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 71727

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5996-1	PH03	Total/NA	Solid	8015B NM	71570
890-5996-2	PH02	Total/NA	Solid	8015B NM	71570

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QC Association Summary

Client: Ensolum
Project/Site: Big Eddy Unit DI 29 Battery

Job ID: 890-5996-1
SDG: 03C1558310

GC Semi VOA (Continued)

Analysis Batch: 71727 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5996-3	PH01	Total/NA	Solid	8015B NM	71570
890-5996-4	SW01	Total/NA	Solid	8015B NM	71570
890-5996-5	FS01	Total/NA	Solid	8015B NM	71570
MB 880-71570/1-A	Method Blank	Total/NA	Solid	8015B NM	71570
LCS 880-71570/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	71570
LCSD 880-71570/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	71570
880-38323-A-2-C MS	Matrix Spike	Total/NA	Solid	8015B NM	71570
880-38323-A-2-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	71570

Analysis Batch: 71921

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5996-1	PH03	Total/NA	Solid	8015 NM	
890-5996-2	PH02	Total/NA	Solid	8015 NM	
890-5996-3	PH01	Total/NA	Solid	8015 NM	
890-5996-4	SW01	Total/NA	Solid	8015 NM	
890-5996-5	FS01	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 71373

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5996-1	PH03	Soluble	Solid	DI Leach	
890-5996-2	PH02	Soluble	Solid	DI Leach	
890-5996-3	PH01	Soluble	Solid	DI Leach	
890-5996-4	SW01	Soluble	Solid	DI Leach	
890-5996-5	FS01	Soluble	Solid	DI Leach	
MB 880-71373/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-71373/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-71373/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5996-1 MS	PH03	Soluble	Solid	DI Leach	
890-5996-1 MSD	PH03	Soluble	Solid	DI Leach	

Analysis Batch: 71576

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5996-1	PH03	Soluble	Solid	300.0	71373
890-5996-2	PH02	Soluble	Solid	300.0	71373
890-5996-3	PH01	Soluble	Solid	300.0	71373
890-5996-4	SW01	Soluble	Solid	300.0	71373
890-5996-5	FS01	Soluble	Solid	300.0	71373
MB 880-71373/1-A	Method Blank	Soluble	Solid	300.0	71373
LCS 880-71373/2-A	Lab Control Sample	Soluble	Solid	300.0	71373
LCSD 880-71373/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	71373
890-5996-1 MS	PH03	Soluble	Solid	300.0	71373
890-5996-1 MSD	PH03	Soluble	Solid	300.0	71373

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: Big Eddy Unit DI 29 Battery

Job ID: 890-5996-1
SDG: 03C1558310

Client Sample ID: PH03

Date Collected: 01/19/24 09:25

Date Received: 01/19/24 13:56

Lab Sample ID: 890-5996-1

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			4.99 g	5 mL	71690	01/26/24 11:23	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71764	01/29/24 05:31	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71827	01/29/24 05:31	SM	EET MID
Total/NA	Analysis	8015 NM		1			71921	01/27/24 17:36	SM	EET MID
Total/NA	Prep	8015NM Prep			9.99 g	10 mL	71570	01/25/24 09:22	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71727	01/27/24 17:36	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	71373	01/22/24 16:59	SA	EET MID
Soluble	Analysis	300.0		1			71576	01/26/24 14:15	CH	EET MID

Client Sample ID: PH02

Date Collected: 01/19/24 09:35

Date Received: 01/19/24 13:56

Lab Sample ID: 890-5996-2

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			5.02 g	5 mL	71690	01/26/24 11:23	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71764	01/29/24 05:51	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71827	01/29/24 05:51	SM	EET MID
Total/NA	Analysis	8015 NM		1			71921	01/27/24 17:57	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	71570	01/25/24 09:22	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71727	01/27/24 17:57	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	71373	01/22/24 16:59	SA	EET MID
Soluble	Analysis	300.0		1			71576	01/26/24 14:29	CH	EET MID

Client Sample ID: PH01

Date Collected: 01/19/24 09:45

Date Received: 01/19/24 13:56

Lab Sample ID: 890-5996-3

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			5.03 g	5 mL	71690	01/26/24 11:23	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71764	01/29/24 06:12	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71827	01/29/24 06:12	SM	EET MID
Total/NA	Analysis	8015 NM		1			71921	01/27/24 18:18	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	71570	01/25/24 09:22	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71727	01/27/24 18:18	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	71373	01/22/24 16:59	SA	EET MID
Soluble	Analysis	300.0		1			71576	01/26/24 14:34	CH	EET MID

Client Sample ID: SW01

Date Collected: 01/19/24 10:05

Date Received: 01/19/24 13:56

Lab Sample ID: 890-5996-4

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			4.97 g	5 mL	71690	01/26/24 11:23	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71764	01/29/24 06:32	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71827	01/29/24 06:32	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: Big Eddy Unit DI 29 Battery

Job ID: 890-5996-1
SDG: 03C1558310

Client Sample ID: SW01

Date Collected: 01/19/24 10:05

Date Received: 01/19/24 13:56

Lab Sample ID: 890-5996-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			71921	01/27/24 18:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	71570	01/25/24 09:22	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71727	01/27/24 18:40	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	71373	01/22/24 16:59	SA	EET MID
Soluble	Analysis	300.0		1			71576	01/26/24 14:39	CH	EET MID

Client Sample ID: FS01

Date Collected: 01/19/24 10:10

Date Received: 01/19/24 13:56

Lab Sample ID: 890-5996-5

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			4.95 g	5 mL	71690	01/26/24 11:23	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71764	01/29/24 06:52	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71827	01/29/24 06:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			71921	01/27/24 19:01	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	71570	01/25/24 09:22	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71727	01/27/24 19:01	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	71373	01/22/24 16:59	SA	EET MID
Soluble	Analysis	300.0		1			71576	01/26/24 14:44	CH	EET MID

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Big Eddy Unit DI 29 Battery

Job ID: 890-5996-1
SDG: 03C1558310

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: Big Eddy Unit DI 29 Battery

Job ID: 890-5996-1
SDG: 03C1558310

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: Big Eddy Unit DI 29 Battery

Job ID: 890-5996-1
SDG: 03C1558310

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5996-1	PH03	Solid	01/19/24 09:25	01/19/24 13:56	2'
890-5996-2	PH02	Solid	01/19/24 09:35	01/19/24 13:56	2'
890-5996-3	PH01	Solid	01/19/24 09:45	01/19/24 13:56	2'
890-5996-4	SW01	Solid	01/19/24 10:05	01/19/24 13:56	0-1'
890-5996-5	FS01	Solid	01/19/24 10:10	01/19/24 13:56	1'

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890-5996 Chain of Custody

www.xenco.com Page 1 of 1

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐

State of Project:

Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐Deliverables: EDD ☐ ADaPT ☐ Other: _____

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



Loc: 890
5996

Project Manager:	Ben Bellill	Bill to: (if different)	Garrett Green
Company Name:	Ensolum	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Green St.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	303-887-2946	Email:	Garrett.Green@ExxonMobil.com

[illegible]

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)		Date/Time	
1					
3					
5					

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5996-1

SDG Number: 03C1558310

Login Number: 5996

List Source: Eurofins Carlsbad

List Number: 1

Creator: Lopez, Abraham

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: 890-5996-1

SDG Number: 03C1558310

Login Number: 5996

List Number: 2

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

List Creation: 01/23/24 12:33 PM

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	



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Ben Belill
Ensolum

601 N. Marienfeld St.
Suite 400

Midland, Texas 79701

Generated 1/29/2024 5:08:22 PM

JOB DESCRIPTION

Big Eddy Unit DI 29 Battery
03C1558310

JOB NUMBER

890-5997-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

Eurofins Carlsbad

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



Generated
1/29/2024 5:08:22 PM

Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Client: Ensolum
Project/Site: Big Eddy Unit DI 29 Battery

Laboratory Job ID: 890-5997-1
SDG: 03C1558310

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Definitions/Glossary

Client: Ensolum
Project/Site: Big Eddy Unit DI 29 Battery

Job ID: 890-5997-1
SDG: 03C1558310

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
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: Big Eddy Unit DI 29 Battery

Job ID: 890-5997-1

Job ID: 890-5997-1

Eurofins Carlsbad

Job Narrative 890-5997-1

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 1/19/2024 1:46 PM. 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 0.2°C

Receipt Exceptions

The following samples analyzed for method were received and analyzed from an unpreserved bulk soil jar: FS02 (890-5997-1), FS03 (890-5997-2), FS04 (890-5997-3), FS05 (890-5997-4), FS06 (890-5997-5), FS07 (890-5997-6) and FS08 (890-5997-7).

GC VOA

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-71518 and 880-71629 and analytical batch 880-71762 was outside the upper control limits.

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

GC Semi VOA

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

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-71373 and analytical batch 880-71576 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit DI 29 Battery

Job ID: 890-5997-1
SDG: 03C1558310

Client Sample ID: FS02

Lab Sample ID: 890-5997-1

Date Collected: 01/19/24 11:05

Matrix: Solid

Date Received: 01/19/24 13:46

Sample Depth: 0.25'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:53	01/29/24 08:16	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:53	01/29/24 08:16	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:53	01/29/24 08:16	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/25/24 17:53	01/29/24 08:16	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:53	01/29/24 08:16	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/25/24 17:53	01/29/24 08:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	01/25/24 17:53	01/29/24 08:16	1
1,4-Difluorobenzene (Surr)	111		70 - 130	01/25/24 17:53	01/29/24 08:16	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			01/29/24 08:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6	mg/Kg			01/26/24 02:15	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	<49.6	U	49.6	mg/Kg		01/24/24 10:23	01/26/24 02:15	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6	mg/Kg		01/24/24 10:23	01/26/24 02:15	1
Oil Range Organics (Over C28-C36)	<49.6	U	49.6	mg/Kg		01/24/24 10:23	01/26/24 02:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	94		70 - 130	01/24/24 10:23	01/26/24 02:15	1
o-Terphenyl	107		70 - 130	01/24/24 10:23	01/26/24 02:15	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	33.8		4.97	mg/Kg			01/26/24 14:58	1

Client Sample ID: FS03

Lab Sample ID: 890-5997-2

Date Collected: 01/19/24 11:10

Matrix: Solid

Date Received: 01/19/24 13:46

Sample Depth: 0.25'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:53	01/29/24 08:36	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:53	01/29/24 08:36	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:53	01/29/24 08:36	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/25/24 17:53	01/29/24 08:36	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:53	01/29/24 08:36	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/25/24 17:53	01/29/24 08:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	01/25/24 17:53	01/29/24 08:36	1

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Client Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit DI 29 Battery

Job ID: 890-5997-1
SDG: 03C1558310

Client Sample ID: FS03

Lab Sample ID: 890-5997-2

Date Collected: 01/19/24 11:10

Matrix: Solid

Date Received: 01/19/24 13:46

Sample Depth: 0.25'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	100		70 - 130	01/25/24 17:53	01/29/24 08:36	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			01/29/24 08:36	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			01/26/24 02:36	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		01/24/24 10:23	01/26/24 02:36	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		01/24/24 10:23	01/26/24 02:36	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/24/24 10:23	01/26/24 02:36	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	98		70 - 130			01/24/24 10:23	01/26/24 02:36	1
o-Terphenyl	116		70 - 130			01/24/24 10:23	01/26/24 02:36	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	30.1		4.96	mg/Kg			01/26/24 15:03	1

Client Sample ID: FS04

Lab Sample ID: 890-5997-3

Date Collected: 01/19/24 11:15

Matrix: Solid

Date Received: 01/19/24 13:46

Sample Depth: 0.25'

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		01/25/24 17:53	01/29/24 10:26	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/25/24 17:53	01/29/24 10:26	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/25/24 17:53	01/29/24 10:26	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		01/25/24 17:53	01/29/24 10:26	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/25/24 17:53	01/29/24 10:26	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		01/25/24 17:53	01/29/24 10:26	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 130			01/25/24 17:53	01/29/24 10:26	1
1,4-Difluorobenzene (Surr)	104		70 - 130			01/25/24 17:53	01/29/24 10:26	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			01/29/24 10:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4	mg/Kg			01/26/24 02:57	1

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Client Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit DI 29 Battery

Job ID: 890-5997-1
SDG: 03C1558310

Client Sample ID: FS04

Lab Sample ID: 890-5997-3

Date Collected: 01/19/24 11:15

Matrix: Solid

Date Received: 01/19/24 13:46

Sample Depth: 0.25'

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	<50.4	U	50.4	mg/Kg		01/24/24 10:23	01/26/24 02:57	1	
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4	mg/Kg		01/24/24 10:23	01/26/24 02:57	1	
Oil Range Organics (Over C28-C36)	<50.4	U	50.4	mg/Kg		01/24/24 10:23	01/26/24 02:57	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	98		70 - 130			01/24/24 10:23	01/26/24 02:57	1	
o-Terphenyl	112		70 - 130			01/24/24 10:23	01/26/24 02:57	1	

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	156		4.97	mg/Kg			01/26/24 15:08	1	

Client Sample ID: FS05

Lab Sample ID: 890-5997-4

Date Collected: 01/19/24 11:20

Matrix: Solid

Date Received: 01/19/24 13:46

Sample Depth: 0.25'

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	<0.00201	U	0.00201	mg/Kg		01/25/24 17:53	01/29/24 10:47	1	
Toluene	<0.00201	U	0.00201	mg/Kg		01/25/24 17:53	01/29/24 10:47	1	
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		01/25/24 17:53	01/29/24 10:47	1	
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		01/25/24 17:53	01/29/24 10:47	1	
o-Xylene	<0.00201	U	0.00201	mg/Kg		01/25/24 17:53	01/29/24 10:47	1	
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		01/25/24 17:53	01/29/24 10:47	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	107		70 - 130			01/25/24 17:53	01/29/24 10:47	1	
1,4-Difluorobenzene (Surr)	109		70 - 130			01/25/24 17:53	01/29/24 10:47	1	

Method: TAL SOP Total BTEX - Total BTEX Calculation									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total BTEX	<0.00402	U	0.00402	mg/Kg			01/29/24 10:47	1	

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total TPH	<50.5	U	50.5	mg/Kg			01/26/24 03:18	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	<50.5	U	50.5	mg/Kg		01/24/24 10:23	01/26/24 03:18	1	
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5	mg/Kg		01/24/24 10:23	01/26/24 03:18	1	
Oil Range Organics (Over C28-C36)	<50.5	U	50.5	mg/Kg		01/24/24 10:23	01/26/24 03:18	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	89		70 - 130			01/24/24 10:23	01/26/24 03:18	1	
o-Terphenyl	114		70 - 130			01/24/24 10:23	01/26/24 03:18	1	

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Client Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit DI 29 Battery

Job ID: 890-5997-1
SDG: 03C1558310

Client Sample ID: FS05

Lab Sample ID: 890-5997-4

Date Collected: 01/19/24 11:20

Matrix: Solid

Date Received: 01/19/24 13:46

Sample Depth: 0.25'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	164		5.05	mg/Kg			01/26/24 15:13	1

Client Sample ID: FS06

Lab Sample ID: 890-5997-5

Date Collected: 01/19/24 11:25

Matrix: Solid

Date Received: 01/19/24 13:46

Sample Depth: 0.25'

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		01/25/24 17:53	01/29/24 11:07	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/25/24 17:53	01/29/24 11:07	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/25/24 17:53	01/29/24 11:07	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		01/25/24 17:53	01/29/24 11:07	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/25/24 17:53	01/29/24 11:07	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		01/25/24 17:53	01/29/24 11:07	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130			01/25/24 17:53	01/29/24 11:07	1
1,4-Difluorobenzene (Surr)	104		70 - 130			01/25/24 17:53	01/29/24 11:07	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			01/29/24 11:07	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			01/26/24 03:39	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	<50.0	U	50.0	mg/Kg		01/24/24 10:23	01/26/24 03:39	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/24/24 10:23	01/26/24 03:39	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/24/24 10:23	01/26/24 03:39	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130			01/24/24 10:23	01/26/24 03:39	1
o-Terphenyl	108		70 - 130			01/24/24 10:23	01/26/24 03:39	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	61.8		5.02	mg/Kg			01/26/24 15:18	1

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Client Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit DI 29 Battery

Job ID: 890-5997-1
SDG: 03C1558310

Client Sample ID: FS07

Lab Sample ID: 890-5997-6

Date Collected: 01/19/24 11:30

Matrix: Solid

Date Received: 01/19/24 13:46

Sample Depth: 0.25'

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:53	01/29/24 11:28	1	
Toluene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:53	01/29/24 11:28	1	
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:53	01/29/24 11:28	1	
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/25/24 17:53	01/29/24 11:28	1	
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:53	01/29/24 11:28	1	
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/25/24 17:53	01/29/24 11:28	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	110		70 - 130			01/25/24 17:53	01/29/24 11:28	1	
1,4-Difluorobenzene (Surr)	108		70 - 130			01/25/24 17:53	01/29/24 11:28	1	
Method: TAL SOP Total BTEX - Total BTEX Calculation									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total BTEX	<0.00398	U	0.00398	mg/Kg			01/29/24 11:28	1	
Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total TPH	<50.2	U	50.2	mg/Kg			01/26/24 04:01	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	<50.2	U	50.2	mg/Kg		01/24/24 10:23	01/26/24 04:01	1	
Diesel Range Organics (Over C10-C28)	<50.2	U	50.2	mg/Kg		01/24/24 10:23	01/26/24 04:01	1	
Oil Range Organics (Over C28-C36)	<50.2	U	50.2	mg/Kg		01/24/24 10:23	01/26/24 04:01	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	93		70 - 130			01/24/24 10:23	01/26/24 04:01	1	
o-Terphenyl	110		70 - 130			01/24/24 10:23	01/26/24 04:01	1	
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	71.5	F1	5.01	mg/Kg			01/26/24 15:23	1	

Client Sample ID: FS08

Lab Sample ID: 890-5997-7

Date Collected: 01/19/24 11:35

Matrix: Solid

Date Received: 01/19/24 13:46

Sample Depth: 0.25'

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:53	01/29/24 11:48	1	
Toluene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:53	01/29/24 11:48	1	
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:53	01/29/24 11:48	1	
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/25/24 17:53	01/29/24 11:48	1	
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:53	01/29/24 11:48	1	
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/25/24 17:53	01/29/24 11:48	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	108		70 - 130			01/25/24 17:53	01/29/24 11:48	1	

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Client Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit DI 29 Battery

Job ID: 890-5997-1
SDG: 03C1558310

Client Sample ID: FS08

Lab Sample ID: 890-5997-7

Date Collected: 01/19/24 11:35

Matrix: Solid

Date Received: 01/19/24 13:46

Sample Depth: 0.25'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	112		70 - 130	01/25/24 17:53	01/29/24 11:48	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			01/29/24 11:48	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4	mg/Kg			01/26/24 04:22	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	<50.4	U	50.4	mg/Kg		01/24/24 10:23	01/26/24 04:22	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4	mg/Kg		01/24/24 10:23	01/26/24 04:22	1
Oil Range Organics (Over C28-C36)	<50.4	U	50.4	mg/Kg		01/24/24 10:23	01/26/24 04:22	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	90		70 - 130			01/24/24 10:23	01/26/24 04:22	1
o-Terphenyl	112		70 - 130			01/24/24 10:23	01/26/24 04:22	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	98.5		4.99	mg/Kg			01/26/24 15:37	1

Surrogate Summary

Client: Ensolum
Project/Site: Big Eddy Unit DI 29 Battery

Job ID: 890-5997-1
SDG: 03C1558310

Method: 8021B - Volatile Organic Compounds (GC)
Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
Lab Sample ID	Client Sample ID	BFB1	DFBZ1				
		(70-130)	(70-130)				
880-38218-A-2-C MS	Matrix Spike	96	91				
880-38218-A-2-D MSD	Matrix Spike Duplicate	106	97				
890-5997-1	FS02	109	111				
890-5997-2	FS03	109	100				
890-5997-3	FS04	94	104				
890-5997-4	FS05	107	109				
890-5997-5	FS06	110	104				
890-5997-6	FS07	110	108				
890-5997-7	FS08	108	112				
LCS 880-71629/1-A	Lab Control Sample	96	90				
LCSD 880-71629/2-A	Lab Control Sample Dup	99	101				
MB 880-71518/5-A	Method Blank	130	132 S1+				
MB 880-71629/5-A	Method Blank	117	132 S1+				
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	OTPH1						
		(70-130)	(70-130)						
880-38284-A-1-F MS	Matrix Spike	111	113						
880-38284-A-1-G MSD	Matrix Spike Duplicate	100	103						
890-5997-1	FS02	94	107						
890-5997-2	FS03	98	116						
890-5997-3	FS04	98	112						
890-5997-4	FS05	89	114						
890-5997-5	FS06	93	108						
890-5997-6	FS07	93	110						
890-5997-7	FS08	90	112						
LCS 880-71508/2-A	Lab Control Sample	90	121						
LCSD 880-71508/3-A	Lab Control Sample Dup	88	115						
MB 880-71508/1-A	Method Blank	95	126						
Surrogate Legend									
1CO = 1-Chlorooctane									
OTPH = o-Terphenyl									

QC Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit DI 29 Battery

Job ID: 890-5997-1
SDG: 03C1558310

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-71518/5-A						Client Sample ID: Method Blank		
Matrix: Solid						Prep Type: Total/NA		
Analysis Batch: 71762						Prep Batch: 71518		
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/24/24 14:18	01/28/24 17:28	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/24/24 14:18	01/28/24 17:28	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/24/24 14:18	01/28/24 17:28	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/24/24 14:18	01/28/24 17:28	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/24/24 14:18	01/28/24 17:28	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/24/24 14:18	01/28/24 17:28	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	130		70 - 130			01/24/24 14:18	01/28/24 17:28	1
1,4-Difluorobenzene (Surr)	132	S1+	70 - 130			01/24/24 14:18	01/28/24 17:28	1

Lab Sample ID: MB 880-71629/5-A						Client Sample ID: Method Blank		
Matrix: Solid						Prep Type: Total/NA		
Analysis Batch: 71762						Prep Batch: 71629		
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/25/24 17:53	01/29/24 05:04	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/25/24 17:53	01/29/24 05:04	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/25/24 17:53	01/29/24 05:04	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/25/24 17:53	01/29/24 05:04	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/25/24 17:53	01/29/24 05:04	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/25/24 17:53	01/29/24 05:04	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	117		70 - 130			01/25/24 17:53	01/29/24 05:04	1
1,4-Difluorobenzene (Surr)	132	S1+	70 - 130			01/25/24 17:53	01/29/24 05:04	1

Lab Sample ID: LCS 880-71629/1-A						Client Sample ID: Lab Control Sample		
Matrix: Solid						Prep Type: Total/NA		
Analysis Batch: 71762						Prep Batch: 71629		
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Benzene	0.100	0.08742		mg/Kg		87	70 - 130	
Toluene	0.100	0.08856		mg/Kg		89	70 - 130	
Ethylbenzene	0.100	0.08928		mg/Kg		89	70 - 130	
m-Xylene & p-Xylene	0.200	0.1698		mg/Kg		85	70 - 130	
o-Xylene	0.100	0.08422		mg/Kg		84	70 - 130	
Surrogate	LCS %Recovery	LCS Qualifier	Limits					
4-Bromofluorobenzene (Surr)	96		70 - 130					
1,4-Difluorobenzene (Surr)	90		70 - 130					

Lab Sample ID: LCSD 880-71629/2-A							Client Sample ID: Lab Control Sample Dup				
Matrix: Solid							Prep Type: Total/NA				
Analysis Batch: 71762							Prep Batch: 71629				
			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limits
Benzene			0.100	0.08672		mg/Kg		87	70 - 130	1	35

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QC Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit DI 29 Battery

Job ID: 890-5997-1
SDG: 03C1558310

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

Lab Sample ID: LCSD 880-71629/2-A

Matrix: Solid

Analysis Batch: 71762

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 71629

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits			
Toluene	0.100	0.07950		mg/Kg		79	70 - 130		11	35
Ethylbenzene	0.100	0.08451		mg/Kg		85	70 - 130		5	35
m-Xylene & p-Xylene	0.200	0.1645		mg/Kg		82	70 - 130		3	35
o-Xylene	0.100	0.08226		mg/Kg		82	70 - 130		2	35

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

Lab Sample ID: 880-38218-A-2-C MS

Matrix: Solid

Analysis Batch: 71762

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 71629

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec	
									Limits	
Benzene	<0.00199	U	0.0996	0.07322		mg/Kg		74	70 - 130	
Toluene	<0.00199	U	0.0996	0.07487		mg/Kg		75	70 - 130	
Ethylbenzene	<0.00199	U	0.0996	0.07174		mg/Kg		72	70 - 130	
m-Xylene & p-Xylene	<0.00398	U	0.199	0.1501		mg/Kg		75	70 - 130	
o-Xylene	<0.00199	U	0.0996	0.07537		mg/Kg		75	70 - 130	

Surrogate	MS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	96		70 - 130
1,4-Difluorobenzene (Surr)	91		70 - 130

Lab Sample ID: 880-38218-A-2-D MSD

Matrix: Solid

Analysis Batch: 71762

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 71629

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
									Limits			
Benzene	<0.00199	U	0.0990	0.09573		mg/Kg		97	70 - 130		27	35
Toluene	<0.00199	U	0.0990	0.08782		mg/Kg		89	70 - 130		16	35
Ethylbenzene	<0.00199	U	0.0990	0.09267		mg/Kg		94	70 - 130		25	35
m-Xylene & p-Xylene	<0.00398	U	0.198	0.1987		mg/Kg		100	70 - 130		28	35
o-Xylene	<0.00199	U	0.0990	0.09951		mg/Kg		100	70 - 130		28	35

Surrogate	MSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

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

Lab Sample ID: MB 880-71508/1-A

Matrix: Solid

Analysis Batch: 71548

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 71508

Analyte	MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/24/24 10:23	01/25/24 19:43	1

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QC Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit DI 29 Battery

Job ID: 890-5997-1
SDG: 03C1558310

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

Lab Sample ID: MB 880-71508/1-A

Matrix: Solid

Analysis Batch: 71548

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 71508

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/24/24 10:23	01/25/24 19:43	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/24/24 10:23	01/25/24 19:43	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	95		70 - 130			01/24/24 10:23	01/25/24 19:43	1
o-Terphenyl	126		70 - 130			01/24/24 10:23	01/25/24 19:43	1

Lab Sample ID: LCS 880-71508/2-A

Matrix: Solid

Analysis Batch: 71548

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 71508

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	932.8		mg/Kg		93	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1030		mg/Kg		103	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1-Chlorooctane	90		70 - 130				
o-Terphenyl	121		70 - 130				

Lab Sample ID: LCSD 880-71508/3-A

Matrix: Solid

Analysis Batch: 71548

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 71508

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1006		mg/Kg		101	70 - 130	8	20
Diesel Range Organics (Over C10-C28)	1000	1085		mg/Kg		108	70 - 130	5	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	88		70 - 130						
o-Terphenyl	115		70 - 130						

Lab Sample ID: 880-38284-A-1-F MS

Matrix: Solid

Analysis Batch: 71548

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 71508

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	997	996.8		mg/Kg		100	70 - 130
Diesel Range Organics (Over C10-C28)	<50.1	U	997	1258		mg/Kg		126	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
1-Chlorooctane	111		70 - 130						
o-Terphenyl	113		70 - 130						

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QC Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit DI 29 Battery

Job ID: 890-5997-1
SDG: 03C1558310

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

Lab Sample ID: 880-38284-A-1-G MSD

Matrix: Solid

Analysis Batch: 71548

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 71508

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	<50.1	U	997	866.0		mg/Kg	-	87	70 - 130	14	20
Diesel Range Organics (Over C10-C28)	<50.1	U	997	1142		mg/Kg		115	70 - 130	10	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	100		70 - 130								
o-Terphenyl	103		70 - 130								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-71373/1-A

Matrix: Solid

Analysis Batch: 71576

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			01/26/24 14:00	1

Lab Sample ID: LCS 880-71373/2-A

Matrix: Solid

Analysis Batch: 71576

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	240.2		mg/Kg		96	90 - 110

Lab Sample ID: LCSD 880-71373/3-A

Matrix: Solid

Analysis Batch: 71576

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

			Spike	LCS	LCS				%Rec		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Chloride			250	265.5		mg/Kg		106	90 - 110	10	20

Lab Sample ID: 890-5997-6 MS

Matrix: Solid

Analysis Batch: 71576

Client Sample ID: FS07

Prep Type: Soluble

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec		
	Result	Qualifier	Added	Result	Qualifier				Limits		
Chloride	71.5	F1	251	358.6	F1	mg/Ka		115	90 - 110		

Lab Sample ID: 890-5997-6 MSD

Matrix: Solid

Analysis Batch: 71576

Client Sample ID: FS07

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	71.5	F1	251	385.6	F1	mg/Kg		125	90 - 110	7	20

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QC Association Summary

Client: Ensolum
Project/Site: Big Eddy Unit DI 29 Battery

Job ID: 890-5997-1
SDG: 03C1558310

GC VOA

Prep Batch: 71518

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-71518/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 71629

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5997-1	FS02	Total/NA	Solid	5035	
890-5997-2	FS03	Total/NA	Solid	5035	
890-5997-3	FS04	Total/NA	Solid	5035	
890-5997-4	FS05	Total/NA	Solid	5035	
890-5997-5	FS06	Total/NA	Solid	5035	
890-5997-6	FS07	Total/NA	Solid	5035	
890-5997-7	FS08	Total/NA	Solid	5035	
MB 880-71629/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-71629/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-71629/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-38218-A-2-C MS	Matrix Spike	Total/NA	Solid	5035	
880-38218-A-2-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 71762

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5997-1	FS02	Total/NA	Solid	8021B	71629
890-5997-2	FS03	Total/NA	Solid	8021B	71629
890-5997-3	FS04	Total/NA	Solid	8021B	71629
890-5997-4	FS05	Total/NA	Solid	8021B	71629
890-5997-5	FS06	Total/NA	Solid	8021B	71629
890-5997-6	FS07	Total/NA	Solid	8021B	71629
890-5997-7	FS08	Total/NA	Solid	8021B	71629
MB 880-71518/5-A	Method Blank	Total/NA	Solid	8021B	71518
MB 880-71629/5-A	Method Blank	Total/NA	Solid	8021B	71629
LCS 880-71629/1-A	Lab Control Sample	Total/NA	Solid	8021B	71629
LCSD 880-71629/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	71629
880-38218-A-2-C MS	Matrix Spike	Total/NA	Solid	8021B	71629
880-38218-A-2-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	71629

Analysis Batch: 71822

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5997-1	FS02	Total/NA	Solid	Total BTEX	
890-5997-2	FS03	Total/NA	Solid	Total BTEX	
890-5997-3	FS04	Total/NA	Solid	Total BTEX	
890-5997-4	FS05	Total/NA	Solid	Total BTEX	
890-5997-5	FS06	Total/NA	Solid	Total BTEX	
890-5997-6	FS07	Total/NA	Solid	Total BTEX	
890-5997-7	FS08	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 71508

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5997-1	FS02	Total/NA	Solid	8015NM Prep	
890-5997-2	FS03	Total/NA	Solid	8015NM Prep	
890-5997-3	FS04	Total/NA	Solid	8015NM Prep	
890-5997-4	FS05	Total/NA	Solid	8015NM Prep	

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QC Association Summary

Client: Ensolum
Project/Site: Big Eddy Unit DI 29 Battery

Job ID: 890-5997-1
SDG: 03C1558310

GC Semi VOA (Continued)

Prep Batch: 71508 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5997-5	FS06	Total/NA	Solid	8015NM Prep	
890-5997-6	FS07	Total/NA	Solid	8015NM Prep	
890-5997-7	FS08	Total/NA	Solid	8015NM Prep	
MB 880-71508/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-71508/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-71508/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-38284-A-1-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-38284-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 71548

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5997-1	FS02	Total/NA	Solid	8015B NM	71508
890-5997-2	FS03	Total/NA	Solid	8015B NM	71508
890-5997-3	FS04	Total/NA	Solid	8015B NM	71508
890-5997-4	FS05	Total/NA	Solid	8015B NM	71508
890-5997-5	FS06	Total/NA	Solid	8015B NM	71508
890-5997-6	FS07	Total/NA	Solid	8015B NM	71508
890-5997-7	FS08	Total/NA	Solid	8015B NM	71508
MB 880-71508/1-A	Method Blank	Total/NA	Solid	8015B NM	71508
LCS 880-71508/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	71508
LCSD 880-71508/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	71508
880-38284-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B NM	71508
880-38284-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	71508

Analysis Batch: 71667

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5997-1	FS02	Total/NA	Solid	8015 NM	
890-5997-2	FS03	Total/NA	Solid	8015 NM	
890-5997-3	FS04	Total/NA	Solid	8015 NM	
890-5997-4	FS05	Total/NA	Solid	8015 NM	
890-5997-5	FS06	Total/NA	Solid	8015 NM	
890-5997-6	FS07	Total/NA	Solid	8015 NM	
890-5997-7	FS08	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 71373

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5997-1	FS02	Soluble	Solid	DI Leach	
890-5997-2	FS03	Soluble	Solid	DI Leach	
890-5997-3	FS04	Soluble	Solid	DI Leach	
890-5997-4	FS05	Soluble	Solid	DI Leach	
890-5997-5	FS06	Soluble	Solid	DI Leach	
890-5997-6	FS07	Soluble	Solid	DI Leach	
890-5997-7	FS08	Soluble	Solid	DI Leach	
MB 880-71373/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-71373/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-71373/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5997-6 MS	FS07	Soluble	Solid	DI Leach	
890-5997-6 MSD	FS07	Soluble	Solid	DI Leach	

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QC Association Summary

Client: Ensolum
Project/Site: Big Eddy Unit DI 29 Battery

Job ID: 890-5997-1
SDG: 03C1558310

HPLC/IC

Analysis Batch: 71576

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5997-1	FS02	Soluble	Solid	300.0	71373
890-5997-2	FS03	Soluble	Solid	300.0	71373
890-5997-3	FS04	Soluble	Solid	300.0	71373
890-5997-4	FS05	Soluble	Solid	300.0	71373
890-5997-5	FS06	Soluble	Solid	300.0	71373
890-5997-6	FS07	Soluble	Solid	300.0	71373
890-5997-7	FS08	Soluble	Solid	300.0	71373
MB 880-71373/1-A	Method Blank	Soluble	Solid	300.0	71373
LCS 880-71373/2-A	Lab Control Sample	Soluble	Solid	300.0	71373
LCSD 880-71373/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	71373
890-5997-6 MS	FS07	Soluble	Solid	300.0	71373
890-5997-6 MSD	FS07	Soluble	Solid	300.0	71373

Lab Chronicle

Client: Ensolum
Project/Site: Big Eddy Unit DI 29 Battery

Job ID: 890-5997-1
SDG: 03C1558310

Client Sample ID: FS02

Date Collected: 01/19/24 11:05

Date Received: 01/19/24 13:46

Lab Sample ID: 890-5997-1

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			5.02 g	5 mL	71629	01/25/24 17:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71762	01/29/24 08:16	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71822	01/29/24 08:16	SM	EET MID
Total/NA	Analysis	8015 NM		1			71667	01/26/24 02:15	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	71508	01/24/24 10:23	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71548	01/26/24 02:15	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	71373	01/22/24 16:59	SA	EET MID
Soluble	Analysis	300.0		1			71576	01/26/24 14:58	CH	EET MID

Client Sample ID: FS03

Date Collected: 01/19/24 11:10

Date Received: 01/19/24 13:46

Lab Sample ID: 890-5997-2

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			5.03 g	5 mL	71629	01/25/24 17:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71762	01/29/24 08:36	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71822	01/29/24 08:36	SM	EET MID
Total/NA	Analysis	8015 NM		1			71667	01/26/24 02:36	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	71508	01/24/24 10:23	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71548	01/26/24 02:36	AJ	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	71373	01/22/24 16:59	SA	EET MID
Soluble	Analysis	300.0		1			71576	01/26/24 15:03	CH	EET MID

Client Sample ID: FS04

Date Collected: 01/19/24 11:15

Date Received: 01/19/24 13:46

Lab Sample ID: 890-5997-3

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			5.01 g	5 mL	71629	01/25/24 17:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71762	01/29/24 10:26	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71822	01/29/24 10:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			71667	01/26/24 02:57	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	71508	01/24/24 10:23	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71548	01/26/24 02:57	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	71373	01/22/24 16:59	SA	EET MID
Soluble	Analysis	300.0		1			71576	01/26/24 15:08	CH	EET MID

Client Sample ID: FS05

Date Collected: 01/19/24 11:20

Date Received: 01/19/24 13:46

Lab Sample ID: 890-5997-4

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			4.97 g	5 mL	71629	01/25/24 17:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71762	01/29/24 10:47	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71822	01/29/24 10:47	SM	EET MID

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Lab Chronicle

Client: Ensolum
Project/Site: Big Eddy Unit DI 29 Battery

Job ID: 890-5997-1
SDG: 03C1558310

Client Sample ID: FS05

Date Collected: 01/19/24 11:20

Date Received: 01/19/24 13:46

Lab Sample ID: 890-5997-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			71667	01/26/24 03:18	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	71508	01/24/24 10:23	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71548	01/26/24 03:18	AJ	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	71373	01/22/24 16:59	SA	EET MID
Soluble	Analysis	300.0		1			71576	01/26/24 15:13	CH	EET MID

Client Sample ID: FS06

Date Collected: 01/19/24 11:25

Date Received: 01/19/24 13:46

Lab Sample ID: 890-5997-5

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			4.99 g	5 mL	71629	01/25/24 17:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71762	01/29/24 11:07	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71822	01/29/24 11:07	SM	EET MID
Total/NA	Analysis	8015 NM		1			71667	01/26/24 03:39	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	71508	01/24/24 10:23	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71548	01/26/24 03:39	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	71373	01/22/24 16:59	SA	EET MID
Soluble	Analysis	300.0		1			71576	01/26/24 15:18	CH	EET MID

Client Sample ID: FS07

Date Collected: 01/19/24 11:30

Date Received: 01/19/24 13:46

Lab Sample ID: 890-5997-6

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			5.02 g	5 mL	71629	01/25/24 17:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71762	01/29/24 11:28	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71822	01/29/24 11:28	SM	EET MID
Total/NA	Analysis	8015 NM		1			71667	01/26/24 04:01	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.96 g	10 mL	71508	01/24/24 10:23	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71548	01/26/24 04:01	AJ	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	71373	01/22/24 16:59	SA	EET MID
Soluble	Analysis	300.0		1			71576	01/26/24 15:23	CH	EET MID

Client Sample ID: FS08

Date Collected: 01/19/24 11:35

Date Received: 01/19/24 13:46

Lab Sample ID: 890-5997-7

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			5.03 g	5 mL	71629	01/25/24 17:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71762	01/29/24 11:48	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71822	01/29/24 11:48	SM	EET MID
Total/NA	Analysis	8015 NM		1			71667	01/26/24 04:22	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.93 g	10 mL	71508	01/24/24 10:23	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71548	01/26/24 04:22	AJ	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: Big Eddy Unit DI 29 Battery

Job ID: 890-5997-1
SDG: 03C1558310

Client Sample ID: FS08

Date Collected: 01/19/24 11:35

Date Received: 01/19/24 13:46

Lab Sample ID: 890-5997-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.01 g	50 mL	71373	01/22/24 16:59	SA	EET MID
Soluble	Analysis	300.0		1			71576	01/26/24 15:37	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: Big Eddy Unit DI 29 Battery

Job ID: 890-5997-1
SDG: 03C1558310

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: Big Eddy Unit DI 29 Battery

Job ID: 890-5997-1
SDG: 03C1558310

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: Big Eddy Unit DI 29 Battery

Job ID: 890-5997-1
SDG: 03C1558310

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5997-1	FS02	Solid	01/19/24 11:05	01/19/24 13:46	0.25'
890-5997-2	FS03	Solid	01/19/24 11:10	01/19/24 13:46	0.25'
890-5997-3	FS04	Solid	01/19/24 11:15	01/19/24 13:46	0.25'
890-5997-4	FS05	Solid	01/19/24 11:20	01/19/24 13:46	0.25'
890-5997-5	FS06	Solid	01/19/24 11:25	01/19/24 13:46	0.25'
890-5997-6	FS07	Solid	01/19/24 11:30	01/19/24 13:46	0.25'
890-5997-7	FS08	Solid	01/19/24 11:35	01/19/24 13:46	0.25'

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Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5997-1

SDG Number: 03C1558310

Login Number: 5997

List Number: 1

Creator: Lopez, Abraham

List Source: Eurofins Carlsbad

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: 890-5997-1
SDG Number: 03C1558310

Login Number: 5997
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 01/23/24 12:33 PM

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	

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QUESTIONS

Action 336093

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:	5380
	Action Number:	336093
	Action Type:	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2331049960
Incident Name	NAPP2331049960 BIG EDDY UNIT DI 29 BATTERY @ 0
Incident Type	Fire
Incident Status	Remediation Closure Report Received

Location of Release Source	
Please answer all the questions in this group.	
Site Name	BIG EDDY UNIT DI 29 BATTERY
Date Release Discovered	10/23/2023
Surface Owner	Federal

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

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Not answered.
Produced Water Released (bbls) Details	Not answered.
Is the concentration of chloride in the produced water >10,000 mg/l	Not answered.
Condensate Released (bbls) Details	Cause: Equipment Failure Pump Condensate Released: 0 BBL Recovered: 0 BBL Lost: 0 BBL.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Not answered.

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QUESTIONS, Page 2

Action 336093

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:	5380
	Action Number:	336093
	Action Type:	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	More info needed to determine if this will be treated as a "gas only" report.
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	Yes
Reasons why this would be considered a submission for a notification of a major release	From paragraph A. "Major release" determine using: (2) an unauthorized release of a volume that: (a) results in a fire or is the result of a fire.
<i>With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.</i>	

Initial Response

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

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

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

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

I hereby agree and sign off to the above statement	Name: Alan Romero Title: Regulatory Analyst Email: alan.romero1@exxonmobil.com Date: 04/22/2024
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QUESTIONS, Page 3

Action 336093

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:	5380
	Action Number:	336093
	Action Type:	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS**Site Characterization**

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

What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 26 and 50 (ft.)
What method was used to determine the depth to ground water	OCD Imaging Records Lookup
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 500 and 1000 (ft.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1000 (ft.) and ½ (mi.)
An occupied permanent residence, school, hospital, institution, or church	Greater than 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	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 500 and 1000 (ft.)
A subsurface mine	Between 1 and 5 (mi.)
An (non-karst) unstable area	Between 1 and 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Greater than 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan

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

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

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

Chloride	(EPA 300.0 or SM4500 Cl B)	222
TPH (GRO+DRO+MRO)	(EPA SW-846 Method 8015M)	85.5
GRO+DRO	(EPA SW-846 Method 8015M)	85.5
BTEX	(EPA SW-846 Method 8021B or 8260B)	0
Benzene	(EPA SW-846 Method 8021B or 8260B)	0

Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.

On what estimated date will the remediation commence	01/10/2024
On what date will (or did) the final sampling or liner inspection occur	01/19/2024
On what date will (or was) the remediation complete(d)	04/26/2024
What is the estimated surface area (in square feet) that will be reclaimed	170
What is the estimated volume (in cubic yards) that will be reclaimed	10
What is the estimated surface area (in square feet) that will be remediated	170
What is the estimated volume (in cubic yards) that will be remediated	10

These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.

The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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QUESTIONS, Page 4

Action 336093

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:	5380
	Action Number:	336093
	Action Type:	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

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: 04/22/2024
<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 336093

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:	5380
	Action Number:	336093
	Action Type:	
	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)	

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS, Page 6

Action 336093

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 336093
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	304218
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	01/22/2024
What was the (estimated) number of samples that were to be gathered	16
What was the sampling surface area in square feet	3200

Remediation Closure Request

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

Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	170
What was the total volume (cubic yards) remediated	10
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	170
What was the total volume (in cubic yards) reclaimed	10
Summarize any additional remediation activities not included by answers (above)	Site assessment, delineation, and excavation activities were conducted at the Site to address the October 23, 2023, release of condensate. Laboratory analytical results for confirmation soil samples collected from the release extent/confirmation soil sampling area and excavation extent indicated that all COC concentrations were compliant with the Site Closure Criteria. Based on laboratory analytical results, no further remediation is required. The excavation is scheduled to be backfilled the week of April 22, 2024, with material purchased locally and the area recontoured to match pre-existing Site conditions.

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (in .pdf format) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

I hereby agree and sign off to the above statement	Name: Alan Romero Title: Regulatory Analyst Email: alan.romero1@exxonmobil.com Date: 04/22/2024
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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
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District III
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District IV
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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

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Action 336093

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 336093
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

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

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CONDITIONS

Action 336093

CONDITIONS

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CONDITIONS

Created By	Condition	Condition Date
nvelez	None	5/15/2024