Form C-141
Page 5

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2230831509
District RP	
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

- ☒ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☒ Extents of contamination must be fully delineated.
- ☒ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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.

Printed Name: ____Garrett Green_____ Title: _____Environmental Coordinator_____

Signature: _____ Date: __1/26/2023_____

email: ____garrett.green@exxonmobil.com _____ Telephone: ___575-200-0729_____

OCD Only

Received by: _____Jocelyn Harimon_____ Date: __01/24/2023____

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☒ Deferral Approved

Signature: Robert Hamlet Date: 5/22/2023

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NAPP2230831509
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Garrett Green	Contact Telephone 575-200-0729
Contact email garrett.green@exxonmobil.com	Incident # *(assigned by OCD)*
Contact mailing address 3104 E. Greene Street, Carlsbad, New Mexico, 88220	

Location of Release Source

Latitude 32.17976 Longitude -103.87130
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Poker Lake Unit 428 Battery	Site Type Tank Battery
Date Release Discovered 10/28/2022	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
C	34	24S	30E	Eddy

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (*Name:* _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☒ Crude Oil	Volume Released (bbls) 6.95	Volume Recovered (bbls) 6.95
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: Failure to respond to tank hi-level alarm caused fluids to release from thief hatch into impermeable containment. All fluids were recovered. A 48-hour advance liner inspection notice was sent to NMOCD District 2. Liner was visually inspected and determined not to be operating as designed. A third-party operator has been retained for remediation purposes.

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2230831509
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Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release? N/A
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? N/A	

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.
- ☒ The impacted area has been secured to protect human health and the environment.
- ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
- ☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

NA

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

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.

Printed Name: Garrett Green Title: SSHE Coordinator

Signature:  Date: 11/3/2022

email: garrett.green@exxonmobil.com Telephone: 575-200-0729

OCD Only

Received by: Jocelyn Harimon Date: 11/04/2022

Location:	**PLU 428 Battery**	
Spill Date:	**10/28/2022**	
Area 1		
Approximate Area =	39.02	cu.ft.
VOLUME OF LEAK		
Total Crude Oil =	6.95	bbls
Total Produced Water =	0.00	bbls
TOTAL VOLUME OF LEAK		
Total Crude Oil =	**6.95**	**bbls**
Total Produced Water =	**0.00**	**bbls**
TOTAL VOLUME RECOVERED		
Total Crude Oil =	**6.95**	**bbls**
Total Produced Water =	**0.00**	**bbls**

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

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

CONDITIONS

Action 156271

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 156271
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	None	11/4/2022

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2230831509
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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?	>100 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
☒ Field data
☒ Data table of soil contaminant concentration data
☒ Depth to water determination
☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
☒ Boring or excavation logs
☒ Photographs including date and GIS information
☒ Topographic/Aerial maps
☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

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Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2230548752
District RP	
Facility ID	
Application ID	

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.

Printed Name: Garrett Green Title: Environmental Coordinator

Signature: Date: 01/26/2023

email: garrett.green@exxonmobil.com Telephone: 575-200-0729

OCD Only

Received by: Jocelyn Harimon Date: 01/24/2023

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2230831509
District RP	
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

☒ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☒ Extents of contamination must be fully delineated.

☒ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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.

Printed Name: Garrett Green Title: Environmental Coordinator

Signature: Garrett Green Date: 1/26/2023

email: garrett.green@exxonmobil.com Telephone: 575-200-0729

OCD Only

Received by: Jocelyn Harimon Date: 01/24/2023

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: Date:

ENSOLUM

January 19, 2023

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

Re: Deferral Request
Poker Lake Unit 428 Battery
XTO Energy, Inc.
Incident Number NAPP2230831509
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared this *Deferral Request* to document assessment and soil sampling activities completed at the Poker Lake Unit 428 Battery (Site) in Unit C, Section 34, Township 24 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the Site assessment and soil sampling activities was to assess for the presence or absence of impacts to soil following a release of crude oil within a lined containment at the Site. Based on field observations, field screening activities, and soil sample laboratory analytical results, XTO is submitting this document requesting deferral of final remediation for Incident Number NAPP2230831509 until the Site is reconstructed, and/ or the well pad is abandoned.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in rural Eddy County, New Mexico and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM). On October 28, 2022, failure to respond to a tank hi-level alarm resulted in the release of approximately 6.95 barrels (bbls) of crude oil into the lined tank battery containment. All released fluids stayed within the lined containment and a vacuum truck was immediately dispatched to the Site to recover free-standing fluids; all 6.95 bbls of released crude oil were recovered from within the lined containment. A 48-hour advance notice of liner inspection was provided via email to the New Mexico Oil Conservation Division (NMOCD) District II office. A liner integrity inspection was conducted by XTO personnel following fluid recovery. Upon inspection, the liner was determined to be insufficient. XTO submitted a *Release Notification Form C-141* (Form C0141) to the NMOCD on November 3, 2022 and the release was assigned Incident Number NAPP2230831509.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized according to *Table I, Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization. Potential site receptors are identified on Figure 1.

Depth to groundwater at the Site is greater than 100 feet below ground surface (bgs) based on a recent soil boring drilled for determination of regional groundwater depth. On September 10, 2020, a soil boring (New Mexico Office of the State Engineer permit C-4474) was drilled less than 0.5 miles from the Site utilizing a track-mounted hollow-stem auger and air rotary rig. Soil boring C-4474 was drilled to a total depth of 110 feet bgs. The location of the borehole is approximately 1,928 feet west of the release area and is depicted on Figure 1. A field geologist logged and described soils continuously and no moisture or groundwater was encountered during dirlling activities. Additionally, the borehole was left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period without observing groundwater, it was confirmed that grounwater beneath the Site is greater than 110 feet bgs. The borehole was properly abandoned with drill cuttings and hydrated bentonite chips. The *Well Record and Log* is included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is an unnamed dry wash located located approximately 690 feet west 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). Site receptors are identified on Figure 1.

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

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

SITE ASSESSMENT ACTIVITIES

On December 2, 2022 and December 27, 2022, Ensolum personnel visited the Site to evaluate the release extent and conduct Site assessment activities. One borehole (BH01) was advanced via hand auger at the location within the largest tear in the liner to assess the vertical extent of impacted soil. Delineation soil samples were collected from borehole BH01 at depths ranging from 0.5 feet to 2 feet bgs. Five additional surface soil samples (SS01 through SS05) were collected around the lined containment to confirm the lateral extent of the release. Soil from the borehole and surface samples was field screened for volatile orangaic compounds (VOCs) utilizating a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. Field screening results and observations from borehole BH01 was documented on a lithologic/soil sampling log, included as Appendix B. The borehole was backfilled with the soil removed and XTO repaired the tear in the liner. Photographic documentation is included in Appendix C.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported at or below 6 degrees Celsius (°C) under strict chain-of-custody procedures to

Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of the following chemicals of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0. Soil samples delivered to the laboratory the same day they were collected may not have equilibrated to 6°C required for shippment and long term storage, but are considered to have been received in acceptable condition.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for delineation soil samples collected from borehole BH01 indicated TPH-DRO/TPH-GRO concentrations exceeded the Closure Criteria at depths ranging from 0.5 feet bgs to 1-foot bgs, directly beneath the torn liner. BH01B, collected at 2 feet bgs, indicated all COC concentrations were compliant with the Closure Criteria.

Laboratory analytical results for lateral delineation soil samples collected from samples SS01 through SS05 all COC concentrations were compliant with the applicable Closure Criteria. Laboratory analytical results are summarized in Table 1, with complete laboratory analytical reports included as Appendix D.

DEFERRAL REQUEST

XTO is requesting deferral of final remediation due to the presence of active production equipment and surface pipelines within the lined containment. The impacted soil is limited to the area immediately beneath the lined containment and active production equipment, where remediation would require a major facility deconstruction. The impacted soil remaining in place beneath the liner is delineated vertically and laterally by delineation soil samples BH01B and SS01 through SS05. If it is assumed that the entire area underneath the liner is equally impacted to a depth of 2 feet bgs, approximately 696 cubic yards of impacted soil remains at the Site; however, based on the volume of recovered fluids and limited number of tears in the liner, this volume appears to be conservatively overestimated.

XTO does not believe deferment will result in imminent risk to human health, the environment, or groundwater. Depth to groundwater was determined to be greater than 100 feet bgs, the release was contained laterally by the lined containment, and the impacted soil remaining in place is limited to the area immediately beneath the liner. The liner has been repaired by XTO and will restrict future vertical migration of residual impacts.

Based on the presence of active production equipment within the release area and the complete lateral and vertical delineation of impacted soil remaining in place, XTO requests deferral of final remediation for Incident Number NAPP2230831509 until final reclamation of the well pad or major construction, whichever comes first.

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

Sincerely,
Ensolum, LLC

Meredith Roberts
Field Geologist

Ashley Ager, MS, PG
Principal, Geologist

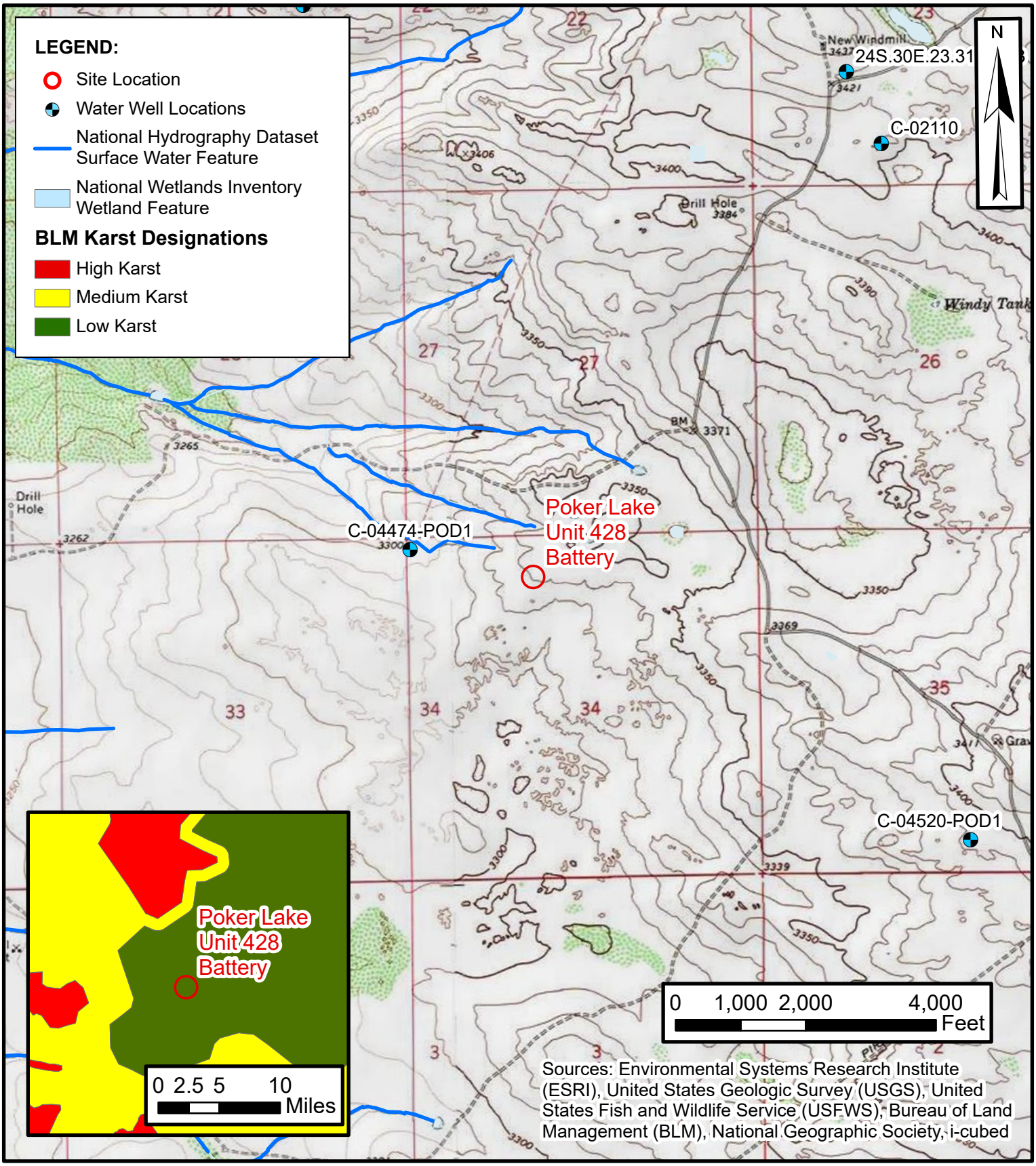
cc: Garrett Green, XTO
Shelby Pennington, XTO
Bureau of Land Management

Appendices:

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

ENSOLUM

FIGURES



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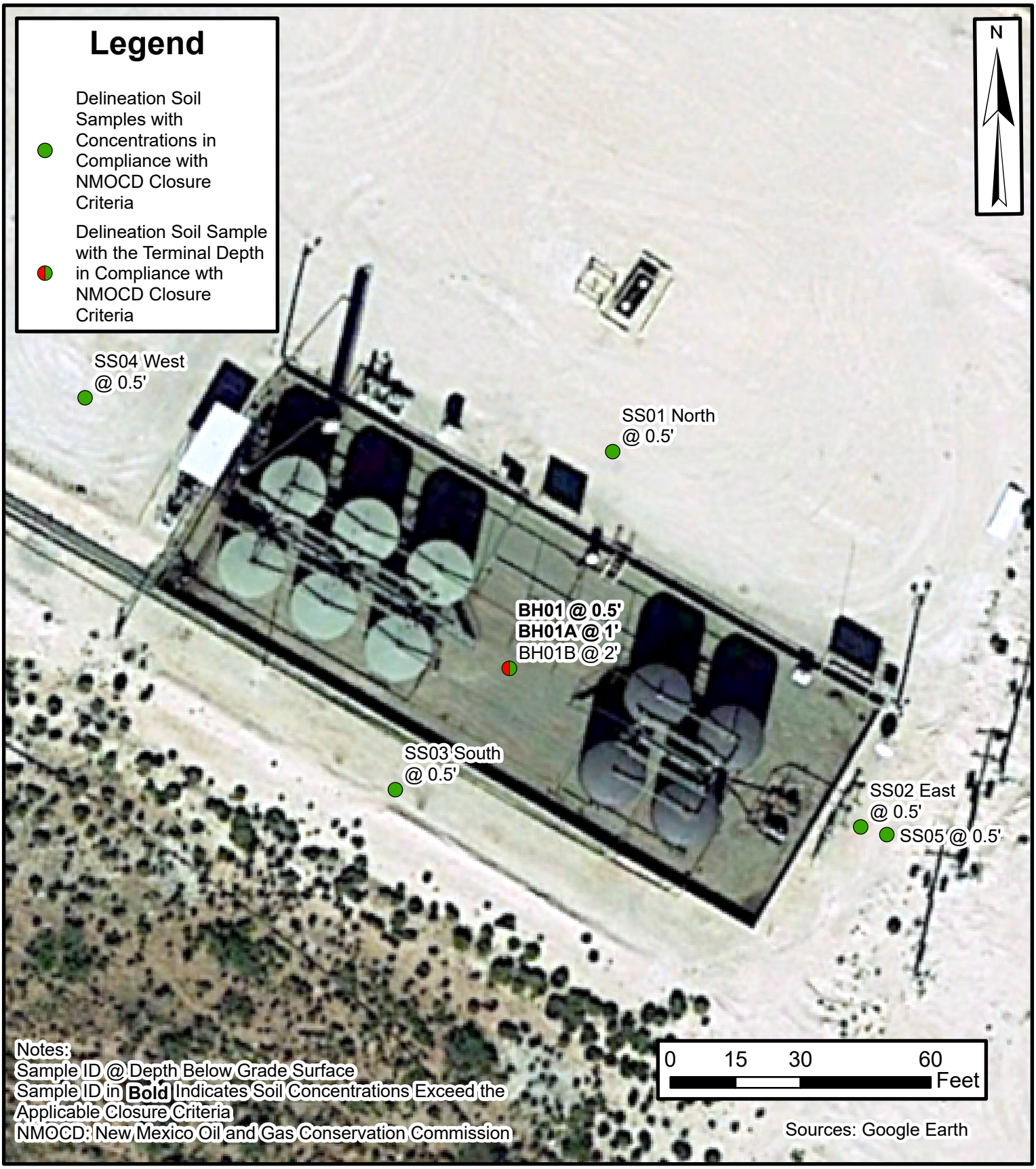
Environmental, Engineering and Hydrogeologic Consultants

SITE RECEPTOR MAP

XTO ENERGY, INC
POKER LAKE UNIT 428 BATTERY

Unit C, Sec 34, T24S, R30E
Eddy County, New Mexico

FIGURE
1



ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

DELINEATION SOIL SAMPLE LOCATIONS

XTO ENERGY, INC
POKER LAKE UNIT 428 BATTERY
Unit C, Sec 34, T24S, R30E
Eddy County, New Mexico

FIGURE
2

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Poker Lake Unit 428 Battery
XTO Energy, Inc.
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Assessment Soil Samples										
BH01	12/02/2022	0.5	0.180	5.81	520	840	<50.0	**1,360**	1,360	17.2
BH01A	12/02/2022	1	0.175	6.92	593	975	<49.9	**1,570**	1,570	226
BH01B	12/27/2022	2	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	616
SS01 North	12/02/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	150
SS02 East	12/02/2022	0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	2,350
SS03 South	12/02/2022	0.5	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	25.2
SS04 West	12/02/2022	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	81.5
SS05	12/27/2022	0.5	<0.00198	0.0142	<49.9	<49.9	<49.9	<49.9	<49.9	9.21

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 1 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

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APPENDIX A

Referenced Well Records

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.): POD1 (BH-01)	WELL TAG ID NO.: n/a	OSE FILE NO(S.): C-4474
WELL OWNER NAME(S): XTO Energy (Kyle Littrell)		PHONE (OPTIONAL):
WELL OWNER MAILING ADDRESS: 6401 Holiday Hill Dr.		CITY: Midland STATE: TX ZIP: 79707

WELL LOCATION (FROM GPS)	DEGREES	MINUTES	SECONDS	
LATITUDE	32°	10'	51.44"	N
LONGITUDE	-103°	52'	38.65"	W

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

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

2. DRILLING & CASING INFORMATION

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

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
09/10/20	09/10/20	temporary well material	110	n/a

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

DRILLING FLUID: ☑ AIR ☐ MUD ADDITIVES – SPECIFY:

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

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	48	±8.5	Boring- HSA	--	--	--	--
48	110	±4.5	Boring- Air Rotary	--	--	--	--

3. ANNULAR MATERIAL

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

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

FILE NO. C-4474	POD NO. 1	TRN NO. 677410
LOCATION 24S.30E.34.111	WELL TAG ID NO. —	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	30	30	Sand, Medium , poorly-graded with silt, no plasticity, Red-Brown	Y ✓ N	
30	45	15	Clayey Sand, Medium, low plasticity, Dark Red-Brown	Y ✓ N	
45	50	5	Sand, Medium , poorly-graded, compacted, no plasticity, Brown	Y ✓ N	
50	58	8	Caliche, well cemented with medium sand matrix. Brown	Y ✓ N	
58	73	15	Clayey Sand, Medium, Moderate plasticity, increasing clay, Brown	Y ✓ N	
73	78	5	Caliche, with Sandy clay layering, mod plasticity, poorly-grated sand, White	Y ✓ N	
78	83	5	Sand, Medium , poorly-graded, no plasticity, Light Brown	Y ✓ N	
83	88	5	Clayey Sand, Medium, Moderate plasticity, decreasing clay, Red Brown	Y ✓ N	
88	110	22	Sand, Fine , poorly-graded, no plasticity , Brown	Y ✓ N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☐ PUMP ☐ AIR LIFT ☐ BAILER ☐ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

5. TEST; RIG SUPERVISION

WELL TEST: TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION: Temporary well materials removed and the soil boring backfilled using drill cuttings from total depth to ten feet below ground surface, then hydrated bentonite chips from ten feet below ground surface to surface. Logs adapted from LTE 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:

Jack Atkins — Jackie D. Atkins — 10/07/2020

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

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

FILE NO. C-4474	POD NO. 1	TRN NO. 677410	
LOCATION 24S.30E.34.111		WELL TAG ID NO. —	PAGE 2 OF 2

2020-10-05_C-4474POD1_OSE_Well Record and Log-forsign

Final Audit Report 2020-10-07

Created:	2020-10-07
By:	Lucas Middleton (lucas@atkinseng.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAEYXgwvt48YpaHuiUB0eJVri0E9M1MV9m

"2020-10-05_C-4474POD1_OSE_Well Record and Log-forsign" History

Document created by Lucas Middleton (lucas@atkinseng.com)
2020-10-07 - 4:31:15 PM GMT- IP address: 69.21.248.123

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Document e-signed by Jack Atkins (jack@atkinseng.com)
Signature Date: 2020-10-07 - 4:36:23 PM GMT - Time Source: server- IP address: 74.50.153.115

Agreement completed.
2020-10-07 - 4:36:23 PM GMT

Adobe Sign

Atkins
ENGINEERING ASSOCIATES INC.
2904 W 2nd St.
Roswell, NM 88201
voice: 575.624.2420
fax: 575.624.2421
www.atkinseng.com

10/07/2020

DII-NMOSE
1900 W 2nd Street
Roswell, NM 88201

Hand Delivered to the DII Office of the State Engineer

Re: Well Record C-4474 Pod1

To whom it may concern:

Attached please find a well record and a plugging record, in duplicate, for a one (1) soil borings, C-4474 Pod1.

If you have any questions, please contact me at 575.499.9244 or lucas@atkinseng.com.

Sincerely,

Lucas Middleton

Enclosures: as noted above

Click to hideNews Bulletins

- See the Water Data for the Nation Blog for the latest news and updates.

Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 321203103511801

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

USGS 321203103511801 24S.30E.23.3124143

Eddy County, New Mexico
Latitude 32°12'03", Longitude 103°51'18" NAD27
Land-surface elevation 3,423 feet above NAVD88
The depth of the well is 474 feet below land surface.
This well is completed in the Pecos River Basin alluvial aquifer (N100PCSRVR) national aquifer.
This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source measur
1959-03-26		D	62610		2998.18	NGVD29	1	Z		
1959-03-26		D	62611		2999.90	NAVD88	1	Z		
1959-03-26		D	72019	423.10			1	Z		

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined

Section	Code	Description
Water-level approval status	A	Approved for publication -- Processing and review completed.

Questions about sites/data?
Feedback on this web site
Automated retrievals
Help
Data Tips
Explanation of terms
Subscribe for system changes
News

Accessibility FOIA Privacy Policies and Notices

U.S. Department of the Interior | U.S. Geological Survey
Title: Groundwater for USA: Water Levels
URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2023-01-17 13:35:27 EST
0.29 0.25 nadww02

ENSOLUM

APPENDIX B

Lithologic / Soil Sampling Log

ENSOLUM

Sample Name: BH01	Date: 12/02/22, 12/27/22	
Site Name: Poker Lake Unit 428 Battery		
Incident Number: NAPP2230831509		
Job Number: 03C1558146		
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: CB	Method: Hand Auger
Coordinates: 32.17976, -103.87130	Hole Diameter: 4"	Total Depth: 2'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	CCHE (fill)	0-1', CALICHE w/ fine sand, dry, tan, some small sub-round gravel, no stain, odor, fill.
D	<156.8	1760	N	BH01	0.5			
D	<156.8	1735	N	BH01A	1	1		
D	<156.8	0	N	BH01B	2	2		CALICHE w/ fine sand, dry, tan, some small sub-rounded gravel, no stain, no odor, fill.
							TD	Total Depth @ 2'

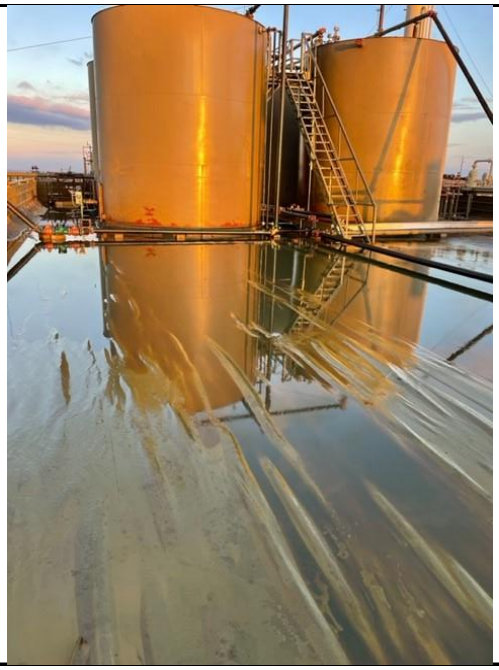
ENSOLUM

APPENDIX C

Photographic Log

ENSOLUM

Photographic Log
XTO Energy, Inc.
Poker Lake Unit 428 Battery
NAPP2230831509



Photograph 1 Date: 10/28/2022
Description: View of containment after release
View: Northwest

Photograph 2 Date: 11/03/2022
Description: Location of failing liner
View: Southeast

Photograph 3 Date: 12/02/2022
Description: Borehole BH01
View: Northwest

Photograph 4 Date: 12/02/2022
Description: Patched hole in liner
View: Northwest

ENSOLUM

APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Stuart Hyde
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 12/15/2022 11:37:36 AM

JOB DESCRIPTION

PLU 428
SDG NUMBER Eddy Co

JOB NUMBER

880-22246-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.

Eurofins Midland

Job Notes

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
12/15/2022 11:37:36 AM

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

Client: Ensolum
Project/Site: PLU 428

Laboratory Job ID: 880-22246-1
SDG: Eddy Co

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 880-22246-1
Project/Site: PLU 428 SDG: Eddy Co

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: PLU 428

Job ID: 880-22246-1
SDG: Eddy Co

Job ID: 880-22246-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-22246-1

Receipt
The samples were received on 12/2/2022 12:11 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 3.6°C

Receipt Exceptions
The following samples were received at the laboratory outside the required temperature criteria: BH01 (880-22246-1) and BH01A (880-22246-2). The sample(s) is considered acceptable since it was collected and submitted to the laboratory on the same day and there is evidence that the chilling process has begun.

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-41768 and analytical batch 880-41782 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.

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-41325 and analytical batch 880-41523 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.

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

Client Sample Results

Client: Ensolum
Project/Site: PLU 428

Job ID: 880-22246-1
SDG: Eddy Co

Client Sample ID: BH01

Lab Sample ID: 880-22246-1
Matrix: Solid
Date Collected: 12/02/22 09:45
Date Received: 12/02/22 12:11
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.180**		0.0398		mg/Kg		12/13/22 15:38	12/15/22 05:31	20
Toluene	<0.0398	U	0.0398		mg/Kg		12/13/22 15:38	12/15/22 05:31	20
Ethylbenzene	**1.42**		0.0398		mg/Kg		12/13/22 15:38	12/15/22 05:31	20
m-Xylene & p-Xylene	**4.07**		0.0797		mg/Kg		12/13/22 15:38	12/15/22 05:31	20
o-Xylene	**0.138**		0.0398		mg/Kg		12/13/22 15:38	12/15/22 05:31	20
Xylenes, Total	**4.21**		0.0797		mg/Kg		12/13/22 15:38	12/15/22 05:31	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*72*		*70 - 130*	*12/13/22 15:38*	*12/15/22 05:31*	*20*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*12/13/22 15:38*	*12/15/22 05:31*	*20*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**5.81**		0.0797		mg/Kg			12/15/22 11:38	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**1360**		50.0		mg/Kg			12/12/22 12:52	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	**520**		50.0		mg/Kg		12/08/22 09:35	12/12/22 00:48	1
Diesel Range Organics (Over C10-C28)	**840**		50.0		mg/Kg		12/08/22 09:35	12/12/22 00:48	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/08/22 09:35	12/12/22 00:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*12/08/22 09:35*	*12/12/22 00:48*	*1*
o-Terphenyl	*107*		*70 - 130*	*12/08/22 09:35*	*12/12/22 00:48*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**17.2**		5.03		mg/Kg			12/11/22 23:37	1

Client Sample ID: BH01A

Lab Sample ID: 880-22246-2
Matrix: Solid
Date Collected: 12/02/22 10:00
Date Received: 12/02/22 12:11
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.175**		0.0398		mg/Kg		12/13/22 15:38	12/15/22 05:51	20
Toluene	<0.0398	U	0.0398		mg/Kg		12/13/22 15:38	12/15/22 05:51	20
Ethylbenzene	**1.66**		0.0398		mg/Kg		12/13/22 15:38	12/15/22 05:51	20
m-Xylene & p-Xylene	**4.92**		0.0795		mg/Kg		12/13/22 15:38	12/15/22 05:51	20
o-Xylene	**0.164**		0.0398		mg/Kg		12/13/22 15:38	12/15/22 05:51	20
Xylenes, Total	**5.08**		0.0795		mg/Kg		12/13/22 15:38	12/15/22 05:51	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*	*12/13/22 15:38*	*12/15/22 05:51*	*20*

Client Sample Results

Client: Ensolum
Project/Site: PLU 428

Job ID: 880-22246-1
SDG: Eddy Co

Client Sample ID: BH01A
Date Collected: 12/02/22 10:00
Date Received: 12/02/22 12:11
Sample Depth: 1

Lab Sample ID: 880-22246-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*12/13/22 15:38*	*12/15/22 05:51*	*20*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**6.92**		0.0795		mg/Kg			12/15/22 11:38	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**1570**		49.9		mg/Kg			12/12/22 12:52	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	**593**		49.9		mg/Kg		12/08/22 09:35	12/12/22 01:09	1
Diesel Range Organics (Over C10-C28)	**975**		49.9		mg/Kg		12/08/22 09:35	12/12/22 01:09	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/08/22 09:35	12/12/22 01:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*125*		*70 - 130*	*12/08/22 09:35*	*12/12/22 01:09*	*1*
o-Terphenyl	*118*		*70 - 130*	*12/08/22 09:35*	*12/12/22 01:09*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**226**		5.01		mg/Kg			12/11/22 23:54	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 428

Job ID: 880-22246-1
SDG: Eddy Co

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-22246-1	BH01	72	103
880-22246-2	BH01A	83	103
LCS 880-41768/1-A	Lab Control Sample	111	121
LCSD 880-41768/2-A	Lab Control Sample Dup	107	118
MB 880-41757/5-A	Method Blank	89	103
MB 880-41768/5-A	Method Blank	87	96

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)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-22246-1	BH01	111	107
880-22246-2	BH01A	125	118
LCS 880-41325/2-A	Lab Control Sample	115	127
LCSD 880-41325/3-A	Lab Control Sample Dup	112	125
MB 880-41325/1-A	Method Blank	119	160 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 428

Job ID: 880-22246-1
SDG: Eddy Co

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-41757/5-A
Matrix: Solid
Analysis Batch: 41782

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 41757

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/13/22 13:22	12/14/22 11:04	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/13/22 13:22	12/14/22 11:04	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/13/22 13:22	12/14/22 11:04	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/13/22 13:22	12/14/22 11:04	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/13/22 13:22	12/14/22 11:04	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/13/22 13:22	12/14/22 11:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*12/13/22 13:22*	*12/14/22 11:04*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*12/13/22 13:22*	*12/14/22 11:04*	*1*

Lab Sample ID: MB 880-41768/5-A
Matrix: Solid
Analysis Batch: 41782

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 41768

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/13/22 15:38	12/14/22 22:00	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/13/22 15:38	12/14/22 22:00	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/13/22 15:38	12/14/22 22:00	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/13/22 15:38	12/14/22 22:00	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/13/22 15:38	12/14/22 22:00	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/13/22 15:38	12/14/22 22:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*	*12/13/22 15:38*	*12/14/22 22:00*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*12/13/22 15:38*	*12/14/22 22:00*	*1*

Lab Sample ID: LCS 880-41768/1-A
Matrix: Solid
Analysis Batch: 41782

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 41768

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1223		mg/Kg		122	70 - 130		
Toluene			0.100	0.1041		mg/Kg		104	70 - 130		
Ethylbenzene			0.100	0.1083		mg/Kg		108	70 - 130		
m-Xylene & p-Xylene			0.200	0.2252		mg/Kg		113	70 - 130		
o-Xylene			0.100	0.1123		mg/Kg		112	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*121*		*70 - 130*

Lab Sample ID: LCSD 880-41768/2-A
Matrix: Solid
Analysis Batch: 41782

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 41768

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1193		mg/Kg		119	70 - 130	2	35

QC Sample Results

Client: Ensolum
Project/Site: PLU 428

Job ID: 880-22246-1
SDG: Eddy Co

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

Lab Sample ID: LCSD 880-41768/2-A
Matrix: Solid
Analysis Batch: 41782

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 41768

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.1035		mg/Kg		103	70 - 130	1	35
Ethylbenzene			0.100	0.1066		mg/Kg		107	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.2222		mg/Kg		111	70 - 130	1	35
o-Xylene			0.100	0.1107		mg/Kg		111	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*118*		*70 - 130*

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

Lab Sample ID: MB 880-41325/1-A
Matrix: Solid
Analysis Batch: 41523

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 41325

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		12/08/22 09:35	12/11/22 20:46	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/08/22 09:35	12/11/22 20:46	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/08/22 09:35	12/11/22 20:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*119*		*70 - 130*	*12/08/22 09:35*	*12/11/22 20:46*	*1*
o-Terphenyl	*160*	*S1+*	*70 - 130*	*12/08/22 09:35*	*12/11/22 20:46*	*1*

Lab Sample ID: LCS 880-41325/2-A
Matrix: Solid
Analysis Batch: 41523

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 41325

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	967.1		mg/Kg		97	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	913.1		mg/Kg		91	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*115*		*70 - 130*
o-Terphenyl	*127*		*70 - 130*

Lab Sample ID: LCSD 880-41325/3-A
Matrix: Solid
Analysis Batch: 41523

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 41325

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	894.5		mg/Kg		89	70 - 130	8	20
Diesel Range Organics (Over C10-C28)			1000	873.9		mg/Kg		87	70 - 130	4	20

Eurofins Midland

QC Sample Results

Client: Ensolum
Project/Site: PLU 428

Job ID: 880-22246-1
SDG: Eddy Co

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

Lab Sample ID: LCSD 880-41325/3-A
Matrix: Solid
Analysis Batch: 41523

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 41325

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	112		70 - 130
o-Terphenyl	125		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-41241/1-A
Matrix: Solid
Analysis Batch: 41536

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			12/11/22 21:38	1

Lab Sample ID: LCS 880-41241/2-A
Matrix: Solid
Analysis Batch: 41536

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	258.2		mg/Kg		103	90 - 110		

Lab Sample ID: LCSD 880-41241/3-A
Matrix: Solid
Analysis Batch: 41536

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	258.7		mg/Kg		103	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 428

Job ID: 880-22246-1
SDG: Eddy Co

GC VOA

Prep Batch: 41757

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-41757/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 41768

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22246-1	BH01	Total/NA	Solid	5035	
880-22246-2	BH01A	Total/NA	Solid	5035	
MB 880-41768/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-41768/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-41768/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 41782

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22246-1	BH01	Total/NA	Solid	8021B	41768
880-22246-2	BH01A	Total/NA	Solid	8021B	41768
MB 880-41757/5-A	Method Blank	Total/NA	Solid	8021B	41757
MB 880-41768/5-A	Method Blank	Total/NA	Solid	8021B	41768
LCS 880-41768/1-A	Lab Control Sample	Total/NA	Solid	8021B	41768
LCSD 880-41768/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	41768

Analysis Batch: 41916

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22246-1	BH01	Total/NA	Solid	Total BTEX	
880-22246-2	BH01A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 41325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22246-1	BH01	Total/NA	Solid	8015NM Prep	
880-22246-2	BH01A	Total/NA	Solid	8015NM Prep	
MB 880-41325/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-41325/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-41325/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 41523

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22246-1	BH01	Total/NA	Solid	8015B NM	41325
880-22246-2	BH01A	Total/NA	Solid	8015B NM	41325
MB 880-41325/1-A	Method Blank	Total/NA	Solid	8015B NM	41325
LCS 880-41325/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	41325
LCSD 880-41325/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	41325

Analysis Batch: 41643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22246-1	BH01	Total/NA	Solid	8015 NM	
880-22246-2	BH01A	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 41241

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22246-1	BH01	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: PLU 428

Job ID: 880-22246-1
SDG: Eddy Co

HPLC/IC (Continued)

Leach Batch: 41241 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22246-2	BH01A	Soluble	Solid	DI Leach	
MB 880-41241/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-41241/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-41241/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 41536

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22246-1	BH01	Soluble	Solid	300.0	41241
880-22246-2	BH01A	Soluble	Solid	300.0	41241
MB 880-41241/1-A	Method Blank	Soluble	Solid	300.0	41241
LCS 880-41241/2-A	Lab Control Sample	Soluble	Solid	300.0	41241
LCSD 880-41241/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	41241

Lab Chronicle

Client: Ensolum
Project/Site: PLU 428

Job ID: 880-22246-1
SDG: Eddy Co

Client Sample ID: BH01

Date Collected: 12/02/22 09:45
Date Received: 12/02/22 12:11

Lab Sample ID: 880-22246-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			41768	MNR	EET MID	12/13/22 15:38
Total/NA	Analysis	8021B		20	41782	MNR	EET MID	12/15/22 05:31
Total/NA	Analysis	Total BTEX		1	41916	SM	EET MID	12/15/22 11:38
Total/NA	Analysis	8015 NM		1	41643	SM	EET MID	12/12/22 12:52
Total/NA	Prep	8015NM Prep			41325	DM	EET MID	12/08/22 09:35
Total/NA	Analysis	8015B NM		1	41523	SM	EET MID	12/12/22 00:48
Soluble	Leach	DI Leach			41241	KS	EET MID	12/07/22 10:02
Soluble	Analysis	300.0		1	41536	CH	EET MID	12/11/22 23:37

Client Sample ID: BH01A

Date Collected: 12/02/22 10:00
Date Received: 12/02/22 12:11

Lab Sample ID: 880-22246-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			41768	MNR	EET MID	12/13/22 15:38
Total/NA	Analysis	8021B		20	41782	MNR	EET MID	12/15/22 05:51
Total/NA	Analysis	Total BTEX		1	41916	SM	EET MID	12/15/22 11:38
Total/NA	Analysis	8015 NM		1	41643	SM	EET MID	12/12/22 12:52
Total/NA	Prep	8015NM Prep			41325	DM	EET MID	12/08/22 09:35
Total/NA	Analysis	8015B NM		1	41523	SM	EET MID	12/12/22 01:09
Soluble	Leach	DI Leach			41241	KS	EET MID	12/07/22 10:02
Soluble	Analysis	300.0		1	41536	CH	EET MID	12/11/22 23:54

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: PLU 428

Job ID: 880-22246-1
SDG: Eddy Co

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	T104704400-22-24	06-30-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum
Project/Site: PLU 428

Job ID: 880-22246-1
SDG: Eddy Co

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	MCAWW	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

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: PLU 428

Job ID: 880-22246-1
SDG: Eddy Co

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-22246-1	BH01	Solid	12/02/22 09:45	12/02/22 12:11	0.5
880-22246-2	BH01A	Solid	12/02/22 10:00	12/02/22 12:11	1

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Chain of Custody

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

Work Order No: 222946

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Project Manager:	Stuart Hyde	Bill to: (if different)	Garrett Green
Company Name:	Ensolum	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E Greene St
City, State ZIP:	Carlsbad NM 88220	City, State ZIP:	
Phone:	970-903-1607 Email		

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:

Project Name:	PLU 429	Turn Around	
Project Number:	03E1558146	☑ Routine ☐ Rush	
Project Location	Eddy Co	Due Date:	
Sampler's Name:	CB	TAT starts the day received by the lab, if received by 4:30pm	
PO #			

SAMPLE RECEIPT	Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	T-NM-007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:		
Sample Custody Seals.	Yes No N/A	Temperature Reading:	20.2	
Total Containers:		Corrected Temperature:		

ANALYSIS REQUEST — Preservative Codes

H_2O

880-22246 Chain of Custody

$Na_2S_2O_3$ $NaSO_3$
Zn Acetate+NaOH Zn
NaOH+Ascorbic Acid SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters	Sample Comments
BH01	S	12-2	0945	1/2	G	1		CHL GRX TPH	CC
BH01A	S	12-2	1000	1	G	1			1086152001
									APL 30-015-41246

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
1		12.2.22 12:11	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

12/15/2022

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-22246-1
SDG Number: Eddy Co

Login Number: 22246
List Number: 1
Creator: Kramer, Jessica

List Source: Eurofins Midland

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.	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	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Stuart Hyde
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

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JOB DESCRIPTION

PLU 428
SDG NUMBER Eddy Co

JOB NUMBER

890-3730-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

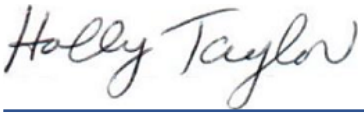
my EOL

Eurofins Carlsbad

Job Notes

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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Revision 1

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

Client: Ensolum
Project/Site: PLU 428

Laboratory Job ID: 890-3730-1
SDG: Eddy Co

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 428

Job ID: 890-3730-1
SDG: Eddy Co

Qualifiers

GC VOA

Qualifier	Qualifier Description
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.
F2	MS/MSD RPD 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/Site: PLU 428

Job ID: 890-3730-1
SDG: Eddy Co

Job ID: 890-3730-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3730-1

Revision
The report being provided is a revision of the original report sent on 1/6/2023. The report (revision 1) is being revised to include the results for the re-analysis of Cl per Stuart Hyde (email).

Receipt
The sample was received on 12/30/2022 9:30 AM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.0º C.

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: BH01B (890-3730-1).

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

GC Semi VOA
Method 8015B NM: Surrogate recovery for the following sample was outside control limits: (890-3757-A-1-B). 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.

General Chemistry
Method 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-43076 and analytical batch 880-43096 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.

Method 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-43434 and 880-43434 and analytical batch 880-43472 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.

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

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

Client Sample Results

Client: Ensolum
Project/Site: PLU 428

Job ID: 890-3730-1
SDG: Eddy Co

Client Sample ID: BH01B
Date Collected: 12/27/22 12:30
Date Received: 12/30/22 09:30
Sample Depth: 2

Lab Sample ID: 890-3730-1
Matrix: Solid

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		01/03/23 13:11	01/04/23 12:23	1
Toluene	<0.00201	U	0.00201		mg/Kg		01/03/23 13:11	01/04/23 12:23	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		01/03/23 13:11	01/04/23 12:23	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		01/03/23 13:11	01/04/23 12:23	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		01/03/23 13:11	01/04/23 12:23	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		01/03/23 13:11	01/04/23 12:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*01/03/23 13:11*	*01/04/23 12:23*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*01/03/23 13:11*	*01/04/23 12:23*	*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			01/04/23 14:46	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			01/06/23 13:03	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/05/23 11:23	01/05/23 23:42	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/05/23 11:23	01/05/23 23:42	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/05/23 11:23	01/05/23 23:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*123*		*70 - 130*	*01/05/23 11:23*	*01/05/23 23:42*	*1*
o-Terphenyl	*113*		*70 - 130*	*01/05/23 11:23*	*01/05/23 23:42*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**616**		4.98		mg/Kg			01/09/23 09:57	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 428

Job ID: 890-3730-1
SDG: Eddy Co

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)
880-23099-A-42-E MS	Matrix Spike	109	94
880-23099-A-42-F MSD	Matrix Spike Duplicate	98	84
890-3730-1	BH01B	119	86
LCS 880-43080/1-A	Lab Control Sample	101	92
LCSD 880-43080/2-A	Lab Control Sample Dup	101	94
MB 880-42893/5-A	Method Blank	102	86
MB 880-43080/5-A	Method Blank	99	88

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)
890-3730-1	BH01B	123	113
890-3757-A-1-C MS	Matrix Spike	112	85
890-3757-A-1-D MSD	Matrix Spike Duplicate	114	88
LCS 880-43251/2-A	Lab Control Sample	104	98
LCSD 880-43251/3-A	Lab Control Sample Dup	118	110
MB 880-43251/1-A	Method Blank	113	109

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 428

Job ID: 890-3730-1
SDG: Eddy Co

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-42893/5-A
Matrix: Solid
Analysis Batch: 43041

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 42893

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/29/22 13:04	01/03/23 14:20	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/29/22 13:04	01/03/23 14:20	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/29/22 13:04	01/03/23 14:20	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/29/22 13:04	01/03/23 14:20	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/29/22 13:04	01/03/23 14:20	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/29/22 13:04	01/03/23 14:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*12/29/22 13:04*	*01/03/23 14:20*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*12/29/22 13:04*	*01/03/23 14:20*	*1*

Lab Sample ID: MB 880-43080/5-A
Matrix: Solid
Analysis Batch: 43041

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43080

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/03/23 13:11	01/04/23 01:05	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/03/23 13:11	01/04/23 01:05	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/03/23 13:11	01/04/23 01:05	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/03/23 13:11	01/04/23 01:05	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/03/23 13:11	01/04/23 01:05	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/03/23 13:11	01/04/23 01:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*01/03/23 13:11*	*01/04/23 01:05*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*01/03/23 13:11*	*01/04/23 01:05*	*1*

Lab Sample ID: LCS 880-43080/1-A
Matrix: Solid
Analysis Batch: 43041

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43080

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08942		mg/Kg		89	70 - 130		
Toluene			0.100	0.08992		mg/Kg		90	70 - 130		
Ethylbenzene			0.100	0.08518		mg/Kg		85	70 - 130		
m-Xylene & p-Xylene			0.200	0.1838		mg/Kg		92	70 - 130		
o-Xylene			0.100	0.09273		mg/Kg		93	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*

Lab Sample ID: LCSD 880-43080/2-A
Matrix: Solid
Analysis Batch: 43041

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 43080

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09218		mg/Kg		92	70 - 130	3	35

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QC Sample Results

Client: Ensolum
Project/Site: PLU 428

Job ID: 890-3730-1
SDG: Eddy Co

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

Lab Sample ID: LCSD 880-43080/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 43041 — **Prep Batch: 43080**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.09272		mg/Kg		93	70 - 130	3	35
Ethylbenzene			0.100	0.08599		mg/Kg		86	70 - 130	1	35
m-Xylene & p-Xylene			0.200	0.1835		mg/Kg		92	70 - 130	0	35
o-Xylene			0.100	0.09268		mg/Kg		93	70 - 130	0	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*

Lab Sample ID: 880-23099-A-42-E MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 43041 — **Prep Batch: 43080**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U	0.101	0.08974		mg/Kg		89	70 - 130
Toluene	<0.00199	U	0.101	0.08647		mg/Kg		86	70 - 130
Ethylbenzene	<0.00199	U	0.101	0.07433		mg/Kg		74	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.202	0.1608		mg/Kg		80	70 - 130
o-Xylene	<0.00199	U	0.101	0.08294		mg/Kg		82	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*

Lab Sample ID: 880-23099-A-42-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 43041 — **Prep Batch: 43080**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.101	0.08211		mg/Kg		81	70 - 130	9	35
Toluene	<0.00199	U	0.101	0.08442		mg/Kg		84	70 - 130	2	35
Ethylbenzene	<0.00199	U	0.101	0.07409		mg/Kg		73	70 - 130	0	35
m-Xylene & p-Xylene	<0.00398	U	0.202	0.1556		mg/Kg		77	70 - 130	3	35
o-Xylene	<0.00199	U	0.101	0.07670		mg/Kg		76	70 - 130	8	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*

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

Lab Sample ID: MB 880-43251/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 43191 — **Prep Batch: 43251**

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		01/05/23 11:23	01/05/23 19:47	1

QC Sample Results

Client: Ensolum
Project/Site: PLU 428

Job ID: 890-3730-1
SDG: Eddy Co

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

Lab Sample ID: MB 880-43251/1-A
Matrix: Solid
Analysis Batch: 43191

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43251

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		01/05/23 11:23	01/05/23 19:47	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/05/23 11:23	01/05/23 19:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*01/05/23 11:23*	*01/05/23 19:47*	*1*
o-Terphenyl	*109*		*70 - 130*	*01/05/23 11:23*	*01/05/23 19:47*	*1*

Lab Sample ID: LCS 880-43251/2-A
Matrix: Solid
Analysis Batch: 43191

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43251

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	978.5		mg/Kg		98	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	924.6		mg/Kg		92	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*104*		*70 - 130*
o-Terphenyl	*98*		*70 - 130*

Lab Sample ID: LCSD 880-43251/3-A
Matrix: Solid
Analysis Batch: 43191

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 43251

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1009		mg/Kg		101	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	999.4		mg/Kg		100	70 - 130	8	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*118*		*70 - 130*
o-Terphenyl	*110*		*70 - 130*

Lab Sample ID: 890-3757-A-1-C MS
Matrix: Solid
Analysis Batch: 43191

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 43251

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	999	750.7		mg/Kg		70	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	999	885.9		mg/Kg		87	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*112*		*70 - 130*
o-Terphenyl	*85*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: PLU 428

Job ID: 890-3730-1
SDG: Eddy Co

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

Lab Sample ID: 890-3757-A-1-D MSD
Matrix: Solid
Analysis Batch: 43191

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 43251

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	999	826.1		mg/Kg		78	70 - 130	10	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	913.9		mg/Kg		90	70 - 130	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*114*		*70 - 130*
o-Terphenyl	*88*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-43434/1-A
Matrix: Solid
Analysis Batch: 43472

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			01/08/23 13:29	1

Lab Sample ID: LCS 880-43434/2-A
Matrix: Solid
Analysis Batch: 43472

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	255.0		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-43434/3-A
Matrix: Solid
Analysis Batch: 43472

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	260.6		mg/Kg		104	90 - 110	2	20

Lab Sample ID: 880-23415-A-12-C MS
Matrix: Solid
Analysis Batch: 43472

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	4390	F1 F2	2480	7268	F1	mg/Kg		116	90 - 110		

Lab Sample ID: 880-23415-A-12-D MSD
Matrix: Solid
Analysis Batch: 43472

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	4390	F1 F2	2480	7270	F1 F2	mg/Kg		116	90 - 110	164	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 428

Job ID: 890-3730-1
SDG: Eddy Co

GC VOA

Prep Batch: 42893

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-42893/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 43041

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3730-1	BH01B	Total/NA	Solid	8021B	43080
MB 880-42893/5-A	Method Blank	Total/NA	Solid	8021B	42893
MB 880-43080/5-A	Method Blank	Total/NA	Solid	8021B	43080
LCS 880-43080/1-A	Lab Control Sample	Total/NA	Solid	8021B	43080
LCSD 880-43080/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	43080
880-23099-A-42-E MS	Matrix Spike	Total/NA	Solid	8021B	43080
880-23099-A-42-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	43080

Prep Batch: 43080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3730-1	BH01B	Total/NA	Solid	5035	
MB 880-43080/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-43080/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-43080/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-23099-A-42-E MS	Matrix Spike	Total/NA	Solid	5035	
880-23099-A-42-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 43173

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3730-1	BH01B	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 43191

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3730-1	BH01B	Total/NA	Solid	8015B NM	43251
MB 880-43251/1-A	Method Blank	Total/NA	Solid	8015B NM	43251
LCS 880-43251/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	43251
LCSD 880-43251/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	43251
890-3757-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	43251
890-3757-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	43251

Prep Batch: 43251

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3730-1	BH01B	Total/NA	Solid	8015NM Prep	
MB 880-43251/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-43251/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-43251/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3757-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3757-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 43390

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3730-1	BH01B	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: PLU 428

Job ID: 890-3730-1
SDG: Eddy Co

HPLC/IC

Leach Batch: 43434

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3730-1	BH01B	Soluble	Solid	DI Leach	
MB 880-43434/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-43434/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-43434/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-23415-A-12-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-23415-A-12-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 43472

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3730-1	BH01B	Soluble	Solid	300.0	43434
MB 880-43434/1-A	Method Blank	Soluble	Solid	300.0	43434
LCS 880-43434/2-A	Lab Control Sample	Soluble	Solid	300.0	43434
LCSD 880-43434/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	43434
880-23415-A-12-C MS	Matrix Spike	Soluble	Solid	300.0	43434
880-23415-A-12-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	43434

Lab Chronicle

Client: Ensolum
Project/Site: PLU 428

Job ID: 890-3730-1
SDG: Eddy Co

Client Sample ID: BH01B
Date Collected: 12/27/22 12:30
Date Received: 12/30/22 09:30

Lab Sample ID: 890-3730-1
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			4.97 g	5 mL	43080	01/03/23 13:11	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43041	01/04/23 12:23	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43173	01/04/23 14:46	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43390	01/06/23 13:03	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	43251	01/05/23 11:23	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43191	01/05/23 23:42	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	43434	01/06/23 16:08	KS	EET MID
Soluble	Analysis	300.0		1			43472	01/09/23 09:57	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: PLU 428

Job ID: 890-3730-1
SDG: Eddy Co

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	T104704400-22-25	06-30-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum
Project/Site: PLU 428

Job ID: 890-3730-1
SDG: Eddy Co

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	MCAWW	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

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: PLU 428

Job ID: 890-3730-1
SDG: Eddy Co

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3730-1	BH01B	Solid	12/27/22 12:30	12/30/22 09:30	2

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Stuart Hyde	Bill to: (if different)	Garrett Green
Company Name:	Ensolum	Company Name:	FTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E Greene
City, State ZIP:	Carlsbad NM 88220	City, State ZIP:	
Phone:	970-403-1607	Email:	

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:

Project Name:	PLU 428	Turn Around	☑ Routine ☐ Rush
Project Number:		Due Date:	
Project Location:	Eddy Co	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	CB		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	IR#007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	1.2
Total Containers:		Corrected Temperature:	1.0

ANALYSIS REQUEST

Pres. Code / Parameters: CHL, BTX, TPH

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2SO_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Sample Comments
BH01B	S	12-27	1230	2ft	G	1	CC 1084521001 APF 30-015-41746

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
1		12/30/22 2100	2		12.30.22 930
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3730-1
SDG Number: Eddy Co

Login Number: 3730
List Number: 1
Creator: Clifton, Cloe

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: 890-3730-1
SDG Number: Eddy Co

Login Number: 3730
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 01/03/23 09:51 AM

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

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ANALYTICAL REPORT

PREPARED FOR

Attn: Stuart Hyde
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 12/15/2022 11:27:43 AM

JOB DESCRIPTION

PLU 428
SDG NUMBER Eddy Co

JOB NUMBER

880-22245-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.

Eurofins Midland

Job Notes

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
12/15/2022 11:27:43 AM

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

Client: Ensolum
Project/Site: PLU 428

Laboratory Job ID: 880-22245-1
SDG: Eddy Co

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 880-22245-1
Project/Site: PLU 428 SDG: Eddy Co

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: PLU 428

Job ID: 880-22245-1
SDG: Eddy Co

Job ID: 880-22245-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-22245-1

Receipt
The samples were received on 12/2/2022 12:11 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 3.6°C

Receipt Exceptions
The following samples were received at the laboratory outside the required temperature criteria: SS01 North (880-22245-1), SS02 East (880-22245-2), SS03 South (880-22245-3) and SS04 West (880-22245-4). The sample(s) is considered acceptable since it was collected and submitted to the laboratory on the same day and there is evidence that the chilling process has begun.

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-41768 and analytical batch 880-41782 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.

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (MB 880-41297/1-A). Evidence of matrix interferences is not obvious.

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.

Client Sample Results

Client: Ensolum
Project/Site: PLU 428

Job ID: 880-22245-1
SDG: Eddy Co

Client Sample ID: SS01 North

Date Collected: 12/02/22 11:00
Date Received: 12/02/22 12:11

Lab Sample ID: 880-22245-1
Matrix: Solid

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		12/13/22 15:38	12/15/22 00:24	1
Toluene	<0.00199	U	0.00199		mg/Kg		12/13/22 15:38	12/15/22 00:24	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		12/13/22 15:38	12/15/22 00:24	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		12/13/22 15:38	12/15/22 00:24	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		12/13/22 15:38	12/15/22 00:24	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		12/13/22 15:38	12/15/22 00:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*12/13/22 15:38*	*12/15/22 00:24*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*12/13/22 15:38*	*12/15/22 00:24*	*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			12/15/22 11:38	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			12/09/22 20:41	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		12/07/22 15:29	12/09/22 15:52	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/07/22 15:29	12/09/22 15:52	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/07/22 15:29	12/09/22 15:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*12/07/22 15:29*	*12/09/22 15:52*	*1*
o-Terphenyl	*110*		*70 - 130*	*12/07/22 15:29*	*12/09/22 15:52*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**150**		24.8		mg/Kg			12/11/22 23:03	5

Client Sample ID: SS02 East

Date Collected: 12/02/22 10:45
Date Received: 12/02/22 12:11

Lab Sample ID: 880-22245-2
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		12/13/22 15:38	12/15/22 00:44	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/13/22 15:38	12/15/22 00:44	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/13/22 15:38	12/15/22 00:44	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		12/13/22 15:38	12/15/22 00:44	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/13/22 15:38	12/15/22 00:44	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		12/13/22 15:38	12/15/22 00:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*12/13/22 15:38*	*12/15/22 00:44*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*12/13/22 15:38*	*12/15/22 00:44*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 428

Job ID: 880-22245-1
SDG: Eddy Co

Client Sample ID: SS02 East

Date Collected: 12/02/22 10:45
Date Received: 12/02/22 12:11

Lab Sample ID: 880-22245-2
Matrix: Solid

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			12/15/22 11:38	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			12/09/22 20:41	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		12/07/22 15:29	12/09/22 16:14	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/07/22 15:29	12/09/22 16:14	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/07/22 15:29	12/09/22 16:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*108*		*70 - 130*	*12/07/22 15:29*	*12/09/22 16:14*	*1*
o-Terphenyl	*114*		*70 - 130*	*12/07/22 15:29*	*12/09/22 16:14*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2350**		24.8		mg/Kg			12/11/22 23:09	5

Client Sample ID: SS03 South

Date Collected: 12/02/22 11:15
Date Received: 12/02/22 12:11

Lab Sample ID: 880-22245-3
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		12/13/22 15:38	12/15/22 01:05	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/13/22 15:38	12/15/22 01:05	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/13/22 15:38	12/15/22 01:05	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		12/13/22 15:38	12/15/22 01:05	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/13/22 15:38	12/15/22 01:05	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		12/13/22 15:38	12/15/22 01:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*12/13/22 15:38*	*12/15/22 01:05*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*12/13/22 15:38*	*12/15/22 01:05*	*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			12/15/22 11:38	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			12/09/22 20:41	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		12/07/22 15:29	12/09/22 16:56	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/07/22 15:29	12/09/22 16:56	1

Eurofins Midland

Client Sample Results

Client: Ensolum
Project/Site: PLU 428

Job ID: 880-22245-1
SDG: Eddy Co

Client Sample ID: SS03 South

Lab Sample ID: 880-22245-3
Matrix: Solid
Date Collected: 12/02/22 11:15
Date Received: 12/02/22 12:11

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/07/22 15:29	12/09/22 16:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 130*	*12/07/22 15:29*	*12/09/22 16:56*	*1*
o-Terphenyl	*104*		*70 - 130*	*12/07/22 15:29*	*12/09/22 16:56*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**25.2**		4.95		mg/Kg			12/11/22 23:15	1

Client Sample ID: SS04 West

Lab Sample ID: 880-22245-4
Matrix: Solid
Date Collected: 12/02/22 11:30
Date Received: 12/02/22 12:11

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		12/13/22 15:38	12/15/22 01:25	1
Toluene	<0.00199	U	0.00199		mg/Kg		12/13/22 15:38	12/15/22 01:25	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		12/13/22 15:38	12/15/22 01:25	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		12/13/22 15:38	12/15/22 01:25	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		12/13/22 15:38	12/15/22 01:25	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		12/13/22 15:38	12/15/22 01:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*12/13/22 15:38*	*12/15/22 01:25*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*12/13/22 15:38*	*12/15/22 01:25*	*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			12/15/22 11:38	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			12/09/22 20:41	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		12/07/22 15:29	12/09/22 17:17	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/07/22 15:29	12/09/22 17:17	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/07/22 15:29	12/09/22 17:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*115*		*70 - 130*	*12/07/22 15:29*	*12/09/22 17:17*	*1*
o-Terphenyl	*120*		*70 - 130*	*12/07/22 15:29*	*12/09/22 17:17*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**81.5**		25.3		mg/Kg			12/11/22 23:32	5

Surrogate Summary

Client: Ensolum
Project/Site: PLU 428

Job ID: 880-22245-1
SDG: Eddy Co

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)											
		BFB1	DFBZ1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
880-22245-1	SS01 North	105	86										
880-22245-2	SS02 East	116	86										
880-22245-3	SS03 South	98	97										
880-22245-4	SS04 West	116	91										
LCS 880-41768/1-A	Lab Control Sample	111	121										
LCSD 880-41768/2-A	Lab Control Sample Dup	107	118										
MB 880-41757/5-A	Method Blank	89	103										
MB 880-41768/5-A	Method Blank	87	96										

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)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
880-22245-1	SS01 North	104	110										
880-22245-2	SS02 East	108	114										
880-22245-3	SS03 South	101	104										
880-22245-4	SS04 West	115	120										
LCS 880-41297/2-A	Lab Control Sample	92	95										
LCSD 880-41297/3-A	Lab Control Sample Dup	88	91										
MB 880-41297/1-A	Method Blank	102	140 S1+										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 428

Job ID: 880-22245-1
SDG: Eddy Co

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-41757/5-A
Matrix: Solid
Analysis Batch: 41782

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 41757

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/13/22 13:22	12/14/22 11:04	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/13/22 13:22	12/14/22 11:04	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/13/22 13:22	12/14/22 11:04	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/13/22 13:22	12/14/22 11:04	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/13/22 13:22	12/14/22 11:04	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/13/22 13:22	12/14/22 11:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*12/13/22 13:22*	*12/14/22 11:04*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*12/13/22 13:22*	*12/14/22 11:04*	*1*

Lab Sample ID: MB 880-41768/5-A
Matrix: Solid
Analysis Batch: 41782

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 41768

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/13/22 15:38	12/14/22 22:00	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/13/22 15:38	12/14/22 22:00	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/13/22 15:38	12/14/22 22:00	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/13/22 15:38	12/14/22 22:00	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/13/22 15:38	12/14/22 22:00	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/13/22 15:38	12/14/22 22:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*	*12/13/22 15:38*	*12/14/22 22:00*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*12/13/22 15:38*	*12/14/22 22:00*	*1*

Lab Sample ID: LCS 880-41768/1-A
Matrix: Solid
Analysis Batch: 41782

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 41768

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1223		mg/Kg		122	70 - 130		
Toluene			0.100	0.1041		mg/Kg		104	70 - 130		
Ethylbenzene			0.100	0.1083		mg/Kg		108	70 - 130		
m-Xylene & p-Xylene			0.200	0.2252		mg/Kg		113	70 - 130		
o-Xylene			0.100	0.1123		mg/Kg		112	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*121*		*70 - 130*

Lab Sample ID: LCSD 880-41768/2-A
Matrix: Solid
Analysis Batch: 41782

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 41768

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1193		mg/Kg		119	70 - 130	2	35

QC Sample Results

Client: Ensolum
Project/Site: PLU 428

Job ID: 880-22245-1
SDG: Eddy Co

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

Lab Sample ID: LCSD 880-41768/2-A
Matrix: Solid
Analysis Batch: 41782

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 41768

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.1035		mg/Kg		103	70 - 130	1	35
Ethylbenzene			0.100	0.1066		mg/Kg		107	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.2222		mg/Kg		111	70 - 130	1	35
o-Xylene			0.100	0.1107		mg/Kg		111	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*118*		*70 - 130*

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

Lab Sample ID: MB 880-41297/1-A
Matrix: Solid
Analysis Batch: 41416

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 41297

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		12/07/22 15:29	12/09/22 09:49	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/07/22 15:29	12/09/22 09:49	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/07/22 15:29	12/09/22 09:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*12/07/22 15:29*	*12/09/22 09:49*	*1*
o-Terphenyl	*140*	*S1+*	*70 - 130*	*12/07/22 15:29*	*12/09/22 09:49*	*1*

Lab Sample ID: LCS 880-41297/2-A
Matrix: Solid
Analysis Batch: 41416

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 41297

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	890.6		mg/Kg		89	70 - 130
Diesel Range Organics (Over C10-C28)			1000	865.8		mg/Kg		87	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*92*		*70 - 130*
o-Terphenyl	*95*		*70 - 130*

Lab Sample ID: LCSD 880-41297/3-A
Matrix: Solid
Analysis Batch: 41416

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 41297

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	837.9		mg/Kg		84	70 - 130	6	20
Diesel Range Organics (Over C10-C28)			1000	863.4		mg/Kg		86	70 - 130	0	20

Eurofins Midland

QC Sample Results

Client: Ensolum
Project/Site: PLU 428

Job ID: 880-22245-1
SDG: Eddy Co

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

Lab Sample ID: LCSD 880-41297/3-A
Matrix: Solid
Analysis Batch: 41416

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 41297

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	88		70 - 130
o-Terphenyl	91		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-41241/1-A
Matrix: Solid
Analysis Batch: 41536

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			12/11/22 21:38	1

Lab Sample ID: LCS 880-41241/2-A
Matrix: Solid
Analysis Batch: 41536

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	258.2		mg/Kg		103	90 - 110		

Lab Sample ID: LCSD 880-41241/3-A
Matrix: Solid
Analysis Batch: 41536

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	258.7		mg/Kg		103	90 - 110	0	20

Lab Sample ID: 880-22245-3 MS
Matrix: Solid
Analysis Batch: 41536

Client Sample ID: SS03 South
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	25.2		248	280.5		mg/Kg		103	90 - 110		

Lab Sample ID: 880-22245-3 MSD
Matrix: Solid
Analysis Batch: 41536

Client Sample ID: SS03 South
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	25.2		248	280.0		mg/Kg		103	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 428

Job ID: 880-22245-1
SDG: Eddy Co

GC VOA

Prep Batch: 41757

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-41757/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 41768

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22245-1	SS01 North	Total/NA	Solid	5035	
880-22245-2	SS02 East	Total/NA	Solid	5035	
880-22245-3	SS03 South	Total/NA	Solid	5035	
880-22245-4	SS04 West	Total/NA	Solid	5035	
MB 880-41768/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-41768/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-41768/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 41782

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22245-1	SS01 North	Total/NA	Solid	8021B	41768
880-22245-2	SS02 East	Total/NA	Solid	8021B	41768
880-22245-3	SS03 South	Total/NA	Solid	8021B	41768
880-22245-4	SS04 West	Total/NA	Solid	8021B	41768
MB 880-41757/5-A	Method Blank	Total/NA	Solid	8021B	41757
MB 880-41768/5-A	Method Blank	Total/NA	Solid	8021B	41768
LCS 880-41768/1-A	Lab Control Sample	Total/NA	Solid	8021B	41768
LCSD 880-41768/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	41768

Analysis Batch: 41914

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22245-1	SS01 North	Total/NA	Solid	Total BTEX	
880-22245-2	SS02 East	Total/NA	Solid	Total BTEX	
880-22245-3	SS03 South	Total/NA	Solid	Total BTEX	
880-22245-4	SS04 West	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 41297

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22245-1	SS01 North	Total/NA	Solid	8015NM Prep	
880-22245-2	SS02 East	Total/NA	Solid	8015NM Prep	
880-22245-3	SS03 South	Total/NA	Solid	8015NM Prep	
880-22245-4	SS04 West	Total/NA	Solid	8015NM Prep	
MB 880-41297/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-41297/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-41297/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 41416

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22245-1	SS01 North	Total/NA	Solid	8015B NM	41297
880-22245-2	SS02 East	Total/NA	Solid	8015B NM	41297
880-22245-3	SS03 South	Total/NA	Solid	8015B NM	41297
880-22245-4	SS04 West	Total/NA	Solid	8015B NM	41297
MB 880-41297/1-A	Method Blank	Total/NA	Solid	8015B NM	41297
LCS 880-41297/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	41297
LCSD 880-41297/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	41297

QC Association Summary

Client: Ensolum
Project/Site: PLU 428

Job ID: 880-22245-1
SDG: Eddy Co

GC Semi VOA

Analysis Batch: 41506

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22245-1	SS01 North	Total/NA	Solid	8015 NM	
880-22245-2	SS02 East	Total/NA	Solid	8015 NM	
880-22245-3	SS03 South	Total/NA	Solid	8015 NM	
880-22245-4	SS04 West	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 41241

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22245-1	SS01 North	Soluble	Solid	DI Leach	
880-22245-2	SS02 East	Soluble	Solid	DI Leach	
880-22245-3	SS03 South	Soluble	Solid	DI Leach	
880-22245-4	SS04 West	Soluble	Solid	DI Leach	
MB 880-41241/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-41241/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-41241/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-22245-3 MS	SS03 South	Soluble	Solid	DI Leach	
880-22245-3 MSD	SS03 South	Soluble	Solid	DI Leach	

Analysis Batch: 41536

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22245-1	SS01 North	Soluble	Solid	300.0	41241
880-22245-2	SS02 East	Soluble	Solid	300.0	41241
880-22245-3	SS03 South	Soluble	Solid	300.0	41241
880-22245-4	SS04 West	Soluble	Solid	300.0	41241
MB 880-41241/1-A	Method Blank	Soluble	Solid	300.0	41241
LCS 880-41241/2-A	Lab Control Sample	Soluble	Solid	300.0	41241
LCSD 880-41241/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	41241
880-22245-3 MS	SS03 South	Soluble	Solid	300.0	41241
880-22245-3 MSD	SS03 South	Soluble	Solid	300.0	41241

Lab Chronicle

Client: Ensolum
Project/Site: PLU 428

Job ID: 880-22245-1
SDG: Eddy Co

Client Sample ID: SS01 North
Date Collected: 12/02/22 11:00
Date Received: 12/02/22 12:11

Lab Sample ID: 880-22245-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			41768	MNR	EET MID	12/13/22 15:38
Total/NA	Analysis	8021B		1	41782	MNR	EET MID	12/15/22 00:24
Total/NA	Analysis	Total BTEX		1	41914	SM	EET MID	12/15/22 11:38
Total/NA	Analysis	8015 NM		1	41506	AJ	EET MID	12/09/22 20:41
Total/NA	Prep	8015NM Prep			41297	DM	EET MID	12/07/22 15:29
Total/NA	Analysis	8015B NM		1	41416	AJ	EET MID	12/09/22 15:52
Soluble	Leach	DI Leach			41241	KS	EET MID	12/07/22 10:02
Soluble	Analysis	300.0		5	41536	CH	EET MID	12/11/22 23:03

Client Sample ID: SS02 East
Date Collected: 12/02/22 10:45
Date Received: 12/02/22 12:11

Lab Sample ID: 880-22245-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			41768	MNR	EET MID	12/13/22 15:38
Total/NA	Analysis	8021B		1	41782	MNR	EET MID	12/15/22 00:44
Total/NA	Analysis	Total BTEX		1	41914	SM	EET MID	12/15/22 11:38
Total/NA	Analysis	8015 NM		1	41506	AJ	EET MID	12/09/22 20:41
Total/NA	Prep	8015NM Prep			41297	DM	EET MID	12/07/22 15:29
Total/NA	Analysis	8015B NM		1	41416	AJ	EET MID	12/09/22 16:14
Soluble	Leach	DI Leach			41241	KS	EET MID	12/07/22 10:02
Soluble	Analysis	300.0		5	41536	CH	EET MID	12/11/22 23:09

Client Sample ID: SS03 South
Date Collected: 12/02/22 11:15
Date Received: 12/02/22 12:11

Lab Sample ID: 880-22245-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			41768	MNR	EET MID	12/13/22 15:38
Total/NA	Analysis	8021B		1	41782	MNR	EET MID	12/15/22 01:05
Total/NA	Analysis	Total BTEX		1	41914	SM	EET MID	12/15/22 11:38
Total/NA	Analysis	8015 NM		1	41506	AJ	EET MID	12/09/22 20:41
Total/NA	Prep	8015NM Prep			41297	DM	EET MID	12/07/22 15:29
Total/NA	Analysis	8015B NM		1	41416	AJ	EET MID	12/09/22 16:56
Soluble	Leach	DI Leach			41241	KS	EET MID	12/07/22 10:02
Soluble	Analysis	300.0		1	41536	CH	EET MID	12/11/22 23:15

Client Sample ID: SS04 West
Date Collected: 12/02/22 11:30
Date Received: 12/02/22 12:11

Lab Sample ID: 880-22245-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			41768	MNR	EET MID	12/13/22 15:38
Total/NA	Analysis	8021B		1	41782	MNR	EET MID	12/15/22 01:25
Total/NA	Analysis	Total BTEX		1	41914	SM	EET MID	12/15/22 11:38

Lab Chronicle

Client: Ensolum
Project/Site: PLU 428

Job ID: 880-22245-1
SDG: Eddy Co

Client Sample ID: SS04 West

Date Collected: 12/02/22 11:30
Date Received: 12/02/22 12:11

Lab Sample ID: 880-22245-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015 NM		1	41506	AJ	EET MID	12/09/22 20:41
Total/NA	Prep	8015NM Prep			41297	DM	EET MID	12/07/22 15:29
Total/NA	Analysis	8015B NM		1	41416	AJ	EET MID	12/09/22 17:17
Soluble	Leach	DI Leach			41241	KS	EET MID	12/07/22 10:02
Soluble	Analysis	300.0		5	41536	CH	EET MID	12/11/22 23:32

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: PLU 428

Job ID: 880-22245-1
SDG: Eddy Co

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	T104704400-22-24	06-30-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum
Project/Site: PLU 428

Job ID: 880-22245-1
SDG: Eddy Co

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	MCAWW	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

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: PLU 428

Job ID: 880-22245-1
SDG: Eddy Co

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-22245-1	SS01 North	Solid	12/02/22 11:00	12/02/22 12:11
880-22245-2	SS02 East	Solid	12/02/22 10:45	12/02/22 12:11
880-22245-3	SS03 South	Solid	12/02/22 11:15	12/02/22 12:11
880-22245-4	SS04 West	Solid	12/02/22 11:30	12/02/22 12:11

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Chain of Custody

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

Work Order No: 22245

www.xenco.com Page _____ of _____

Project Manager:	Stuart Hyde	Bill to: (if different)	Garrett Green
Company Name:	Ensolum	Company Name:	XTO Energy
Address:	3122 National Parks	Address:	3104 E Greene St
City, State ZIP:	Carlsbad NM 88220	City, State ZIP:	
Phone	970-903-1607	Email	

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:

Project Name:	PLU 424	Turn Around	
Project Number:	03E1558146	☑ Routine ☐ Rush	
Project Location:	Eddy Co	Due Date.	
Sampler's Name:	CG	TAT starts the day received by the lab, if received by 4.30pm	
PO #			

SAMPLE RECEIPT				
Temp Blank.	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:	T_NM-007	
Cooler Custody Seals.	Yes No N/A	Correction Factor:		
Sample Custody Seals.	Yes No N/A	Temperature Reading.	20.2	
Total Containers.		Corrected Temperature:		

ANALYSIS REQUEST

Preservative Codes
None NO DI Water H_2O
$Na_2S_2O_3$ $NaSO_3$
Zn Acetate+NaOH Zn
NaOH+Ascorbic Acid SAPC

880-22245 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: BTX, TPH, Chl	Sample Comments
SS01 North	S	12-2	1100	1/2	G	1			CC 10515 21001
SS02 East	S	12-2	1045	1/2	G	1			
SS03 South	S	12-2	1115	1/2	G	1			
SS04 West	S	12-2	1130	1/2	G	1			API 30-015-41246

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		12-2-22 12:11	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-22245-1
SDG Number: Eddy Co

Login Number: 22245
List Number: 1
Creator: Kramer, Jessica

List Source: Eurofins Midland

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.	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	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Stuart Hyde
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

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JOB DESCRIPTION

PLU 428
SDG NUMBER Eddy Co

JOB NUMBER

890-3731-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

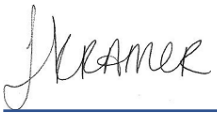
my EOL

Eurofins Carlsbad

Job Notes

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

Client: Ensolum
Project/Site: PLU 428

Laboratory Job ID: 890-3731-1
SDG: Eddy Co

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 428

Job ID: 890-3731-1
SDG: Eddy Co

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
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/Site: PLU 428

Job ID: 890-3731-1
SDG: Eddy Co

Job ID: 890-3731-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3731-1

Receipt
The sample was received on 12/30/2022 9:30 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.0°C

Receipt Exceptions
The following sample was received and analyzed from an unpreserved bulk soil jar: SS05 (890-3731-1).

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-43081 and analytical batch 880-43042 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.

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (890-3757-A-1-B). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-43076 and analytical batch 880-43096 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.

Client Sample Results

Client: Ensolum
Project/Site: PLU 428

Job ID: 890-3731-1
SDG: Eddy Co

Client Sample ID: SS05

Date Collected: 12/27/22 11:50
Date Received: 12/30/22 09:30
Sample Depth: 0.5

Lab Sample ID: 890-3731-1

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		01/03/23 13:31	01/04/23 01:28	1
Toluene	<0.00198	U	0.00198		mg/Kg		01/03/23 13:31	01/04/23 01:28	1
Ethylbenzene	**0.00266**		0.00198		mg/Kg		01/03/23 13:31	01/04/23 01:28	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		01/03/23 13:31	01/04/23 01:28	1
o-Xylene	**0.0115**		0.00198		mg/Kg		01/03/23 13:31	01/04/23 01:28	1
Xylenes, Total	**0.0115**		0.00396		mg/Kg		01/03/23 13:31	01/04/23 01:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*	*01/03/23 13:31*	*01/04/23 01:28*	*1*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*	*01/03/23 13:31*	*01/04/23 01:28*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0142**		0.00396		mg/Kg			01/04/23 09:17	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			01/06/23 13:03	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		01/05/23 11:23	01/06/23 00:03	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		01/05/23 11:23	01/06/23 00:03	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/05/23 11:23	01/06/23 00:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*129*		*70 - 130*	*01/05/23 11:23*	*01/06/23 00:03*	*1*
o-Terphenyl	*118*		*70 - 130*	*01/05/23 11:23*	*01/06/23 00:03*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9.21**		5.03		mg/Kg			01/04/23 08:38	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 428

Job ID: 890-3731-1
SDG: Eddy Co

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)											
		BFB1	DFBZ1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
880-23218-A-1-A MS	Matrix Spike	108	105										
880-23218-A-1-B MSD	Matrix Spike Duplicate	104	105										
890-3731-1	SS05	120	108										
LCS 880-43081/1-A	Lab Control Sample	98	108										
LCSD 880-43081/2-A	Lab Control Sample Dup	97	106										
MB 880-42941/5-A	Method Blank	97	107										
MB 880-43081/5-A	Method Blank	99	106										

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)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
890-3731-1	SS05	129	118										
890-3757-A-1-C MS	Matrix Spike	112	85										
890-3757-A-1-D MSD	Matrix Spike Duplicate	114	88										
LCS 880-43251/2-A	Lab Control Sample	104	98										
LCSD 880-43251/3-A	Lab Control Sample Dup	118	110										
MB 880-43251/1-A	Method Blank	113	109										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 428

Job ID: 890-3731-1
SDG: Eddy Co

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-42941/5-A
Matrix: Solid
Analysis Batch: 43042

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 42941

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/30/22 11:33	01/03/23 12:23	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/30/22 11:33	01/03/23 12:23	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/30/22 11:33	01/03/23 12:23	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/30/22 11:33	01/03/23 12:23	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/30/22 11:33	01/03/23 12:23	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/30/22 11:33	01/03/23 12:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*12/30/22 11:33*	*01/03/23 12:23*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*12/30/22 11:33*	*01/03/23 12:23*	*1*

Lab Sample ID: MB 880-43081/5-A
Matrix: Solid
Analysis Batch: 43042

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43081

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/03/23 13:31	01/03/23 23:58	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/03/23 13:31	01/03/23 23:58	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/03/23 13:31	01/03/23 23:58	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/03/23 13:31	01/03/23 23:58	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/03/23 13:31	01/03/23 23:58	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/03/23 13:31	01/03/23 23:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*01/03/23 13:31*	*01/03/23 23:58*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*01/03/23 13:31*	*01/03/23 23:58*	*1*

Lab Sample ID: LCS 880-43081/1-A
Matrix: Solid
Analysis Batch: 43042

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43081

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08719		mg/Kg		87	70 - 130		
Toluene			0.100	0.08354		mg/Kg		84	70 - 130		
Ethylbenzene			0.100	0.08171		mg/Kg		82	70 - 130		
m-Xylene & p-Xylene			0.200	0.1684		mg/Kg		84	70 - 130		
o-Xylene			0.100	0.08268		mg/Kg		83	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: LCSD 880-43081/2-A
Matrix: Solid
Analysis Batch: 43042

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 43081

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09080		mg/Kg		91	70 - 130	4	35

QC Sample Results

Client: Ensolum
Project/Site: PLU 428

Job ID: 890-3731-1
SDG: Eddy Co

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

Lab Sample ID: LCSD 880-43081/2-A
Matrix: Solid
Analysis Batch: 43042

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 43081

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.08713		mg/Kg		87	70 - 130	4	35
Ethylbenzene			0.100	0.08626		mg/Kg		86	70 - 130	5	35
m-Xylene & p-Xylene			0.200	0.1780		mg/Kg		89	70 - 130	6	35
o-Xylene			0.100	0.08662		mg/Kg		87	70 - 130	5	35

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

Lab Sample ID: 880-23218-A-1-A MS
Matrix: Solid
Analysis Batch: 43042

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 43081

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U F1	0.101	<0.00202	U F1	mg/Kg		0.4	70 - 130
Toluene	<0.00199	U F2 F1	0.101	<0.00202	U F1	mg/Kg		0.3	70 - 130
Ethylbenzene	0.00570	F1	0.101	0.01008	F1	mg/Kg		4	70 - 130
m-Xylene & p-Xylene	0.0163	F1	0.202	0.02834	F1	mg/Kg		6	70 - 130
o-Xylene	0.0114	F1	0.101	0.01973	F1	mg/Kg		8	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: 880-23218-A-1-B MSD
Matrix: Solid
Analysis Batch: 43042

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 43081

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U F1	0.0996	<0.00199	U F1	mg/Kg		0	70 - 130	NC	35
Toluene	<0.00199	U F2 F1	0.0996	0.006192	F2 F1	mg/Kg		5	70 - 130	105	35
Ethylbenzene	0.00570	F1	0.0996	0.01127	F1	mg/Kg		6	70 - 130	11	35
m-Xylene & p-Xylene	0.0163	F1	0.199	0.02364	F1	mg/Kg		4	70 - 130	18	35
o-Xylene	0.0114	F1	0.0996	0.01768	F1	mg/Kg		6	70 - 130	11	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

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

Lab Sample ID: MB 880-43251/1-A
Matrix: Solid
Analysis Batch: 43191

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43251

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		01/05/23 11:23	01/05/23 19:47	1

QC Sample Results

Client: Ensolum
Project/Site: PLU 428

Job ID: 890-3731-1
SDG: Eddy Co

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

Lab Sample ID: MB 880-43251/1-A
Matrix: Solid
Analysis Batch: 43191

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43251

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		01/05/23 11:23	01/05/23 19:47	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/05/23 11:23	01/05/23 19:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*01/05/23 11:23*	*01/05/23 19:47*	*1*
o-Terphenyl	*109*		*70 - 130*	*01/05/23 11:23*	*01/05/23 19:47*	*1*

Lab Sample ID: LCS 880-43251/2-A
Matrix: Solid
Analysis Batch: 43191

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43251

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	978.5		mg/Kg		98	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	924.6		mg/Kg		92	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*104*		*70 - 130*
o-Terphenyl	*98*		*70 - 130*

Lab Sample ID: LCSD 880-43251/3-A
Matrix: Solid
Analysis Batch: 43191

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 43251

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1009		mg/Kg		101	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	999.4		mg/Kg		100	70 - 130	8	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*118*		*70 - 130*
o-Terphenyl	*110*		*70 - 130*

Lab Sample ID: 890-3757-A-1-C MS
Matrix: Solid
Analysis Batch: 43191

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 43251

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	999	750.7		mg/Kg		70	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	999	885.9		mg/Kg		87	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*112*		*70 - 130*
o-Terphenyl	*85*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: PLU 428

Job ID: 890-3731-1
SDG: Eddy Co

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

Lab Sample ID: 890-3757-A-1-D MSD
Matrix: Solid
Analysis Batch: 43191

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 43251

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	999	826.1		mg/Kg		78	70 - 130	10	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	913.9		mg/Kg		90	70 - 130	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*114*		*70 - 130*
o-Terphenyl	*88*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-43076/1-A
Matrix: Solid
Analysis Batch: 43096

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			01/04/23 05:18	1

Lab Sample ID: LCS 880-43076/2-A
Matrix: Solid
Analysis Batch: 43096

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	262.3		mg/Kg		105	90 - 110		

Lab Sample ID: LCSD 880-43076/3-A
Matrix: Solid
Analysis Batch: 43096

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	264.0		mg/Kg		106	90 - 110	1	20

Lab Sample ID: 890-3727-A-2-E MS
Matrix: Solid
Analysis Batch: 43096

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	477	F1	248	763.7	F1	mg/Kg		116	90 - 110		

Lab Sample ID: 890-3727-A-2-F MSD
Matrix: Solid
Analysis Batch: 43096

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	477	F1	248	766.4	F1	mg/Kg		117	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 428

Job ID: 890-3731-1
SDG: Eddy Co

GC VOA

Prep Batch: 42941

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-42941/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 43042

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3731-1	SS05	Total/NA	Solid	8021B	43081
MB 880-42941/5-A	Method Blank	Total/NA	Solid	8021B	42941
MB 880-43081/5-A	Method Blank	Total/NA	Solid	8021B	43081
LCS 880-43081/1-A	Lab Control Sample	Total/NA	Solid	8021B	43081
LCSD 880-43081/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	43081
880-23218-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	43081
880-23218-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	43081

Prep Batch: 43081

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3731-1	SS05	Total/NA	Solid	5035	
MB 880-43081/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-43081/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-43081/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-23218-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-23218-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 43127

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3731-1	SS05	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 43191

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3731-1	SS05	Total/NA	Solid	8015B NM	43251
MB 880-43251/1-A	Method Blank	Total/NA	Solid	8015B NM	43251
LCS 880-43251/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	43251
LCSD 880-43251/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	43251
890-3757-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	43251
890-3757-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	43251

Prep Batch: 43251

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3731-1	SS05	Total/NA	Solid	8015NM Prep	
MB 880-43251/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-43251/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-43251/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3757-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3757-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 43391

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3731-1	SS05	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: PLU 428

Job ID: 890-3731-1
SDG: Eddy Co

HPLC/IC

Leach Batch: 43076

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3731-1	SS05	Soluble	Solid	DI Leach	
MB 880-43076/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-43076/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-43076/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3727-A-2-E MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3727-A-2-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 43096

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3731-1	SS05	Soluble	Solid	300.0	43076
MB 880-43076/1-A	Method Blank	Soluble	Solid	300.0	43076
LCS 880-43076/2-A	Lab Control Sample	Soluble	Solid	300.0	43076
LCSD 880-43076/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	43076
890-3727-A-2-E MS	Matrix Spike	Soluble	Solid	300.0	43076
890-3727-A-2-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	43076

Lab Chronicle

Client: Ensolum
Project/Site: PLU 428

Job ID: 890-3731-1
SDG: Eddy Co

Client Sample ID: SS05
Date Collected: 12/27/22 11:50
Date Received: 12/30/22 09:30

Lab Sample ID: 890-3731-1
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	43081	01/03/23 13:31	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43042	01/04/23 01:28	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43127	01/04/23 09:17	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43391	01/06/23 13:03	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	43251	01/05/23 11:23	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43191	01/06/23 00:03	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	43076	01/03/23 12:06	KS	EET MID
Soluble	Analysis	300.0		1			43096	01/04/23 08:38	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: PLU 428

Job ID: 890-3731-1
SDG: Eddy Co

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	T104704400-22-25	06-30-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum
Project/Site: PLU 428

Job ID: 890-3731-1
SDG: Eddy Co

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	MCAWW	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

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: PLU 428

Job ID: 890-3731-1
SDG: Eddy Co

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3731-1	SS05	Solid	12/27/22 11:50	12/30/22 09:30	0.5

eurofins | 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:	Stuart Hyde	Bill to: (if different)	Concert Green
Company Name:	Ensolum	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E Greene St
City, State ZIP:	Carlsbad NM 88220	City, State ZIP:	
Phone:	970-903-1607	Email:	

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:

Project Name:	PLU 428	Turn Around	☑ Routine ☐ Rush
Project Number:		Pres. Code	
Project Location:	Edd, Co	Due Date:	
Sampler's Name:	CB	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	WM007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	1.2
Total Containers:		Corrected Temperature:	1.0

ANALYSIS REQUEST

Parameters: CHL, BTX, TPH

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2SO_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Sample Comments
SS05	S	12-27	1150	1/2	G	1	CC 10815 2100'
							API 30-015-41246

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			12/30/22 2:00 pm	2		12.30.2230
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3731-1
SDG Number: Eddy Co

Login Number: 3731
List Number: 1
Creator: Clifton, Cloe

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: 890-3731-1
SDG Number: Eddy Co

Login Number: 3731
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 01/03/23 09:51 AM

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

ENSOLUM

APPENDIX E

NMOCD Notifications

Collins, Melanie

From: Green, Garrett J
Sent: Monday, October 31, 2022 4:24 PM
To: ocd.enviro@emnrd.nm.gov; Bratcher, Michael, EMNRD; Billings, Bradford, EMNRD; Harimon, Jocelyn, EMNRD; Hamlet, Robert, EMNRD
Cc: DelawareSpills /SM
Subject: XTO 48 Hour Liner Inspection Notification - PLU 428

Good afternoon,

This is sent as a 48-hour notification, XTO is scheduled to inspect the lined containment at PLU 428 released on (10/28/22), on Thursday, November 3, 2022, at 10am MST. A 24 hour release notification was not sent out on Wednesday, February 26, 2020 at 1:35 PM since the release was less than 25 barrels in volume. Please call us with any questions or concerns.

GPS Coordinates: (32.17964,-103.87113)

Thank you,

Garrett Green
Environmental Coordinator
Delaware Business Unit
(575) 200-0729
Garrett.Green@ExxonMobil.com

XTO Energy, Inc.
3104 E. Greene Street | Carlsbad, NM 88220 | M: (575)200-0729

From: Enviro, OCD, EMNRD
To: Green, Garrett J; Enviro, OCD, EMNRD; Bratcher, Michael, EMNRD; Harimon, Jocelyn, EMNRD; Hamlet, Robert, EMNRD
Cc: Tacoma Morrissey; Stuart Hyde
Subject: RE: [EXTERNAL] RE: XTO - Sampling Notification (Week of 12/19/22 - 12/23/22)
Date: Wednesday, December 21, 2022 1:54:40 PM

[**EXTERNAL EMAIL**]

Thank you for the notification. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Jocelyn Harimon ● Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
1220 South St. Francis Drive | Santa Fe, NM 87505
(505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov
http:// **www.emnrd.nm.gov**

From: Green, Garrett J <garrett.green@exxonmobil.com>
Sent: Wednesday, December 21, 2022 12:09 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@emnrd.nm.gov>; Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>
Cc: Tacoma Morrissey <tmorrissey@ensolum.com>; Stuart Hyde <shyde@ensolum.com>
Subject: [EXTERNAL] RE: XTO - Sampling Notification (Week of 12/19/22 - 12/23/22)

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Good afternoon,

We have an addition to the sampling schedule below. Friday afternoon we will be collecting final samples at PLU 428 CTB.

Thank you,

Garrett Green
Environmental Coordinator
Delaware Business Unit
(575) 200-0729

Garrett.Green@ExxonMobil.com

XTO Energy, Inc.
3104 E. Greene Street | Carlsbad, NM 88220 | M: (575)200-0729

From: Green, Garrett J
Sent: Thursday, December 15, 2022 7:53 AM
To: 'ocd.enviro@emnrd.nm.gov' <ocd.enviro@emnrd.nm.gov>; 'Bratcher, Michael, EMNRD' <mike.bratcher@emnrd.nm.gov>; 'Harimon, Jocelyn, EMNRD' <Jocelyn.Harimon@emnrd.nm.gov>; 'Hamlet, Robert, EMNRD' <Robert.Hamlet@emnrd.nm.gov>
Cc: 'Tacoma Morrissey' <tmorrissey@ensolum.com>; DelawareSpills /SM <DelawareSpills@exxonmobil.com>
Subject: XTO - Sampling Notification (Week of 12/19/22 - 12/23/22)

All,

XTO plans to complete final sampling activities at the following sites the week of Dec 19, 2022.

- JRU 10 / NAB1521257588 NAB1535754357, & NAB1904653072
- Indian Flats Bass Federal/ nAB1523133089, nAB1520127947, nAB1523155412, nAB1614429643, nAB1526056410
- Poker Lake Unit 409 / nAPP2223751933
- Big Sinks Battery 2-24-30 / NAB1913729531

Thank you,

Garrett Green
Environmental Coordinator
Delaware Business Unit
(575) 200-0729
Garrett.Green@ExxonMobil.com

XTO Energy, Inc.
3104 E. Greene Street | Carlsbad, NM 88220 | M: (575)200-0729

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

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

CONDITIONS

Action 179129

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 179129
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	XTO's deferral requests to complete final remediation during any future major construction/alteration or final plugging/abandonment, whichever occurs first. Ensolum and XTO do not believe deferment will result in imminent risk to human health, the environment, or groundwater. The area requested for deferral is "BH01". The area has been delineated and documented in the report. At this time, OCD approves this request. The Deferral Request and C-141 will be accepted for record and marked accordingly. The release will remain open in OCD database files and reflect an open environmental issue. This is a federal site and will require like approval from the BLM.	5/22/2023