State of New Mexico
Oil Conservation Division

Incident ID	NAPP2231551182
District RP	
Facility ID	
Application ID	

Closure

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

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

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

Printed Name: _Garrett Green_____ Title: _Environmental Coordinator_____

Signature: _____ Date: __01/25/2023_____

email: __garrett.green@exxonmobil.com_____ Telephone: ___575-200-0729_____

OCD Only

Received by: ___Jocelyn Harimon_____ Date: ___01/30/2023___

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: ___Robert Hamlet_____ Date: 5/2/2023

Printed Name: Robert Hamlet Title: Environmental Specialist - Advanced

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	NAPP2231551182
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 32.20597 Longitude -103.83001
(NAD 83 in decimal degrees to 5 decimal places)

Site Name PLU 13 Dog Town Draw	Site Type Central Tank Battery
Date Release Discovered 10/30/2022	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
G	24	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)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 31.60	Volume Recovered (bbls) 30.00
	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: Internal corrosion caused a 6" produced water line to release fluids to pad. All free fluids were recovered. A third-party contractor has been retained for remediation purposes.

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2231551182
District RP	
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? A release equal to or greater than 25 barrels.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?

Yes, by Melanie Collins to ocd.enviro (ocd.enviro@emnrd.nm.gov); Bratcher, Michael, Nobui, Jennifer, Hamlet, Robert, Harimon, Jocelyn, Billings, Bradford on 10/31/2022 via email.

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: 11/10/2022

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

OCD Only

Received by: Jocelyn Harimon Date: 11/14/2022

Location:	**PLU 13 DTD CTB**	
Spill Date:	**10/30/2022**	
Area 1		
Approximate Area =	355.01	sq. ft.
Average Saturation (or depth) of spill =	0.25	inches
Average Porosity Factor =	0.03	
VOLUME OF LEAK		
Total Crude Oil =	0.00	bbls
Total Produced Water =	31.60	bbls
TOTAL VOLUME OF LEAK		
Total Crude Oil =	**0.00**	**bbls**
Total Produced Water =	**31.60**	**bbls**
TOTAL VOLUME RECOVERED		
Total Crude Oil =	**0.00**	**bbls**
Total Produced Water =	**30.00**	**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

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 158237
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	None	11/14/2022

Incident ID	NAPP2231551182
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.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2231551182
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: ____01/25/2023_____

email: _garrett.green@exxonmobil.com_____ Telephone: ____575-200-0729_____

OCD Only

Received by: ____Jocelyn Harimon_____ Date: __01/30/2023____

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2231551182
District RP	
Facility ID	
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Closure

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Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

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Printed Name: _Garrett Green_____ Title: _Environmental Coordinator_____

Signature: _____ Date: __01/25/2023_____

email: __garrett.green@exxonmobil.com_____ Telephone: ___575-200-0729_____

OCD Only

Received by: ____Jocelyn Harimon_____ Date: ___01/30/2023___

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

ENSOLUM

January 25, 2023

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

Re: Closure Request
PLU 13 Dog Town Draw
Incident Number NAPP2231551182
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared this *Closure Request* to document assessment and soil sampling activities at the PLU 13 Dog Town Draw (Site). The purpose of the Site assessment and soil sampling activities was to assess for the presence or absence of impacts to soil following a release of produced water at the Site. Based on Site assessment activities and soil sample laboratory analytical results, XTO is submitting this *Closure Request*, describing remediation activities that have occurred and requesting no further action for Incident Number NAPP2231551182.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit G, Section 24, Township 24 South, Range 30 East, in Eddy County, New Mexico (32.20597°, -103.83001°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On October 30, 2022, internal corrosion of a produced water pipeline caused a release of approximately 31.6 barrels (bbls) of produced water onto the well pad and around active production equipment. A vacuum truck was immediately dispatched to the Site, which recovered 30.0 bbls. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) via email on October 31, 2022 and submitted a Release Notification Form C-141 (Form C-141) on November 10, 2022. The release was assigned Incident Number NAPP2231551182.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess the applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization.

Depth to groundwater at the Site is estimated to be greater than 100 below ground surface (bgs) based on a recent soil boring drilled for determination of regional groundwater depth. On November 24, 2020, a soil boring (New Mexico Office of the State Engineer (NM OSE) file number C-4483) was drilled approximately 0.29 miles northwest of the Site utilizing a truck-mounted hollow-stem auger rig. Soil boring C-4483 was drilled to a depth of 110 feet bgs. A field geologist logged and described soils continuously. No moisture or groundwater was encountered during drilling activities. The borehole was

left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period without observing groundwater, it was confirmed that groundwater beneath the Site is greater than 110 feet bgs. The borehole was properly abandoned with drill cuttings and hydrated bentonite chips. The Well Log is included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is a freshwater emergent wetland, located approximately 4,338 feet west of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake, and is greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet from a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Potential site receptors are identified on Figure 1.

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

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

SITE ASSESSMENT AND DELINEATION ACTIVITIES

On November 17, 2022, Site assessment activities were conducted to evaluate the release extent based on information provided on the Form C-141 and visual observations. Six delineation soil samples (SS01 through SS06) were collected within and around the release extent at a depth of 0.5 feet bgs. Delineation soil samples SS01 and SS02 were collected within the release extent and samples SS03 through SS06 were collected around the release extent to determine lateral definition of the release. The delineation soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The release extent and soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2.

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 under strict chain-of-custody procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of the following contaminants 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 equilabrated to 6 degrees Celcius required for shipment and long term storage, but are considered to have been received in acceptable condition by the laboratory.

On December 1, 2022, Ensolum personnel returned to the Site to complete additional delineation activities. Two boreholes (BH01 and BH02) were advanced via hand auger to assess the vertical extent of the release. Boreholes BH01 and BH02 were advanced in the vicinity of SS01 and SS02, respectively. Discrete delineation soil samples were collected from BH01 at a depth of 1-foot bgs and from BH02 at

depths of 1-foot and 2.5 feet bgs. Field screening results and observations for the boreholes were logged on lithologic/soil sampling logs and are included in Appendix B. The delineation soil samples were handled and analyzed as described above. Photographic documentation was conducted during the Site visit and a photographic log is included in Appendix C.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results indicated COC concentrations for all delineation soil samples were in compliance with the Site Closure Criteria. Additionally, the release extent is delineated to the strictest Table I Closure Criteria, which includes vertical definition by soil sample concentrations indicated in BH01 and BH02A, and lateral definition by soil samples SS03 through SS06. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included in Appendix D.

CLOSURE REQUEST

Site assessment and delineation activities were conducted at the Site to assess for the presence or absence of impacted soil from the October 30, 2022 release of produced water. Laboratory analytical results indicated COC concentrations for all delineation soil samples were in compliance with the Site Closure Criteria.

Depth to groundwater has been estimated to be greater than 100 feet bgs and no other sensitive receptors were identified near the release extent. Based on laboratory analytical results compliant with Closure Criteria, no further remediation appears to be required. As such, XTO respectfully requests closure for Incident Number NAPP2231551182.

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 L. Ager, P.G.
Principal

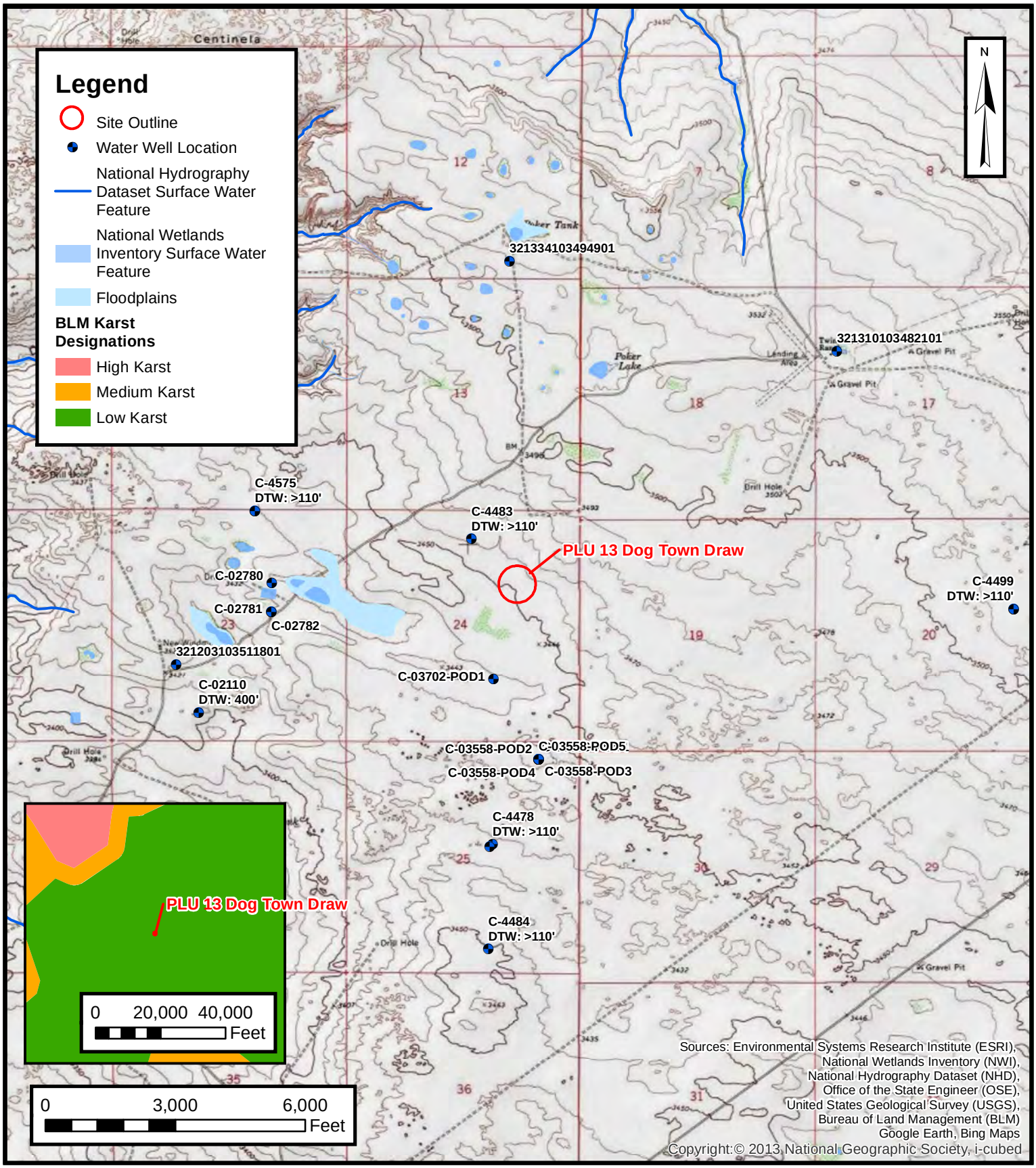
cc: Garrett Green, XTO
Shelby Pennington, XTO
BLM

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	Lithology Soil Sampling Logs
Appendix C	Photographic Log
Appendix D	Laboratory Analytical Reports & Chain-of-Custody Documentation

ENSOLUM

FIGURES

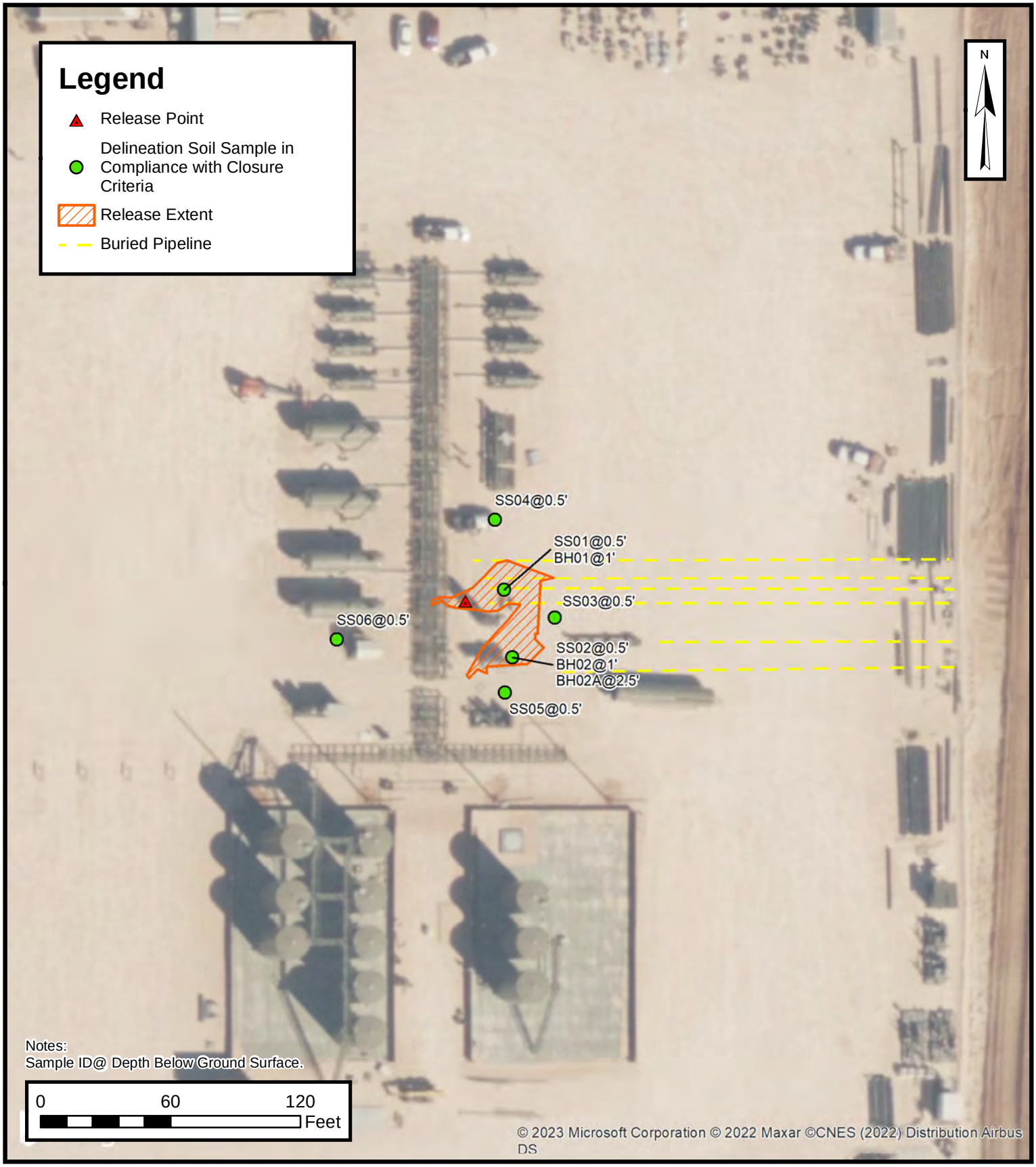


ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

XTO Energy, Inc
PLU 13 Dog Town Draw
NAPP2231551182
Unit G, Sec 24, T24S, R30E
Eddy County, New Mexico

FIGURE
1



ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Delineation Soil Sample Locations

XTO Energy, Inc
PLU 13 Dog Town Draw
NAPP2231551182
Unit G, Sec 24, T24S, R30E
Eddy County, New Mexico

FIGURE
2

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
PLU 13 Dog Town Draw
XTO Energy, Inc
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			**10**	**50**	**NE**	**NE**	**NE**	**1,000**	**2,500**	**20,000**
Delineation Soil Samples										
SS01	11/17/2022	0.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	2,270
BH01	12/01/2022	1	<0.00199	<0.00398	<49.9	95.2	<49.9	95.2	95.2	599
SS02	11/17/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	8,120
BH02	12/01/2022	1	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	8,360
BH02A	12/01/2022	2.5	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	260
SS03	11/17/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	55.7
SS04	11/17/2022	0.5	<0.00200	<0.00401	<49.8	<49.8	<49.8	<49.8	<49.8	25.4
SS05	11/17/2022	0.5	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	25.2
SS06	11/17/2022	0.5	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	20.7

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

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

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

NMAC: New Mexico Administrative Code

ENSOLUM

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.)	WELL TAG ID NO.	OSE FILE NO(S).
POD1 (BH-01)	n/a	C-4483

WELL OWNER NAME(S)	PHONE (OPTIONAL)
XTO Energy (Kyle Littrell)	

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
6401 Holiday Hill Dr.	Midland	TX	79707

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32°	12'	31.77"	N
	LONGITUDE	-104°	50'	0.72"	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

NW NW NE Sec. 24 T24S R30E

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)
11/24/2020	11/24/2020	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	110	±8.5	Boring- HSA	--	--	--	--

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
				OSE DII DEC 17 2020 PM3:29	

FOR OSE INTERNAL USE

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

FILE NO. C-4483	POD NO. 1	TRN NO. 679344	
LOCATION 23 T24S R30E Sec 24		WELL TAG ID NO. NA	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	24	24	Sand, Fine-grained,poorly-graded, with caliche, Tan-Off-White	Y ✓ N	
24	34	10	Sand, Fine-grained,poorly-graded, silty, with caliche gravel, Tan-Off-White	Y ✓ N	
34	51	17	Sand, Fine-grained,poorly-graded, silty, with caliche gravel, Light Brown	Y ✓ N	
51	54	3	Sand, Fine-grained,poorly-graded, silty, with caliche gravel, Light Brown-Brown	Y ✓ N	
54	76	22	Sand, Fine-grained,poorly-graded, Brown, dry	Y ✓ N	
76	101	25	Sand, Fine-grained,poorly-graded, Light-Brown, dry	Y ✓ N	
101	110	9	Sand, Fine-grained,poorly-graded, with gravel, Light-Brown, dry-moist	Y ✓ N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				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 — 12/14/20

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

OSE DII DEC 17 2020 PM 3:29

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

FILE NO. C-4483	POD NO. 1	TRN NO. 629544	
LOCATION 12 3 T24S R30E Sec 24		WELL TAG ID NO. N/A	PAGE 2 OF 2

John R. D Antonio, Jr., P.E.
State Engineer

Roswell Office
1900 WEST SECOND STREET
ROSWELL, NM 88201

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER

Trn Nbr: 679344
File Nbr: C 04483
Well File Nbr: C 04483 POD1

Jan. 22, 2021

TACOMA MORRISSEY
LT ENVIRONMENTAL INC
508 WEST STEVENS
CARLSBAD, NM 88220

Greetings:

The above numbered permit was issued in your name on 09/29/2020.

The Well Record was received in this office on 12/17/2020, stating that it had been completed on 11/24/2020, and was a dry well. The well is to be plugged according to 19.27.4.30 NMAC.

Please note that another well can be drilled under this permit if the well is completed and the well log filed on or before 09/29/2021.

If you have any questions, please feel free to contact us.

Sincerely,

Andrew Dennis
(575)622-6521

drywell

ENSOLUM

APPENDIX B

Lithologic / Soil Sampling Logs

ENSOLUM

	Sample Name: BH01	Date: 12/01/2022
	Site Name: PLU 13 DTD	
	Incident Number: NAPP2231551182	
	Job Number: 03C1558147	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: MR	Method: Hand Auger
Coordinates: 32.20597, -103.83001	Hole Diameter: 4"	Total Depth: 1'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	CCHE	0-0.5' CALICHE w/ med. Sand, dry, tan, some sub-round gravel, no staining, no odor, fill.
N	3,091	0.6	N	SS01	0.5	0.5	SP	0.5-1', SAND w/ some caliche gravel, red, moist, no odor, no staining.
M	364	0.0	N	BH01	1	1		
							TD	Total Depth @ 1'

ENSOLUM

	Sample Name: BH02	Date: 12/01/2022
	Site Name: PLU 13 DTD	
	Incident Number: NAPP2231551182	
	Job Number: 03C1558147	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: MR	Method: Hand Auger
Coordinates: 32.20597, -103.83001	Hole Diameter: 4"	Total Depth: 2.5'

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 in all chloride screenings.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	CCHE	0-0.5' CALICHE w/ med. sand, dry, tan, some sub-round gravel, no staining, no odor, fill.
N	10,046	0.7	N	SS02	0.5	0.5		0.5-2', CALICHE w/ medium sand, tan, some sub-rounded gravel, moist, no odor, no staining.
M	9,520	0.6	N	BH02	1	1		
M	644	0.0	N			2	SP	2-2.5' SAND w/ small amount of caliche gravel, red/brown, moist, no staining, no odor.
M	358.4	0.0	N	BH02A	2.5	2.5		
							TD	Total Depth @ 2.5' bgs.

ENSOLUM

APPENDIX C

Photographic Log

ENSOLUM

Photographic Log
XTO Energy, Inc.
PLU 13 Dog Town Draw
NAPP2231551182

Photograph 1 Date: 11/17/2022
Description: Site assessment activities
View: West

Photograph 2 Date: 11/17/2022
Description: Site assessment activites, release area
View: Northeast

Photograph 3 Date: 12/01/2022
Description: Delineation activities, BH01
View: South

Photograph 4 Date: 12/01/2022
Description: Delineation activities, backfilled BH02
View: East

ENSOLUM

APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ben Belill
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Generated 11/29/2022 8:58:03 AM

JOB DESCRIPTION

PLU 13 DTD CTB
SDG NUMBER 03E1558147

JOB NUMBER

890-3525-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

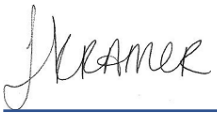
See page two for job notes and contact information.

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



Generated
11/29/2022 8:58:03 AM

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

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Laboratory Job ID: 890-3525-1
SDG: 03E1558147

Table of Contents

Cover Page 1
Table of Contents 3
Definitions/Glossary 4
Case Narrative 5
Client Sample Results 6
Surrogate Summary 8
QC Sample Results 9
QC Association Summary 13
Lab Chronicle 15
Certification Summary 16
Method Summary 17
Sample Summary 18
Chain of Custody 19
Receipt Checklists 20

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 890-3525-1
SDG: 03E1558147

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 890-3525-1
SDG: 03E1558147

Job ID: 890-3525-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3525-1

Receipt
The samples were received on 11/18/2022 8:20 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.2°C

GC VOA
Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-40465 and analytical batch 880-40503 was outside the upper control limits.

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

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-40343 and analytical batch 880-40262 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-40343/2-A) and (LCSD 880-40343/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: SS01 (890-3525-1), SS02 (890-3525-2), (890-3525-A-1-C MS) and (890-3525-A-1-D MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The method blank for preparation batch 880-40343 and analytical batch 880-40262 contained Gasoline Range Organics (GRO)-C6-C10 above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-40343 and analytical batch 880-40262 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10.

Method 8015MOD_NM: The matrix spike duplicate (MSD) recoveries for preparation batch 880-40343 and analytical batch 880-40262 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

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

Client Sample Results

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 890-3525-1
SDG: 03E1558147

Client Sample ID: SS01

Date Collected: 11/17/22 10:00
Date Received: 11/18/22 08:20
Sample Depth: 0.5

Lab Sample ID: 890-3525-1
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		11/28/22 12:47	11/29/22 05:43	1
Toluene	<0.00201	U	0.00201		mg/Kg		11/28/22 12:47	11/29/22 05:43	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		11/28/22 12:47	11/29/22 05:43	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		11/28/22 12:47	11/29/22 05:43	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		11/28/22 12:47	11/29/22 05:43	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		11/28/22 12:47	11/29/22 05:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*11/28/22 12:47*	*11/29/22 05:43*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*11/28/22 12:47*	*11/29/22 05:43*	*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			11/29/22 09:39	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			11/28/22 11:40	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9		mg/Kg		11/23/22 15:04	11/23/22 21:50	1
Diesel Range Organics (Over C10-C28)	<49.9	U F1	49.9		mg/Kg		11/23/22 15:04	11/23/22 21:50	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/23/22 15:04	11/23/22 21:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*11/23/22 15:04*	*11/23/22 21:50*	*1*
o-Terphenyl	*142*	*S1+*	*70 - 130*	*11/23/22 15:04*	*11/23/22 21:50*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2270**		25.1		mg/Kg			11/23/22 21:13	5

Client Sample ID: SS02

Date Collected: 11/17/22 10:05
Date Received: 11/18/22 08:20
Sample Depth: 0.5

Lab Sample ID: 890-3525-2
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		11/28/22 12:47	11/29/22 06:10	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/28/22 12:47	11/29/22 06:10	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/28/22 12:47	11/29/22 06:10	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/28/22 12:47	11/29/22 06:10	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/28/22 12:47	11/29/22 06:10	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/28/22 12:47	11/29/22 06:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*11/28/22 12:47*	*11/29/22 06:10*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 890-3525-1
SDG: 03E1558147

Client Sample ID: SS02
Date Collected: 11/17/22 10:05
Date Received: 11/18/22 08:20
Sample Depth: 0.5

Lab Sample ID: 890-3525-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*11/28/22 12:47*	*11/29/22 06:10*	*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			11/29/22 09:39	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			11/28/22 11:40	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9		mg/Kg		11/23/22 15:04	11/23/22 22:55	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/23/22 15:04	11/23/22 22:55	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/23/22 15:04	11/23/22 22:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*129*		*70 - 130*	*11/23/22 15:04*	*11/23/22 22:55*	*1*
o-Terphenyl	*155*	*S1+*	*70 - 130*	*11/23/22 15:04*	*11/23/22 22:55*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8120**		50.0		mg/Kg			11/23/22 21:21	10

Surrogate Summary

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 890-3525-1
SDG: 03E1558147

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)
880-21770-A-1-G MS	Matrix Spike	93	108
880-21770-A-1-H MSD	Matrix Spike Duplicate	90	98
890-3525-1	SS01	95	100
890-3525-2	SS02	107	100
LCS 880-40465/1-A	Lab Control Sample	87	108
LCSD 880-40465/2-A	Lab Control Sample Dup	90	108
MB 880-40465/5-A	Method Blank	62 S1-	92

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)
890-3525-1	SS01	113	142 S1+
890-3525-1 MS	SS01	145 S1+	159 S1+
890-3525-1 MSD	SS01	147 S1+	164 S1+
890-3525-2	SS02	129	155 S1+
LCS 880-40343/2-A	Lab Control Sample	175 S1+	217 S1+
LCSD 880-40343/3-A	Lab Control Sample Dup	200 S1+	240 S1+
MB 880-40343/1-A	Method Blank	155 S1+	184 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 890-3525-1
SDG: 03E1558147

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-40465/5-A
Matrix: Solid
Analysis Batch: 40503

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40465

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/28/22 12:47	11/28/22 20:27	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/28/22 12:47	11/28/22 20:27	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/28/22 12:47	11/28/22 20:27	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/28/22 12:47	11/28/22 20:27	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/28/22 12:47	11/28/22 20:27	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/28/22 12:47	11/28/22 20:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*62*	*S1-*	*70 - 130*	*11/28/22 12:47*	*11/28/22 20:27*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*11/28/22 12:47*	*11/28/22 20:27*	*1*

Lab Sample ID: LCS 880-40465/1-A
Matrix: Solid
Analysis Batch: 40503

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40465

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09543		mg/Kg		95	70 - 130		
Toluene			0.100	0.09266		mg/Kg		93	70 - 130		
Ethylbenzene			0.100	0.08841		mg/Kg		88	70 - 130		
m-Xylene & p-Xylene			0.200	0.1754		mg/Kg		88	70 - 130		
o-Xylene			0.100	0.08922		mg/Kg		89	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: LCSD 880-40465/2-A
Matrix: Solid
Analysis Batch: 40503

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 40465

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1066		mg/Kg		107	70 - 130	11	35
Toluene			0.100	0.09978		mg/Kg		100	70 - 130	7	35
Ethylbenzene			0.100	0.09260		mg/Kg		93	70 - 130	5	35
m-Xylene & p-Xylene			0.200	0.1838		mg/Kg		92	70 - 130	5	35
o-Xylene			0.100	0.09332		mg/Kg		93	70 - 130	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: 880-21770-A-1-G MS
Matrix: Solid
Analysis Batch: 40503

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40465

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U	0.0996	0.08481		mg/Kg		85	70 - 130		
Toluene	<0.00200	U	0.0996	0.08454		mg/Kg		85	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 890-3525-1
SDG: 03E1558147

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

Lab Sample ID: 880-21770-A-1-G MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 40503 — **Prep Batch: 40465**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.0996	0.07697		mg/Kg		77	70 - 130
m-Xylene & p-Xylene	<0.00401	U	0.199	0.1546		mg/Kg		78	70 - 130
o-Xylene	<0.00200	U	0.0996	0.07769		mg/Kg		78	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: 880-21770-A-1-H MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 40503 — **Prep Batch: 40465**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0994	0.08061		mg/Kg		81	70 - 130	5	35
Toluene	<0.00200	U	0.0994	0.07752		mg/Kg		78	70 - 130	9	35
Ethylbenzene	<0.00200	U	0.0994	0.06982		mg/Kg		70	70 - 130	10	35
m-Xylene & p-Xylene	<0.00401	U	0.199	0.1390		mg/Kg		70	70 - 130	11	35
o-Xylene	<0.00200	U	0.0994	0.07102		mg/Kg		71	70 - 130	9	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

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

Lab Sample ID: MB 880-40343/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 40262 — **Prep Batch: 40343**

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		11/23/22 15:04	11/23/22 20:46	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		11/23/22 15:04	11/23/22 20:46	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/23/22 15:04	11/23/22 20:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*155*	*S1+*	*70 - 130*	*11/23/22 15:04*	*11/23/22 20:46*	*1*
o-Terphenyl	*184*	*S1+*	*70 - 130*	*11/23/22 15:04*	*11/23/22 20:46*	*1*

Lab Sample ID: LCS 880-40343/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 40262 — **Prep Batch: 40343**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	949.0		mg/Kg		95	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1030		mg/Kg		103	70 - 130

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 890-3525-1
SDG: 03E1558147

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

Lab Sample ID: LCS 880-40343/2-A
Matrix: Solid
Analysis Batch: 40262

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40343

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	175	S1+	70 - 130
o-Terphenyl	217	S1+	70 - 130

Lab Sample ID: LCSD 880-40343/3-A
Matrix: Solid
Analysis Batch: 40262

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 40343

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1193	*1	mg/Kg		119	70 - 130	23	20
Diesel Range Organics (Over C10-C28)			1000	1169		mg/Kg		117	70 - 130	13	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	200	S1+	70 - 130
o-Terphenyl	240	S1+	70 - 130

Lab Sample ID: 890-3525-1 MS
Matrix: Solid
Analysis Batch: 40262

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 40343

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	999	1143		mg/Kg		114	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U F1	999	1303		mg/Kg		130	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	145	S1+	70 - 130
o-Terphenyl	159	S1+	70 - 130

Lab Sample ID: 890-3525-1 MSD
Matrix: Solid
Analysis Batch: 40262

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 40343

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	998	1103		mg/Kg		111	70 - 130	4	20
Diesel Range Organics (Over C10-C28)	<49.9	U F1	998	1360	F1	mg/Kg		136	70 - 130	4	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	147	S1+	70 - 130
o-Terphenyl	164	S1+	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 890-3525-1
SDG: 03E1558147

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-40010/1-A
Matrix: Solid
Analysis Batch: 40325

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			11/23/22 19:11	1

Lab Sample ID: LCS 880-40010/2-A
Matrix: Solid
Analysis Batch: 40325

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	243.9		mg/Kg		98	90 - 110		

Lab Sample ID: LCSD 880-40010/3-A
Matrix: Solid
Analysis Batch: 40325

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	246.3		mg/Kg		99	90 - 110	1	20

Lab Sample ID: 890-3519-A-1-B MS
Matrix: Solid
Analysis Batch: 40325

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	57.9		249	281.5		mg/Kg		90	90 - 110		

Lab Sample ID: 890-3519-A-1-C MSD
Matrix: Solid
Analysis Batch: 40325

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	57.9		249	287.5		mg/Kg		92	90 - 110	2	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 890-3525-1
SDG: 03E1558147

GC VOA

Prep Batch: 40465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3525-1	SS01	Total/NA	Solid	5035	
890-3525-2	SS02	Total/NA	Solid	5035	
MB 880-40465/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-40465/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-40465/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-21770-A-1-G MS	Matrix Spike	Total/NA	Solid	5035	
880-21770-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 40503

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3525-1	SS01	Total/NA	Solid	8021B	40465
890-3525-2	SS02	Total/NA	Solid	8021B	40465
MB 880-40465/5-A	Method Blank	Total/NA	Solid	8021B	40465
LCS 880-40465/1-A	Lab Control Sample	Total/NA	Solid	8021B	40465
LCSD 880-40465/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	40465
880-21770-A-1-G MS	Matrix Spike	Total/NA	Solid	8021B	40465
880-21770-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	40465

Analysis Batch: 40578

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3525-1	SS01	Total/NA	Solid	Total BTEX	
890-3525-2	SS02	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 40262

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3525-1	SS01	Total/NA	Solid	8015B NM	40343
890-3525-2	SS02	Total/NA	Solid	8015B NM	40343
MB 880-40343/1-A	Method Blank	Total/NA	Solid	8015B NM	40343
LCS 880-40343/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	40343
LCSD 880-40343/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	40343
890-3525-1 MS	SS01	Total/NA	Solid	8015B NM	40343
890-3525-1 MSD	SS01	Total/NA	Solid	8015B NM	40343

Prep Batch: 40343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3525-1	SS01	Total/NA	Solid	8015NM Prep	
890-3525-2	SS02	Total/NA	Solid	8015NM Prep	
MB 880-40343/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-40343/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-40343/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3525-1 MS	SS01	Total/NA	Solid	8015NM Prep	
890-3525-1 MSD	SS01	Total/NA	Solid	8015NM Prep	

Analysis Batch: 40444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3525-1	SS01	Total/NA	Solid	8015 NM	
890-3525-2	SS02	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 890-3525-1
SDG: 03E1558147

HPLC/IC

Leach Batch: 40010

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3525-1	SS01	Soluble	Solid	DI Leach	
890-3525-2	SS02	Soluble	Solid	DI Leach	
MB 880-40010/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-40010/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-40010/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3519-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3519-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 40325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3525-1	SS01	Soluble	Solid	300.0	40010
890-3525-2	SS02	Soluble	Solid	300.0	40010
MB 880-40010/1-A	Method Blank	Soluble	Solid	300.0	40010
LCS 880-40010/2-A	Lab Control Sample	Soluble	Solid	300.0	40010
LCSD 880-40010/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	40010
890-3519-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	40010
890-3519-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	40010

Lab Chronicle

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 890-3525-1
SDG: 03E1558147

Client Sample ID: SS01

Date Collected: 11/17/22 10:00
Date Received: 11/18/22 08:20

Lab Sample ID: 890-3525-1

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	40465	11/28/22 12:47	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40503	11/29/22 05:43	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			40578	11/29/22 09:39	SM	EET MID
Total/NA	Analysis	8015 NM		1			40444	11/28/22 11:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	40343	11/23/22 15:04	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40262	11/23/22 21:50	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	40010	11/20/22 12:21	CH	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	40325	11/23/22 21:13	CH	EET MID

Client Sample ID: SS02

Date Collected: 11/17/22 10:05
Date Received: 11/18/22 08:20

Lab Sample ID: 890-3525-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	40465	11/28/22 12:47	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40503	11/29/22 06:10	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			40578	11/29/22 09:39	SM	EET MID
Total/NA	Analysis	8015 NM		1			40444	11/28/22 11:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	40343	11/23/22 15:04	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40262	11/23/22 22:55	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	40010	11/20/22 12:21	CH	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	40325	11/23/22 21:21	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 13 DTD CTB

Job ID: 890-3525-1
SDG: 03E1558147

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 13 DTD CTB

Job ID: 890-3525-1
SDG: 03E1558147

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 13 DTD CTB

Job ID: 890-3525-1
SDG: 03E1558147

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3525-1	SS01	Solid	11/17/22 10:00	11/18/22 08:20	0.5
890-3525-2	SS02	Solid	11/17/22 10:05	11/18/22 08:20	0.5

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Chain of Custody

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

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Work Order No: _____

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

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 13 DTD CTB	Turn Around	☑ Routine ☐ Rush
Project Number:	03E1558147	Due Date:	
Project Location:		TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Connor Whitman		
PO #:			

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Samples Received Intact:	(Yes) No	Thermometer ID:	TAM-007	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	4.4	
Total Containers:		Corrected Temperature:	4.2	

ANALYSIS REQUEST

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	Pres. Code	Parameters: CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
SS01	S	11/17/22	10:00	.5'	G	1		✓	✓	✓
SS02	S	1	10:05	.5'	G	1		✓	✓	✓

CV

890-3525 Chain of Custody

Sample Comments

Incident ID:
nAPP2231551182
Cost Center:
2191711001
AFE:

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		11/18/2022 8:50	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3525-1
SDG Number: 03E1558147

Login Number: 3525
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: 890-3525-1
SDG Number: 03E1558147

Login Number: 3525
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 11/21/22 08:46 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	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ben Belill
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 12/1/2022 12:54:11 PM

JOB DESCRIPTION

PLU 13 DTD CTB
SDG NUMBER 03E1558147

JOB NUMBER

890-3523-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

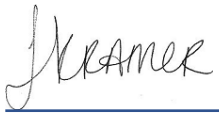
my EOL

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
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Client: Ensolum
Project/Site: PLU 13 DTD CTB

Laboratory Job ID: 890-3523-1
SDG: 03E1558147

Table of Contents

Cover Page 1
Table of Contents 3
Definitions/Glossary 4
Case Narrative 5
Client Sample Results 6
Surrogate Summary 7
QC Sample Results 8
QC Association Summary 12
Lab Chronicle 14
Certification Summary 15
Method Summary 16
Sample Summary 17
Chain of Custody 18
Receipt Checklists 19

Definitions/Glossary

Client: Ensolum Job ID: 890-3523-1
Project/Site: PLU 13 DTD CTB SDG: 03E1558147

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
F2	MS/MSD RPD exceeds control limits
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
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 13 DTD CTB

Job ID: 890-3523-1
SDG: 03E1558147

Job ID: 890-3523-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3523-1

Receipt
The sample was received on 11/18/2022 8:20 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 4.2°C

Receipt Exceptions
The following sample was received and analyzed from an unpreserved bulk soil jar: SS05 (890-3523-1).

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-40588 and analytical batch 880-40656 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was 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 880-40341 and analytical batch 880-40260 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-40341/2-A) and (LCSD 880-40341/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (890-3498-A-1-B) and (890-3498-A-1-C MS). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The method blank for preparation batch 880-40341 and analytical batch 880-40260 contained Gasoline Range Organics (GRO)-C6-C10 and Diesel Range Organics (Over C10-C28) above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 880-40341 and analytical batch 880-40260 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample 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.

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 13 DTD CTB

Job ID: 890-3523-1
SDG: 03E1558147

Client Sample ID: SS05

Date Collected: 11/17/22 11:01
Date Received: 11/18/22 08:20
Sample Depth: 0.5

Lab Sample ID: 890-3523-1

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		11/29/22 10:58	11/30/22 18:18	1
Toluene	<0.00201	U	0.00201		mg/Kg		11/29/22 10:58	11/30/22 18:18	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		11/29/22 10:58	11/30/22 18:18	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		11/29/22 10:58	11/30/22 18:18	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		11/29/22 10:58	11/30/22 18:18	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		11/29/22 10:58	11/30/22 18:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*11/29/22 10:58*	*11/30/22 18:18*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*11/29/22 10:58*	*11/30/22 18:18*	*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			12/01/22 12:55	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			11/28/22 12:39	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		11/23/22 14:58	11/24/22 03:57	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		11/23/22 14:58	11/24/22 03:57	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		11/23/22 14:58	11/24/22 03:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*11/23/22 14:58*	*11/24/22 03:57*	*1*
o-Terphenyl	*115*		*70 - 130*	*11/23/22 14:58*	*11/24/22 03:57*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**25.2**		4.97		mg/Kg			11/23/22 20:24	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 890-3523-1
SDG: 03E1558147

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)
880-21976-A-1-E MS	Matrix Spike	99	116
880-21976-A-1-F MSD	Matrix Spike Duplicate	102	120
890-3523-1	SS05	97	110
LCS 880-40588/1-A	Lab Control Sample	88	115
LCSD 880-40588/2-A	Lab Control Sample Dup	92	117
MB 880-40588/5-A	Method Blank	84	101

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)
890-3498-A-1-C MS	Matrix Spike	131 S1+	128
890-3498-A-1-D MSD	Matrix Spike Duplicate	118	118
890-3523-1	SS05	111	115
LCS 880-40341/2-A	Lab Control Sample	126	141 S1+
LCSD 880-40341/3-A	Lab Control Sample Dup	122	136 S1+
MB 880-40341/1-A	Method Blank	140 S1+	149 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 890-3523-1
SDG: 03E1558147

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-40588/5-A
Matrix: Solid
Analysis Batch: 40656

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40588

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/29/22 10:58	11/30/22 11:46	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/29/22 10:58	11/30/22 11:46	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/29/22 10:58	11/30/22 11:46	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/29/22 10:58	11/30/22 11:46	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/29/22 10:58	11/30/22 11:46	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/29/22 10:58	11/30/22 11:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*	*11/29/22 10:58*	*11/30/22 11:46*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*11/29/22 10:58*	*11/30/22 11:46*	*1*

Lab Sample ID: LCS 880-40588/1-A
Matrix: Solid
Analysis Batch: 40656

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40588

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1178		mg/Kg		118	70 - 130		
Toluene			0.100	0.09961		mg/Kg		100	70 - 130		
Ethylbenzene			0.100	0.09377		mg/Kg		94	70 - 130		
m-Xylene & p-Xylene			0.200	0.1903		mg/Kg		95	70 - 130		
o-Xylene			0.100	0.09180		mg/Kg		92	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*

Lab Sample ID: LCSD 880-40588/2-A
Matrix: Solid
Analysis Batch: 40656

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 40588

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1187		mg/Kg		119	70 - 130	1	35
Toluene			0.100	0.09880		mg/Kg		99	70 - 130	1	35
Ethylbenzene			0.100	0.09425		mg/Kg		94	70 - 130	1	35
m-Xylene & p-Xylene			0.200	0.1919		mg/Kg		96	70 - 130	1	35
o-Xylene			0.100	0.09325		mg/Kg		93	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*
1,4-Difluorobenzene (Surr)	*117*		*70 - 130*

Lab Sample ID: 880-21976-A-1-E MS
Matrix: Solid
Analysis Batch: 40656

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40588

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U	0.0996	0.08295		mg/Kg		83	70 - 130		
Toluene	<0.00199	U F1	0.0996	0.06828	F1	mg/Kg		68	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 890-3523-1
SDG: 03E1558147

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

Lab Sample ID: 880-21976-A-1-E MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 40656 — **Prep Batch: 40588**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U F1	0.0996	0.06277	F1	mg/Kg		63	70 - 130
m-Xylene & p-Xylene	<0.00398	U F1	0.199	0.1265	F1	mg/Kg		63	70 - 130
o-Xylene	<0.00199	U F1	0.0996	0.06159	F1	mg/Kg		61	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*

Lab Sample ID: 880-21976-A-1-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 40656 — **Prep Batch: 40588**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.0996	0.08634		mg/Kg		87	70 - 130	4	35
Toluene	<0.00199	U F1	0.0996	0.06778	F1	mg/Kg		67	70 - 130	1	35
Ethylbenzene	<0.00199	U F1	0.0996	0.06442	F1	mg/Kg		65	70 - 130	3	35
m-Xylene & p-Xylene	<0.00398	U F1	0.199	0.1253	F1	mg/Kg		63	70 - 130	1	35
o-Xylene	<0.00199	U F1	0.0996	0.06065	F1	mg/Kg		60	70 - 130	2	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*120*		*70 - 130*

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

Lab Sample ID: MB 880-40341/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 40260 — **Prep Batch: 40341**

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		11/23/22 14:58	11/23/22 20:46	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		11/23/22 14:58	11/23/22 20:46	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/23/22 14:58	11/23/22 20:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*140*	*S1+*	*70 - 130*	*11/23/22 14:58*	*11/23/22 20:46*	*1*
o-Terphenyl	*149*	*S1+*	*70 - 130*	*11/23/22 14:58*	*11/23/22 20:46*	*1*

Lab Sample ID: LCS 880-40341/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 40260 — **Prep Batch: 40341**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	981.4		mg/Kg		98	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1013		mg/Kg		101	70 - 130

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 890-3523-1
SDG: 03E1558147

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

Lab Sample ID: LCS 880-40341/2-A
Matrix: Solid
Analysis Batch: 40260

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40341

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	126		70 - 130
o-Terphenyl	141	S1+	70 - 130

Lab Sample ID: LCSD 880-40341/3-A
Matrix: Solid
Analysis Batch: 40260

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 40341

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1015		mg/Kg		101	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	978.2		mg/Kg		98	70 - 130	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	122		70 - 130
o-Terphenyl	136	S1+	70 - 130

Lab Sample ID: 890-3498-A-1-C MS
Matrix: Solid
Analysis Batch: 40260

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40341

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.8	U F2	997	1247		mg/Kg		121	70 - 130
Diesel Range Organics (Over C10-C28)	<49.8	U	997	1161		mg/Kg		116	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	131	S1+	70 - 130
o-Terphenyl	128		70 - 130

Lab Sample ID: 890-3498-A-1-D MSD
Matrix: Solid
Analysis Batch: 40260

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 40341

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	<49.8	U F2	996	924.4	F2	mg/Kg		89	70 - 130	30	20
Diesel Range Organics (Over C10-C28)	<49.8	U	996	1069		mg/Kg		107	70 - 130	8	20

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

QC Sample Results

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 890-3523-1
SDG: 03E1558147

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-40010/1-A
Matrix: Solid
Analysis Batch: 40325

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			11/23/22 19:11	1

Lab Sample ID: LCS 880-40010/2-A
Matrix: Solid
Analysis Batch: 40325

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	243.9		mg/Kg		98	90 - 110		

Lab Sample ID: LCSD 880-40010/3-A
Matrix: Solid
Analysis Batch: 40325

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	246.3		mg/Kg		99	90 - 110	1	20

Lab Sample ID: 890-3519-A-1-B MS
Matrix: Solid
Analysis Batch: 40325

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	57.9		249	281.5		mg/Kg		90	90 - 110		

Lab Sample ID: 890-3519-A-1-C MSD
Matrix: Solid
Analysis Batch: 40325

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	57.9		249	287.5		mg/Kg		92	90 - 110	2	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 890-3523-1
SDG: 03E1558147

GC VOA

Prep Batch: 40588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3523-1	SS05	Total/NA	Solid	5035	
MB 880-40588/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-40588/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-40588/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-21976-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
880-21976-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 40656

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3523-1	SS05	Total/NA	Solid	8021B	40588
MB 880-40588/5-A	Method Blank	Total/NA	Solid	8021B	40588
LCS 880-40588/1-A	Lab Control Sample	Total/NA	Solid	8021B	40588
LCSD 880-40588/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	40588
880-21976-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	40588
880-21976-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	40588

Analysis Batch: 40783

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3523-1	SS05	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 40260

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3523-1	SS05	Total/NA	Solid	8015B NM	40341
MB 880-40341/1-A	Method Blank	Total/NA	Solid	8015B NM	40341
LCS 880-40341/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	40341
LCSD 880-40341/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	40341
890-3498-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	40341
890-3498-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	40341

Prep Batch: 40341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3523-1	SS05	Total/NA	Solid	8015NM Prep	
MB 880-40341/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-40341/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-40341/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3498-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3498-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 40462

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3523-1	SS05	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 40010

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3523-1	SS05	Soluble	Solid	DI Leach	
MB 880-40010/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-40010/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-40010/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 890-3523-1
SDG: 03E1558147

HPLC/IC (Continued)

Leach Batch: 40010 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3519-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3519-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 40325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3523-1	SS05	Soluble	Solid	300.0	40010
MB 880-40010/1-A	Method Blank	Soluble	Solid	300.0	40010
LCS 880-40010/2-A	Lab Control Sample	Soluble	Solid	300.0	40010
LCSD 880-40010/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	40010
890-3519-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	40010
890-3519-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	40010

Lab Chronicle

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 890-3523-1
SDG: 03E1558147

Client Sample ID: SS05
Date Collected: 11/17/22 11:01
Date Received: 11/18/22 08:20

Lab Sample ID: 890-3523-1
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	40588	11/29/22 10:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40656	11/30/22 18:18	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			40783	12/01/22 12:55	SM	EET MID
Total/NA	Analysis	8015 NM		1			40462	11/28/22 12:39	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	40341	11/23/22 14:58	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40260	11/24/22 03:57	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	40010	11/20/22 12:21	CH	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40325	11/23/22 20:24	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 13 DTD CTB

Job ID: 890-3523-1
SDG: 03E1558147

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 13 DTD CTB

Job ID: 890-3523-1
SDG: 03E1558147

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 13 DTD CTB

Job ID: 890-3523-1
SDG: 03E1558147

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3523-1	SS05	Solid	11/17/22 11:01	11/18/22 08:20	0.5

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

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

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 13 DTD CTB	Turn Around	☑ Routine ☐ Rush
Project Number:	03E1558147	Due Date:	
Project Location:		TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Connor Whitman		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	TAM.007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	4.4
Total Containers:		Corrected Temperature:	4.2

ANALYSIS REQUEST

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	Pres. Code	Parameters: CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
SS05	S	10:10	11/17/22	.5'	G	1		/	/	/

890-3523 Chain of Custody

Sample Comments

Incident ID:
nAPP2231551182
Cost Center:
2191711001
AFE:

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			2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3523-1
SDG Number: 03E1558147

Login Number: 3523
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: 890-3523-1
SDG Number: 03E1558147

Login Number: 3523
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 11/21/22 08:46 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: Ben Belill
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

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JOB DESCRIPTION

PLU 13 DTD CTB
SDG NUMBER 03E1558147

JOB NUMBER

890-3524-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

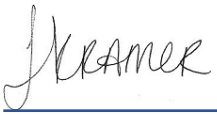
my EOL

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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12/1/2022 12:59:44 PM

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

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Laboratory Job ID: 890-3524-1
SDG: 03E1558147

Table of Contents

Cover Page 1
Table of Contents 3
Definitions/Glossary 4
Case Narrative 5
Client Sample Results 6
Surrogate Summary 9
QC Sample Results 10
QC Association Summary 14
Lab Chronicle 16
Certification Summary 17
Method Summary 18
Sample Summary 19
Chain of Custody 20
Receipt Checklists 21

Definitions/Glossary

Client: Ensolum Job ID: 890-3524-1
Project/Site: PLU 13 DTD CTB SDG: 03E1558147

Qualifiers

GC VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*1	LCS/LCSD RPD exceeds control limits.
F1	MS and/or MSD recovery exceeds control limits.
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 890-3524-1
SDG: 03E1558147

Job ID: 890-3524-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3524-1

Receipt
The samples were received on 11/18/2022 8:20 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.2°C

GC VOA
Method 8021B: The absolute response for Benzene, Toluene, Ethylbenzene, m-Xylene & p-Xylene and o-Xylene was greater than the method reporting limit (RL) in the following sample: (LCSD 880-40436/2-A). The instrument raw data has been manually reviewed and the result can be reported as ND.

Method 8021B: The matrix spike (MS) and/or matrix spike duplicate (MSD) recovery for preparation batch 880-40436 and analytical batch 880-40689 was outside control limits for the following analyte(s): Benzene and Toluene. Results may be biased high because this analyte is a common laboratory solvent and contaminant.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-40436 and analytical batch 880-40689 was outside the control 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 880-40210 and analytical batch 880-40168 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 13 DTD CTB

Job ID: 890-3524-1
SDG: 03E1558147

Client Sample ID: SS03

Date Collected: 11/17/22 09:30
Date Received: 11/18/22 08:20
Sample Depth: 0.5

Lab Sample ID: 890-3524-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *- *1	0.00199		mg/Kg		11/28/22 11:21	12/01/22 01:58	1
Toluene	<0.00199	U *- *1	0.00199		mg/Kg		11/28/22 11:21	12/01/22 01:58	1
Ethylbenzene	<0.00199	U *- *1	0.00199		mg/Kg		11/28/22 11:21	12/01/22 01:58	1
m-Xylene & p-Xylene	<0.00398	U *- *1	0.00398		mg/Kg		11/28/22 11:21	12/01/22 01:58	1
o-Xylene	<0.00199	U *- *1	0.00199		mg/Kg		11/28/22 11:21	12/01/22 01:58	1
Xylenes, Total	<0.00398	U *- *1	0.00398		mg/Kg		11/28/22 11:21	12/01/22 01:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*11/28/22 11:21*	*12/01/22 01:58*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*11/28/22 11:21*	*12/01/22 01:58*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			12/01/22 13:21	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			11/23/22 11:46	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		11/22/22 11:24	11/23/22 02:47	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/22/22 11:24	11/23/22 02:47	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/22/22 11:24	11/23/22 02:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*115*		*70 - 130*	*11/22/22 11:24*	*11/23/22 02:47*	*1*
o-Terphenyl	*111*		*70 - 130*	*11/22/22 11:24*	*11/23/22 02:47*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**55.7**		5.05		mg/Kg			11/23/22 20:48	1

Client Sample ID: SS04

Date Collected: 11/17/22 09:35
Date Received: 11/18/22 08:20
Sample Depth: 0.5

Lab Sample ID: 890-3524-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *- *1	0.00200		mg/Kg		11/28/22 11:21	12/01/22 02:24	1
Toluene	<0.00200	U *- *1	0.00200		mg/Kg		11/28/22 11:21	12/01/22 02:24	1
Ethylbenzene	<0.00200	U *- *1	0.00200		mg/Kg		11/28/22 11:21	12/01/22 02:24	1
m-Xylene & p-Xylene	<0.00401	U *- *1	0.00401		mg/Kg		11/28/22 11:21	12/01/22 02:24	1
o-Xylene	<0.00200	U *- *1	0.00200		mg/Kg		11/28/22 11:21	12/01/22 02:24	1
Xylenes, Total	<0.00401	U *- *1	0.00401		mg/Kg		11/28/22 11:21	12/01/22 02:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*	*11/28/22 11:21*	*12/01/22 02:24*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 890-3524-1
SDG: 03E1558147

Client Sample ID: SS04

Date Collected: 11/17/22 09:35
Date Received: 11/18/22 08:20
Sample Depth: 0.5

Lab Sample ID: 890-3524-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*11/28/22 11:21*	*12/01/22 02:24*	*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			12/01/22 13:21	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			11/23/22 11:46	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		11/22/22 11:24	11/23/22 03:09	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		11/22/22 11:24	11/23/22 03:09	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		11/22/22 11:24	11/23/22 03:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*99*		*70 - 130*	*11/22/22 11:24*	*11/23/22 03:09*	*1*
o-Terphenyl	*98*		*70 - 130*	*11/22/22 11:24*	*11/23/22 03:09*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**25.4**		5.04	mg/Kg			11/23/22 20:57	1

Client Sample ID: SS06

Date Collected: 11/17/22 10:15
Date Received: 11/18/22 08:20
Sample Depth: 0.5

Lab Sample ID: 890-3524-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U *- *1	0.00201	mg/Kg		11/28/22 11:21	12/01/22 02:50	1
Toluene	<0.00201	U *- *1	0.00201	mg/Kg		11/28/22 11:21	12/01/22 02:50	1
Ethylbenzene	<0.00201	U *- *1	0.00201	mg/Kg		11/28/22 11:21	12/01/22 02:50	1
m-Xylene & p-Xylene	<0.00402	U *- *1	0.00402	mg/Kg		11/28/22 11:21	12/01/22 02:50	1
o-Xylene	<0.00201	U *- *1	0.00201	mg/Kg		11/28/22 11:21	12/01/22 02:50	1
Xylenes, Total	<0.00402	U *- *1	0.00402	mg/Kg		11/28/22 11:21	12/01/22 02:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*11/28/22 11:21*	*12/01/22 02:50*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*11/28/22 11:21*	*12/01/22 02:50*	*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			12/01/22 13:21	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			11/23/22 11:46	1

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Client Sample Results

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 890-3524-1
SDG: 03E1558147

Client Sample ID: SS06

Date Collected: 11/17/22 10:15
Date Received: 11/18/22 08:20
Sample Depth: 0.5

Lab Sample ID: 890-3524-3

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		11/22/22 11:24	11/23/22 03:30	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		11/22/22 11:24	11/23/22 03:30	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		11/22/22 11:24	11/23/22 03:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*11/22/22 11:24*	*11/23/22 03:30*	*1*
o-Terphenyl	*108*		*70 - 130*	*11/22/22 11:24*	*11/23/22 03:30*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**20.7**		5.02		mg/Kg			11/23/22 21:05	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 890-3524-1
SDG: 03E1558147

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)
890-3511-A-10-D MS	Matrix Spike	92	104
890-3511-A-10-E MSD	Matrix Spike Duplicate	101	95
890-3524-1	SS03	98	103
890-3524-2	SS04	91	92
890-3524-3	SS06	93	97
LCS 880-40436/1-A	Lab Control Sample	99	89
LCSD 880-40436/2-A	Lab Control Sample Dup	0 S1-	0 S1-
MB 880-40436/5-A	Method Blank	66 S1-	95

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)
820-6564-A-1-E MS	Matrix Spike	99	95
820-6564-A-1-F MSD	Matrix Spike Duplicate	117	97
890-3524-1	SS03	115	111
890-3524-2	SS04	99	98
890-3524-3	SS06	113	108
LCS 880-40210/2-A	Lab Control Sample	104	103
LCSD 880-40210/3-A	Lab Control Sample Dup	115	102
MB 880-40210/1-A	Method Blank	135 S1+	135 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 890-3524-1
SDG: 03E1558147

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-40436/5-A
Matrix: Solid
Analysis Batch: 40689

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40436

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/28/22 11:21	11/30/22 17:06	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/28/22 11:21	11/30/22 17:06	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/28/22 11:21	11/30/22 17:06	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/28/22 11:21	11/30/22 17:06	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/28/22 11:21	11/30/22 17:06	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/28/22 11:21	11/30/22 17:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*66*	*S1-*	*70 - 130*	*11/28/22 11:21*	*11/30/22 17:06*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*11/28/22 11:21*	*11/30/22 17:06*	*1*

Lab Sample ID: LCS 880-40436/1-A
Matrix: Solid
Analysis Batch: 40689

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40436

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1127		mg/Kg		113	70 - 130		
Toluene			0.100	0.1182		mg/Kg		118	70 - 130		
Ethylbenzene			0.100	0.1070		mg/Kg		107	70 - 130		
m-Xylene & p-Xylene			0.200	0.2149		mg/Kg		107	70 - 130		
o-Xylene			0.100	0.1084		mg/Kg		108	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*

Lab Sample ID: LCSD 880-40436/2-A
Matrix: Solid
Analysis Batch: 40689

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 40436

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	<0.00200	U *- *1	mg/Kg		0	70 - 130	200	35
Toluene			0.100	<0.00200	U *- *1	mg/Kg		0	70 - 130	200	35
Ethylbenzene			0.100	<0.00200	U *- *1	mg/Kg		0	70 - 130	200	35
m-Xylene & p-Xylene			0.200	<0.00400	U *- *1	mg/Kg		0	70 - 130	200	35
o-Xylene			0.100	<0.00200	U *- *1	mg/Kg		0	70 - 130	200	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*0*	*S1-*	*70 - 130*
1,4-Difluorobenzene (Surr)	*0*	*S1-*	*70 - 130*

Lab Sample ID: 890-3511-A-10-D MS
Matrix: Solid
Analysis Batch: 40689

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40436

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U F1 *- *1	0.0996	0.1174		mg/Kg		118	70 - 130		
Toluene	<0.00201	U F1 *- *1	0.0996	0.1158		mg/Kg		116	70 - 130		

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QC Sample Results

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 890-3524-1
SDG: 03E1558147

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

Lab Sample ID: 890-3511-A-10-D MS
Matrix: Solid
Analysis Batch: 40689

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40436

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U *- *1	0.0996	0.09952		mg/Kg		100	70 - 130
m-Xylene & p-Xylene	<0.00402	U *- *1	0.199	0.2008		mg/Kg		101	70 - 130
o-Xylene	<0.00201	U *- *1	0.0996	0.1059		mg/Kg		106	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: 890-3511-A-10-E MSD
Matrix: Solid
Analysis Batch: 40689

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 40436

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U F1 *- *1	0.100	0.1370	F1	mg/Kg		136	70 - 130	15	35
Toluene	<0.00201	U F1 *- *1	0.100	0.1331	F1	mg/Kg		133	70 - 130	14	35
Ethylbenzene	<0.00201	U *- *1	0.100	0.1144		mg/Kg		114	70 - 130	14	35
m-Xylene & p-Xylene	<0.00402	U *- *1	0.201	0.2338		mg/Kg		116	70 - 130	15	35
o-Xylene	<0.00201	U *- *1	0.100	0.1220		mg/Kg		122	70 - 130	14	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

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

Lab Sample ID: MB 880-40210/1-A
Matrix: Solid
Analysis Batch: 40168

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40210

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		11/22/22 11:24	11/22/22 19:48	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/22/22 11:24	11/22/22 19:48	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/22/22 11:24	11/22/22 19:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*135*	*S1+*	*70 - 130*	*11/22/22 11:24*	*11/22/22 19:48*	*1*
o-Terphenyl	*135*	*S1+*	*70 - 130*	*11/22/22 11:24*	*11/22/22 19:48*	*1*

Lab Sample ID: LCS 880-40210/2-A
Matrix: Solid
Analysis Batch: 40168

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40210

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	994.7		mg/Kg		99	70 - 130
Diesel Range Organics (Over C10-C28)			1000	955.7		mg/Kg		96	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 890-3524-1
SDG: 03E1558147

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

Lab Sample ID: LCS 880-40210/2-A
Matrix: Solid
Analysis Batch: 40168

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40210

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	104		70 - 130
o-Terphenyl	103		70 - 130

Lab Sample ID: LCSD 880-40210/3-A
Matrix: Solid
Analysis Batch: 40168

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 40210

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	869.2		mg/Kg		87	70 - 130	13	20
Diesel Range Organics (Over C10-C28)			1000	926.3		mg/Kg		93	70 - 130	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	115		70 - 130
o-Terphenyl	102		70 - 130

Lab Sample ID: 820-6564-A-1-E MS
Matrix: Solid
Analysis Batch: 40168

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40210

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	822.5		mg/Kg		80	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	999	906.5		mg/Kg		88	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	99		70 - 130
o-Terphenyl	95		70 - 130

Lab Sample ID: 820-6564-A-1-F MSD
Matrix: Solid
Analysis Batch: 40168

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 40210

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	998	818.0		mg/Kg		80	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<49.9	U	998	934.6		mg/Kg		91	70 - 130	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	117		70 - 130
o-Terphenyl	97		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 890-3524-1
SDG: 03E1558147

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-40010/1-A
Matrix: Solid
Analysis Batch: 40325

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			11/23/22 19:11	1

Lab Sample ID: LCS 880-40010/2-A
Matrix: Solid
Analysis Batch: 40325

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	243.9		mg/Kg		98	90 - 110		

Lab Sample ID: LCSD 880-40010/3-A
Matrix: Solid
Analysis Batch: 40325

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	246.3		mg/Kg		99	90 - 110	1	20

Lab Sample ID: 890-3519-A-1-B MS
Matrix: Solid
Analysis Batch: 40325

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	57.9		249	281.5		mg/Kg		90	90 - 110		

Lab Sample ID: 890-3519-A-1-C MSD
Matrix: Solid
Analysis Batch: 40325

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	57.9		249	287.5		mg/Kg		92	90 - 110	2	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 890-3524-1
SDG: 03E1558147

GC VOA

Prep Batch: 40436

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3524-1	SS03	Total/NA	Solid	5035	
890-3524-2	SS04	Total/NA	Solid	5035	
890-3524-3	SS06	Total/NA	Solid	5035	
MB 880-40436/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-40436/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-40436/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3511-A-10-D MS	Matrix Spike	Total/NA	Solid	5035	
890-3511-A-10-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 40689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3524-1	SS03	Total/NA	Solid	8021B	40436
890-3524-2	SS04	Total/NA	Solid	8021B	40436
890-3524-3	SS06	Total/NA	Solid	8021B	40436
MB 880-40436/5-A	Method Blank	Total/NA	Solid	8021B	40436
LCS 880-40436/1-A	Lab Control Sample	Total/NA	Solid	8021B	40436
LCSD 880-40436/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	40436
890-3511-A-10-D MS	Matrix Spike	Total/NA	Solid	8021B	40436
890-3511-A-10-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	40436

Analysis Batch: 40797

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3524-1	SS03	Total/NA	Solid	Total BTEX	
890-3524-2	SS04	Total/NA	Solid	Total BTEX	
890-3524-3	SS06	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 40168

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3524-1	SS03	Total/NA	Solid	8015B NM	40210
890-3524-2	SS04	Total/NA	Solid	8015B NM	40210
890-3524-3	SS06	Total/NA	Solid	8015B NM	40210
MB 880-40210/1-A	Method Blank	Total/NA	Solid	8015B NM	40210
LCS 880-40210/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	40210
LCSD 880-40210/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	40210
820-6564-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	40210
820-6564-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	40210

Prep Batch: 40210

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3524-1	SS03	Total/NA	Solid	8015NM Prep	
890-3524-2	SS04	Total/NA	Solid	8015NM Prep	
890-3524-3	SS06	Total/NA	Solid	8015NM Prep	
MB 880-40210/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-40210/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-40210/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
820-6564-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
820-6564-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 890-3524-1
SDG: 03E1558147

GC Semi VOA

Analysis Batch: 40301

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3524-1	SS03	Total/NA	Solid	8015 NM	
890-3524-2	SS04	Total/NA	Solid	8015 NM	
890-3524-3	SS06	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 40010

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3524-1	SS03	Soluble	Solid	DI Leach	
890-3524-2	SS04	Soluble	Solid	DI Leach	
890-3524-3	SS06	Soluble	Solid	DI Leach	
MB 880-40010/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-40010/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-40010/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3519-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3519-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 40325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3524-1	SS03	Soluble	Solid	300.0	40010
890-3524-2	SS04	Soluble	Solid	300.0	40010
890-3524-3	SS06	Soluble	Solid	300.0	40010
MB 880-40010/1-A	Method Blank	Soluble	Solid	300.0	40010
LCS 880-40010/2-A	Lab Control Sample	Soluble	Solid	300.0	40010
LCSD 880-40010/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	40010
890-3519-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	40010
890-3519-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	40010

Lab Chronicle

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 890-3524-1
SDG: 03E1558147

Client Sample ID: SS03

Lab Sample ID: 890-3524-1

Date Collected: 11/17/22 09:30
Matrix: Solid
Date Received: 11/18/22 08:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	40436	11/28/22 11:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40689	12/01/22 01:58	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			40797	12/01/22 13:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			40301	11/23/22 11:46	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	40210	11/22/22 11:24	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40168	11/23/22 02:47	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	40010	11/20/22 12:21	CH	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40325	11/23/22 20:48	CH	EET MID

Client Sample ID: SS04

Lab Sample ID: 890-3524-2

Date Collected: 11/17/22 09:35
Matrix: Solid
Date Received: 11/18/22 08:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	40436	11/28/22 11:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40689	12/01/22 02:24	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			40797	12/01/22 13:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			40301	11/23/22 11:46	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	40210	11/22/22 11:24	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40168	11/23/22 03:09	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	40010	11/20/22 12:21	CH	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40325	11/23/22 20:57	CH	EET MID

Client Sample ID: SS06

Lab Sample ID: 890-3524-3

Date Collected: 11/17/22 10:15
Matrix: Solid
Date Received: 11/18/22 08:20

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	40436	11/28/22 11:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40689	12/01/22 02:50	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			40797	12/01/22 13:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			40301	11/23/22 11:46	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	40210	11/22/22 11:24	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40168	11/23/22 03:30	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	40010	11/20/22 12:21	CH	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40325	11/23/22 21:05	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 13 DTD CTB

Job ID: 890-3524-1
SDG: 03E1558147

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 13 DTD CTB

Job ID: 890-3524-1
SDG: 03E1558147

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 13 DTD CTB

Job ID: 890-3524-1
SDG: 03E1558147

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3524-1	SS03	Solid	11/17/22 09:30	11/18/22 08:20	0.5
890-3524-2	SS04	Solid	11/17/22 09:35	11/18/22 08:20	0.5
890-3524-3	SS06	Solid	11/17/22 10:15	11/18/22 08:20	0.5

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

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

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 13 DTD CTB	Turn Around	☑ Routine ☐ Rush
Project Number:	03E1558147	Due Date:	
Project Location:		TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Connor Whitman		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	TNM-007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	4.4
Total Containers:		Corrected Temperature:	4.2

ANALYSIS REQUEST

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

890-3524 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
SS03	S	11/17/22	9:30	.5'	G	1		✓	✓	✓
SS04	S	"	9:35	.5'	G	1		✓	✓	✓
SS06	S	"	10:15	.5'	G	1		✓	✓	✓
									CW	

Sample Comments

Incident ID:
nAPP2231551182
Cost Center:
2191711001
AFE:

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			2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3524-1
SDG Number: 03E1558147

Login Number: 3524
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: 890-3524-1
SDG Number: 03E1558147

Login Number: 3524
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 11/21/22 08:46 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: Ben Belill
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 12/13/2022 1:32:49 PM

JOB DESCRIPTION

PLU 13 DTD CTB
SDG NUMBER 03E1558147

JOB NUMBER

880-22195-1

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
12/13/2022 1:32:49 PM

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

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Laboratory Job ID: 880-22195-1
SDG: 03E1558147

Table of Contents

Cover Page 1
Table of Contents 3
Definitions/Glossary 4
Case Narrative 5
Client Sample Results 6
Surrogate Summary 8
QC Sample Results 9
QC Association Summary 12
Lab Chronicle 14
Certification Summary 15
Method Summary 16
Sample Summary 17
Chain of Custody 18
Receipt Checklists 19

Eurofins Midland
12/13/2022

Definitions/Glossary

Client: Ensolum Job ID: 880-22195-1
Project/Site: PLU 13 DTD CTB SDG: 03E1558147

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
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 13 DTD CTB

Job ID: 880-22195-1
SDG: 03E1558147

Job ID: 880-22195-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-22195-1

Receipt
The samples were received on 12/1/2022 1:44 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice.

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: (LCS 880-40910/1-A) and (LCSD 880-40910/2-A). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following sample was outside control limits: BH02 (880-22195-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-40910 and analytical batch 880-41566 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.

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-41187 and analytical batch 880-41218 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-41187/2-A) and (LCSD 880-41187/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (880-22119-A-1-F). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: BH02 (880-22195-1) and BH02A (880-22195-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 880-41187 and analytical batch 880-41218 was outside control limits. Sample non-homogeneity is suspected.

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 880-40959 and analytical batch 880-41085 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 13 DTD CTB

Job ID: 880-22195-1
SDG: 03E1558147

Client Sample ID: BH02

Date Collected: 12/01/22 10:45
Date Received: 12/01/22 13:44

Lab Sample ID: 880-22195-1
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		12/08/22 15:45	12/13/22 08:15	1
Toluene	<0.00201	U	0.00201		mg/Kg		12/08/22 15:45	12/13/22 08:15	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		12/08/22 15:45	12/13/22 08:15	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		12/08/22 15:45	12/13/22 08:15	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		12/08/22 15:45	12/13/22 08:15	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		12/08/22 15:45	12/13/22 08:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*155*	*S1+*	*70 - 130*	*12/08/22 15:45*	*12/13/22 08:15*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*12/08/22 15:45*	*12/13/22 08:15*	*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			12/13/22 11:04	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			12/08/22 12:15	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		12/06/22 15:06	12/07/22 18:47	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/06/22 15:06	12/07/22 18:47	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/06/22 15:06	12/07/22 18:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*123*		*70 - 130*	*12/06/22 15:06*	*12/07/22 18:47*	*1*
o-Terphenyl	*145*	*S1+*	*70 - 130*	*12/06/22 15:06*	*12/07/22 18:47*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8360**		50.0		mg/Kg			12/08/22 09:06	10

Client Sample ID: BH02A

Date Collected: 12/01/22 11:15
Date Received: 12/01/22 13:44

Lab Sample ID: 880-22195-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		12/08/22 15:45	12/13/22 08:36	1
Toluene	<0.00202	U	0.00202		mg/Kg		12/08/22 15:45	12/13/22 08:36	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		12/08/22 15:45	12/13/22 08:36	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		12/08/22 15:45	12/13/22 08:36	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		12/08/22 15:45	12/13/22 08:36	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		12/08/22 15:45	12/13/22 08:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*12/08/22 15:45*	*12/13/22 08:36*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*12/08/22 15:45*	*12/13/22 08:36*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 880-22195-1
SDG: 03E1558147

Client Sample ID: BH02A

Date Collected: 12/01/22 11:15
Date Received: 12/01/22 13:44

Lab Sample ID: 880-22195-2

Matrix: Solid

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			12/13/22 11:04	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			12/08/22 12:15	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		12/06/22 15:06	12/07/22 19:09	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/06/22 15:06	12/07/22 19:09	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/06/22 15:06	12/07/22 19:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*130*		*70 - 130*	*12/06/22 15:06*	*12/07/22 19:09*	*1*
o-Terphenyl	*151*	*S1+*	*70 - 130*	*12/06/22 15:06*	*12/07/22 19:09*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**260**		4.97		mg/Kg			12/08/22 09:13	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 880-22195-1
SDG: 03E1558147

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)
880-22195-1	BH02	155 S1+	102
880-22195-2	BH02A	101	99
LCS 880-40910/1-A	Lab Control Sample	147 S1+	96
LCSD 880-40910/2-A	Lab Control Sample Dup	137 S1+	97
MB 880-40910/5-A	Method Blank	74	98
MB 880-41490/5-A	Method Blank	74	99

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)
880-22195-1	BH02	123	145 S1+
880-22195-2	BH02A	130	151 S1+
LCS 880-41187/2-A	Lab Control Sample	157 S1+	182 S1+
LCSD 880-41187/3-A	Lab Control Sample Dup	153 S1+	181 S1+
MB 880-41187/1-A	Method Blank	119	145 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 880-22195-1
SDG: 03E1558147

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-40910/5-A
Matrix: Solid
Analysis Batch: 41566

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40910

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/02/22 16:18	12/13/22 00:29	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/02/22 16:18	12/13/22 00:29	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/02/22 16:18	12/13/22 00:29	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/02/22 16:18	12/13/22 00:29	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/02/22 16:18	12/13/22 00:29	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/02/22 16:18	12/13/22 00:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*74*		*70 - 130*	*12/02/22 16:18*	*12/13/22 00:29*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*12/02/22 16:18*	*12/13/22 00:29*	*1*

Lab Sample ID: LCS 880-40910/1-A
Matrix: Solid
Analysis Batch: 41566

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40910

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09037		mg/Kg		90	70 - 130		
Toluene			0.100	0.09680		mg/Kg		97	70 - 130		
Ethylbenzene			0.100	0.1042		mg/Kg		104	70 - 130		
m-Xylene & p-Xylene			0.200	0.2347		mg/Kg		117	70 - 130		
o-Xylene			0.100	0.1151		mg/Kg		115	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*147*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: LCSD 880-40910/2-A
Matrix: Solid
Analysis Batch: 41566

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 40910

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1092		mg/Kg		109	70 - 130	19	35
Toluene			0.100	0.1036		mg/Kg		104	70 - 130	7	35
Ethylbenzene			0.100	0.1081		mg/Kg		108	70 - 130	4	35
m-Xylene & p-Xylene			0.200	0.2415		mg/Kg		121	70 - 130	3	35
o-Xylene			0.100	0.1212		mg/Kg		121	70 - 130	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*137*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: MB 880-41490/5-A
Matrix: Solid
Analysis Batch: 41566

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 41490

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/09/22 14:34	12/12/22 12:54	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/09/22 14:34	12/12/22 12:54	1

QC Sample Results

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 880-22195-1
SDG: 03E1558147

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

Lab Sample ID: MB 880-41490/5-A
Matrix: Solid
Analysis Batch: 41566

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 41490

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/09/22 14:34	12/12/22 12:54	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/09/22 14:34	12/12/22 12:54	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/09/22 14:34	12/12/22 12:54	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/09/22 14:34	12/12/22 12:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*74*		*70 - 130*	*12/09/22 14:34*	*12/12/22 12:54*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*12/09/22 14:34*	*12/12/22 12:54*	*1*

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

Lab Sample ID: MB 880-41187/1-A
Matrix: Solid
Analysis Batch: 41218

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 41187

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		12/06/22 15:06	12/07/22 08:21	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/06/22 15:06	12/07/22 08:21	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/06/22 15:06	12/07/22 08:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*119*		*70 - 130*	*12/06/22 15:06*	*12/07/22 08:21*	*1*
o-Terphenyl	*145*	*S1+*	*70 - 130*	*12/06/22 15:06*	*12/07/22 08:21*	*1*

Lab Sample ID: LCS 880-41187/2-A
Matrix: Solid
Analysis Batch: 41218

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 41187

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	883.0		mg/Kg		88	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	948.5		mg/Kg		95	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*157*	*S1+*	*70 - 130*
o-Terphenyl	*182*	*S1+*	*70 - 130*

Lab Sample ID: LCSD 880-41187/3-A
Matrix: Solid
Analysis Batch: 41218

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 41187

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	913.7		mg/Kg		91	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	923.1		mg/Kg		92	70 - 130	3	20

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QC Sample Results

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 880-22195-1
SDG: 03E1558147

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

Lab Sample ID: LCSD 880-41187/3-A
Matrix: Solid
Analysis Batch: 41218

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 41187

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*153*	*S1+*	*70 - 130*
o-Terphenyl	*181*	*S1+*	*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-40959/1-A
Matrix: Solid
Analysis Batch: 41085

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			12/07/22 22:10	1

Lab Sample ID: LCS 880-40959/2-A
Matrix: Solid
Analysis Batch: 41085

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	267.0		mg/Kg		107	90 - 110		

Lab Sample ID: LCSD 880-40959/3-A
Matrix: Solid
Analysis Batch: 41085

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	267.4		mg/Kg		107	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 880-22195-1
SDG: 03E1558147

GC VOA

Prep Batch: 40910

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22195-1	BH02	Total/NA	Solid	5035	
880-22195-2	BH02A	Total/NA	Solid	5035	
MB 880-40910/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-40910/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-40910/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Prep Batch: 41490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-41490/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 41566

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22195-1	BH02	Total/NA	Solid	8021B	40910
880-22195-2	BH02A	Total/NA	Solid	8021B	40910
MB 880-40910/5-A	Method Blank	Total/NA	Solid	8021B	40910
MB 880-41490/5-A	Method Blank	Total/NA	Solid	8021B	41490
LCS 880-40910/1-A	Lab Control Sample	Total/NA	Solid	8021B	40910
LCSD 880-40910/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	40910

Analysis Batch: 41734

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22195-1	BH02	Total/NA	Solid	Total BTEX	
880-22195-2	BH02A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 41187

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22195-1	BH02	Total/NA	Solid	8015NM Prep	
880-22195-2	BH02A	Total/NA	Solid	8015NM Prep	
MB 880-41187/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-41187/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-41187/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 41218

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22195-1	BH02	Total/NA	Solid	8015B NM	41187
880-22195-2	BH02A	Total/NA	Solid	8015B NM	41187
MB 880-41187/1-A	Method Blank	Total/NA	Solid	8015B NM	41187
LCS 880-41187/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	41187
LCSD 880-41187/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	41187

Analysis Batch: 41365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22195-1	BH02	Total/NA	Solid	8015 NM	
880-22195-2	BH02A	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 40959

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22195-1	BH02	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 880-22195-1
SDG: 03E1558147

HPLC/IC (Continued)

Leach Batch: 40959 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22195-2	BH02A	Soluble	Solid	DI Leach	
MB 880-40959/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-40959/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-40959/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 41085

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22195-1	BH02	Soluble	Solid	300.0	40959
880-22195-2	BH02A	Soluble	Solid	300.0	40959
MB 880-40959/1-A	Method Blank	Soluble	Solid	300.0	40959
LCS 880-40959/2-A	Lab Control Sample	Soluble	Solid	300.0	40959
LCSD 880-40959/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	40959

Lab Chronicle

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 880-22195-1
SDG: 03E1558147

Client Sample ID: BH02
Date Collected: 12/01/22 10:45
Date Received: 12/01/22 13:44

Lab Sample ID: 880-22195-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			40910	MNR	EET MID	12/08/22 15:45
Total/NA	Analysis	8021B		1	41566	MNR	EET MID	12/13/22 08:15
Total/NA	Analysis	Total BTEX		1	41734	SM	EET MID	12/13/22 11:04
Total/NA	Analysis	8015 NM		1	41365	SM	EET MID	12/08/22 12:15
Total/NA	Prep	8015NM Prep			41187	DM	EET MID	12/06/22 15:06
Total/NA	Analysis	8015B NM		1	41218	SM	EET MID	12/07/22 18:47
Soluble	Leach	DI Leach			40959	SMC	EET MID	12/03/22 13:50
Soluble	Analysis	300.0		10	41085	CH	EET MID	12/08/22 09:06

Client Sample ID: BH02A
Date Collected: 12/01/22 11:15
Date Received: 12/01/22 13:44

Lab Sample ID: 880-22195-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			40910	MNR	EET MID	12/08/22 15:45
Total/NA	Analysis	8021B		1	41566	MNR	EET MID	12/13/22 08:36
Total/NA	Analysis	Total BTEX		1	41734	SM	EET MID	12/13/22 11:04
Total/NA	Analysis	8015 NM		1	41365	SM	EET MID	12/08/22 12:15
Total/NA	Prep	8015NM Prep			41187	DM	EET MID	12/06/22 15:06
Total/NA	Analysis	8015B NM		1	41218	SM	EET MID	12/07/22 19:09
Soluble	Leach	DI Leach			40959	SMC	EET MID	12/03/22 13:50
Soluble	Analysis	300.0		1	41085	CH	EET MID	12/08/22 09:13

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 13 DTD CTB

Job ID: 880-22195-1
SDG: 03E1558147

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 13 DTD CTB

Job ID: 880-22195-1
SDG: 03E1558147

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 13 DTD CTB

Job ID: 880-22195-1
SDG: 03E1558147

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-22195-1	BH02	Solid	12/01/22 10:45	12/01/22 13:44
880-22195-2	BH02A	Solid	12/01/22 11:15	12/01/22 13:44

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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: 22195

www.xenco.com Page 1 of 1

Project Manager:	Ben Belill	Bill to. (if different)	Garrett Green
Company Name	Ensolum, LLC	Company Name	XTO Energy
Address	3122 Nat'l Parks Hwy	Address.	3104 E Greene St
City State ZIP:	Carlsbad, NM 88220	City State ZIP:	Carlsbad, NM 88220
Phone	989 854-0852 Email		bbelill@ensolum.com

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 13 DTD CTB	Turn Around	
Project Number:	03E1558147	☑ Routine ☐ Rush	
Project Location	32.20597, -103.83001	Due Date	
Sampler's Name:	Meredith Roberts	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		2.8
Total Containers.		Corrected Temperature		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: Chlorides	BTEX	TPH
BH02	S	12/01/22	1045	1'	G	1		X	X	X
BH02A	S	12/01/22	1115	2.5'	G	1		X	X	X

ANALYSIS REQUEST

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 Comments

Incident #
nAPP2231551182

Cost Center:
2191711001

880-22195 Chain of Custody

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		12/1/22 13:44	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-22195-1
SDG Number: 03E1558147

Login Number: 22195
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: Ben Belill
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 12/22/2022 8:59:40 AM Revision 1

JOB DESCRIPTION

PLU 13 DTD CTB
SDG NUMBER 03E1558147

JOB NUMBER

880-22196-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.

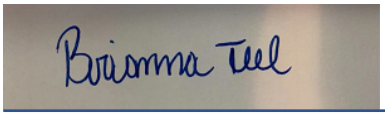
my EOL

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



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Revision 1

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Client: Ensolum
Project/Site: PLU 13 DTD CTB

Laboratory Job ID: 880-22196-1
SDG: 03E1558147

Table of Contents

Cover Page 1
Table of Contents 3
Definitions/Glossary 4
Case Narrative 5
Client Sample Results 6
Surrogate Summary 7
QC Sample Results 8
QC Association Summary 11
Lab Chronicle 13
Certification Summary 14
Method Summary 15
Sample Summary 16
Chain of Custody 17
Receipt Checklists 18

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 880-22196-1
SDG: 03E1558147

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
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 13 DTD CTB

Job ID: 880-22196-1
SDG: 03E1558147

Job ID: 880-22196-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-22196-1

REVISION

The report being provided is a revision of the original report sent on 12/14/2022. The report (revision 1) is being revised due to Per client email requesting chloride re run.

Report revision history

Receipt
The sample was received on 12/1/2022 1:44 PM. 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 2.8°C

GC VOA
Method 8021B: Surrogate recovery for the following sample was outside control limits: (LCS 880-41400/1-A). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following samples were outside control limits: (880-22122-A-50-C MS) and (880-22122-A-50-D MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (880-22122-A-50-E). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-41084 and analytical batch 880-40987 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-40987/31), (CCV 880-40987/47), (CCV 880-40987/58), (LCS 880-41084/2-A) and (LCSD 880-41084/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: BH01 (880-22196-1), (880-22272-A-21-G), (880-22272-A-21-H MS) and (880-22272-A-21-I MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

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

Client Sample Results

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 880-22196-1
SDG: 03E1558147

Client Sample ID: BH01

Date Collected: 12/01/22 11:55
Date Received: 12/01/22 13:44
Sample Depth: 1'

Lab Sample ID: 880-22196-1

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		12/08/22 16:23	12/14/22 08:24	1
Toluene	<0.00199	U	0.00199		mg/Kg		12/08/22 16:23	12/14/22 08:24	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		12/08/22 16:23	12/14/22 08:24	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		12/08/22 16:23	12/14/22 08:24	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		12/08/22 16:23	12/14/22 08:24	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		12/08/22 16:23	12/14/22 08:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*12/08/22 16:23*	*12/14/22 08:24*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*12/08/22 16:23*	*12/14/22 08:24*	*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			12/14/22 10:47	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**95.2**		49.9		mg/Kg			12/06/22 10:09	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		12/05/22 15:06	12/06/22 04:45	1
Diesel Range Organics (Over C10-C28)	**95.2**		49.9		mg/Kg		12/05/22 15:06	12/06/22 04:45	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/05/22 15:06	12/06/22 04:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*167*	*S1+*	*70 - 130*	*12/05/22 15:06*	*12/06/22 04:45*	*1*
o-Terphenyl	*200*	*S1+*	*70 - 130*	*12/05/22 15:06*	*12/06/22 04:45*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**599**		5.00		mg/Kg			12/21/22 18:01	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 880-22196-1
SDG: 03E1558147

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)
880-22196-1	BH01	98	103
LCS 880-41400/1-A	Lab Control Sample	141 S1+	93
LCSD 880-41400/2-A	Lab Control Sample Dup	127	91
MB 880-41400/5-A	Method Blank	78	103
MB 880-41401/5-A	Method Blank	78	103

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)
880-22196-1	BH01	167 S1+	200 S1+
LCS 880-41084/2-A	Lab Control Sample	156 S1+	190 S1+
LCSD 880-41084/3-A	Lab Control Sample Dup	158 S1+	191 S1+
MB 880-41084/1-A	Method Blank	113	142 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 880-22196-1
SDG: 03E1558147

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-41400/5-A
Matrix: Solid
Analysis Batch: 41705

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 41400

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/08/22 16:23	12/13/22 23:56	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/08/22 16:23	12/13/22 23:56	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/08/22 16:23	12/13/22 23:56	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/08/22 16:23	12/13/22 23:56	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/08/22 16:23	12/13/22 23:56	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/08/22 16:23	12/13/22 23:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*78*		*70 - 130*	*12/08/22 16:23*	*12/13/22 23:56*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*12/08/22 16:23*	*12/13/22 23:56*	*1*

Lab Sample ID: LCS 880-41400/1-A
Matrix: Solid
Analysis Batch: 41705

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 41400

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1049		mg/Kg		105	70 - 130		
Toluene			0.100	0.09994		mg/Kg		100	70 - 130		
Ethylbenzene			0.100	0.1102		mg/Kg		110	70 - 130		
m-Xylene & p-Xylene			0.200	0.2402		mg/Kg		120	70 - 130		
o-Xylene			0.100	0.1173		mg/Kg		117	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*141*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

Lab Sample ID: LCSD 880-41400/2-A
Matrix: Solid
Analysis Batch: 41705

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 41400

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08250		mg/Kg		82	70 - 130	24	35
Toluene			0.100	0.08174		mg/Kg		82	70 - 130	20	35
Ethylbenzene			0.100	0.08948		mg/Kg		89	70 - 130	21	35
m-Xylene & p-Xylene			0.200	0.1962		mg/Kg		98	70 - 130	20	35
o-Xylene			0.100	0.09728		mg/Kg		97	70 - 130	19	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*127*		*70 - 130*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*

Lab Sample ID: MB 880-41401/5-A
Matrix: Solid
Analysis Batch: 41705

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 41401

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/08/22 16:47	12/13/22 12:20	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/08/22 16:47	12/13/22 12:20	1

QC Sample Results

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 880-22196-1
SDG: 03E1558147

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

Lab Sample ID: MB 880-41401/5-A
Matrix: Solid
Analysis Batch: 41705

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 41401

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/08/22 16:47	12/13/22 12:20	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/08/22 16:47	12/13/22 12:20	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/08/22 16:47	12/13/22 12:20	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/08/22 16:47	12/13/22 12:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*78*		*70 - 130*	*12/08/22 16:47*	*12/13/22 12:20*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*12/08/22 16:47*	*12/13/22 12:20*	*1*

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

Lab Sample ID: MB 880-41084/1-A
Matrix: Solid
Analysis Batch: 40987

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 41084

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		12/05/22 15:06	12/05/22 20:25	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/05/22 15:06	12/05/22 20:25	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/05/22 15:06	12/05/22 20:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*12/05/22 15:06*	*12/05/22 20:25*	*1*
o-Terphenyl	*142*	*S1+*	*70 - 130*	*12/05/22 15:06*	*12/05/22 20:25*	*1*

Lab Sample ID: LCS 880-41084/2-A
Matrix: Solid
Analysis Batch: 40987

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 41084

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	880.3		mg/Kg		88	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	951.5		mg/Kg		95	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*156*	*S1+*	*70 - 130*
o-Terphenyl	*190*	*S1+*	*70 - 130*

Lab Sample ID: LCSD 880-41084/3-A
Matrix: Solid
Analysis Batch: 40987

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 41084

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	901.1		mg/Kg		90	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	955.6		mg/Kg		96	70 - 130	0	20

Eurofins Midland

QC Sample Results

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 880-22196-1
SDG: 03E1558147

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

Lab Sample ID: LCSD 880-41084/3-A
Matrix: Solid
Analysis Batch: 40987

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 41084

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*158*	*S1+*	*70 - 130*
o-Terphenyl	*191*	*S1+*	*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-42369/1-A
Matrix: Solid
Analysis Batch: 42424

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			12/21/22 16:14	1

Lab Sample ID: LCS 880-42369/2-A
Matrix: Solid
Analysis Batch: 42424

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	248.2		mg/Kg		99	90 - 110		

Lab Sample ID: LCSD 880-42369/3-A
Matrix: Solid
Analysis Batch: 42424

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	248.3		mg/Kg		99	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 880-22196-1
SDG: 03E1558147

GC VOA

Prep Batch: 41400

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22196-1	BH01	Total/NA	Solid	5035	
MB 880-41400/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-41400/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-41400/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Prep Batch: 41401

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-41401/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 41705

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22196-1	BH01	Total/NA	Solid	8021B	41400
MB 880-41400/5-A	Method Blank	Total/NA	Solid	8021B	41400
MB 880-41401/5-A	Method Blank	Total/NA	Solid	8021B	41401
LCS 880-41400/1-A	Lab Control Sample	Total/NA	Solid	8021B	41400
LCSD 880-41400/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	41400

Analysis Batch: 41800

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22196-1	BH01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 40987

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22196-1	BH01	Total/NA	Solid	8015B NM	41084
MB 880-41084/1-A	Method Blank	Total/NA	Solid	8015B NM	41084
LCS 880-41084/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	41084
LCSD 880-41084/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	41084

Prep Batch: 41084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22196-1	BH01	Total/NA	Solid	8015NM Prep	
MB 880-41084/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-41084/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-41084/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 41139

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22196-1	BH01	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 42369

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22196-1	BH01	Soluble	Solid	DI Leach	
MB 880-42369/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-42369/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-42369/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 880-22196-1
SDG: 03E1558147

HPLC/IC

Analysis Batch: 42424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22196-1	BH01	Soluble	Solid	300.0	42369
MB 880-42369/1-A	Method Blank	Soluble	Solid	300.0	42369
LCS 880-42369/2-A	Lab Control Sample	Soluble	Solid	300.0	42369
LCSD 880-42369/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	42369

Lab Chronicle

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 880-22196-1
SDG: 03E1558147

Client Sample ID: BH01
Date Collected: 12/01/22 11:55
Date Received: 12/01/22 13:44

Lab Sample ID: 880-22196-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			41400	MNR	EET MID	12/08/22 16:23
Total/NA	Analysis	8021B		1	41705	MNR	EET MID	12/14/22 08:24
Total/NA	Analysis	Total BTEX		1	41800	SM	EET MID	12/14/22 10:47
Total/NA	Analysis	8015 NM		1	41139	SM	EET MID	12/06/22 10:09
Total/NA	Prep	8015NM Prep			41084	DM	EET MID	12/05/22 15:06
Total/NA	Analysis	8015B NM		1	40987	SM	EET MID	12/06/22 04:45
Soluble	Leach	DI Leach			42369	KS	EET MID	12/21/22 08:43
Soluble	Analysis	300.0		1	42424	CH	EET MID	12/21/22 18:01

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 13 DTD CTB

Job ID: 880-22196-1
SDG: 03E1558147

Laboratory: Eurofins Midland

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-25	06-30-23

Method Summary

Client: Ensolum
Project/Site: PLU 13 DTD CTB

Job ID: 880-22196-1
SDG: 03E1558147

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 13 DTD CTB

Job ID: 880-22196-1
SDG: 03E1558147

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-22196-1	BH01	Solid	12/01/22 11:55	12/01/22 13:44	1'

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: 22196

www.xenco.com Page 1 of 1

Project Manager:	Ben Belill	Bill to (if different)	Garrett Green
Company Name	Ensolum, LLC	Company Name	XTO Energy
Address:	3122 Nat'l Parks Hwy	Address	3104 E Greene St
City, State ZIP:	Carlsbad, NM 88220	City State ZIP:	Carlsbad, NM 88220
Phone	989-854 0852 Email		bbelill@ensolum.com

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 13 DTD CTB	Turn Around	
Project Number:	03E1558147	☑ Routine ☐ Rush	
Project Location	32.20597, -103.83001	Due Date	
Sampler's Name:	Meredith Roberts	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	2.8	
Total Containers.		Corrected Temperature:		

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: Chlorides	BTEX	TPH
BH01	S	12/01/22	1155	1'	G	1		X	X	X

NR

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 Comments

Incident #:
nAPP2223159182

Cost Center:
2191711001

880-22196 Chain of Custody

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			12/1/22 13:44	2		
3				4		
5				6		

Revised Date: 08/25/2020 Rev 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-22196-1
SDG Number: 03E1558147

Login Number: 22196
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	

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 179587

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 179587
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your closure report and final C-141 for Incident #NAPP2231551182 PLU 13 DOG TOWN DRAW CTB, thank you. This closure is approved. Please be aware that any contaminants left on pad above reclamation standards will need to be addressed at the time the site/facility is plugged and abandoned.	5/2/2023