State of New Mexico
Oil Conservation Division

Incident ID	NAPP2215947887
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: __11/01/2022_____

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

OCD Only

Received by: Jocelyn Harimon Date: 11/01/2022

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: 1/11/2023

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	NAPP2215947887
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 32.11019 Longitude -103.87932
(NAD 83 in decimal degrees to 5 decimal places)

Site Name PLU 21 Brushy Draw 907H	Site Type Production Well
Date Release Discovered 06/04/~~2021~~ 2022	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
P	21	25S	30E	Eddy

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

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)	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☒ Other (describe) Produced water w/ FR	Volume/Weight Released (provide units) 15.00 BBLS	Volume/Weight Recovered (provide units) 10.00 BBLS

Cause of Release: Blender tub was overfilled due to human error, releasing fluids to containment and 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	NAPP2215947887
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? N/A

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

Initial Response

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

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

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

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

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

Printed Name: Garrett Green
Title: SSHE Coordinator
Signature:
Date: 06/08/2022
email: garret.green@exxonmobil.com
Telephone: 575-200-0729

OCD Only

Received by: Jocelyn Harimon
Date: 06/08/2022

Location:	PLU 21 Brushy Draw 907H	
Spill Date:	6/4/2022	

Area 1		
Approximate Area =	56.15	cu. Ft.
VOLUME OF LEAK		
Total Crude Oil =	0.00	bbls
Total Produced Water =	10.00	bbls
Area 2		
Approximate Area =	7479.00	sq. ft.
Average Saturation (or depth) of spill =	1.50	inches

Average Porosity Factor =	0.03	

VOLUME OF LEAK		
Total Crude Oil =	0.00	bbls
Total Produced Water =	5.00	bbls

TOTAL VOLUME OF LEAK		
Total Crude Oil =	**0.00**	**bbls**
Total Produced Water =	**15.00**	**bbls**
TOTAL VOLUME RECOVERED		
Total Crude Oil =	**0.00**	**bbls**
Total Produced Water =	**10.00**	**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: 115090
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	None	6/8/2022

Incident ID	NAPP2215947887
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	NAPP2215947887
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: ____11/01/2022_____

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

OCD Only

Received by: Jocelyn Harimon Date: 11/01/2022

Incident ID	NAPP2215947887
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: __11/01/2022_____

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

OCD Only

Received by: Jocelyn Harimon Date: 11/01/2022

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

November 1, 2022

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

Re: Closure Request
PLU 21 Brushy Draw 907H
Incident Number NAPP2215947887
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 site assessment and soil sampling activities at the PLU 21 Brushy Draw 907H (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 with friction reducer (FR) into a temporary containment and onto the well pad. Based on field observations, field screening activities, and soil sample laboratory analytical results, XTO is submitting this *Closure Request*, describing site assessment and delineation activities that have occurred and requesting no further action for Incident Number NAPP2215947887.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit P, Section 21, Township 25 South, Range 30 East, in Eddy County, New Mexico (32.11019°N, 103.87932°W) and is associated with oil and gas exploration and production operations on private land owned by Janey Paschal.

On June 4, 2022, a blender tub was overfilled due to human error, resulting in the release of approximately 15 barrels (bbls) of produced water with FR into the temporary containment and onto the pad. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; 10 bbls of released fluids were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on June 8, 2022. The release was assigned Incident Number NAPP2215947887.

Produced water is recycled through filtering and separation, then mixed in a blender with FR and used as hydraulic fracturing (frac) fluid during the well completion process. The safety data sheet (SDS) for FR is provided as an attachment.

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. Potential site receptors are identified on Figure 1.

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is United States Geological Survey (USGS) well 320628103533001, located approximately 4,031 feet southwest of the Site. The groundwater well has a reported depth to groundwater of 264 feet bgs and a total depth of 288 feet bgs. Ground surface elevation at the groundwater well location is 3,217 feet above mean sea level (amsl), which is approximately 61 feet lower in elevation than the Site. There are four additional wells within a 2-mile radius with regional depth to groundwater greater than 100 feet bgs. Two of the wells were recently drilled by XTO. All wells used for depth to groundwater determination are presented on Figure 1. The referenced well records are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is an intermittent riverine, located approximately 533 feet southeast of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

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

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

SITE ASSESSMENT ACTIVITIES AND ANALYTICAL RESULTS

Frac operations continued onsite prohibiting XTO from conducting Site assessment immediately following notification of the release. Between August 31, 2022 and September 8, 2022, Ensolum personnel visited the Site to evaluate the release extent based on information provided on the Form C-141 and information from XTO regarding the location of the former containment. Once Ensolum personnel were able to access the Site, the temporary containment had been removed and the spill extent was not visually obvious for mapping. Six soil samples (SS01 through SS06) were collected within and around the release extent from a depth of approximately 0.5 feet bgs to assess the lateral extent of the impacted soil. The preliminary soil samples were field screened for volatile aromatic hydrocarbons (VOCs) and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. The soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation is included in Appendix B.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported at or below 4 degrees Celsius (°C) under strict chain-of-custody procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of the following chemicals of conern (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.

Potholes PH01 and PH02 were advanced via backhoe to a depth of 2 feet bgs within the release extent to assess the vertical extent of the release. Delineation soil samples were collected from each pothole at depths of 1-foot and 2 feet bgs. Soil from the delineation potholes was field screened for VOCs and chloride, respectively. Field screening results and observations for the potholes were logged on lithologic/soil sampling logs, which are included in Appendix C. The vertical delineation soil sample locations are depicted on Figure 3.

Laboratory analytical results for all delineation soil samples indicated concentrations of all COCs were compliant with the Site Closure Criteria. In addition, soil samples SS03 through SS06, collected outside of the footprint of the former containment, were compliant with the most stringent Table I Closure Criteria. Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included in Appendix D.

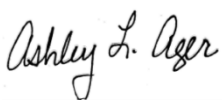
CLOSURE REQUEST

Site assessment and delineation activities were conducted at the Site to address the June 4, 2022, release of produced water with FR. Laboratory analytical results for the delineation soil samples indicated all COC concentrations were compliant with the Site Closure Criteria. Additionally, the release was laterally delineated to below the most stringent Table I Closure Criteria. Based on the soil sample laboratory analytical results, no further remediation was required.

Depth to groundwater has been estimated to be greater than 100 feet bgs and no other sensitive receptors were identified near the release extent. XTO believes these remedial actions are protective of human health, the environment, and groundwater. As such, XTO respectfully requests closure for Incident Number NAPP2215947887.

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

Sincerely,
Ensolum, LLC



Tacoma Morrissey
Senior Geologist

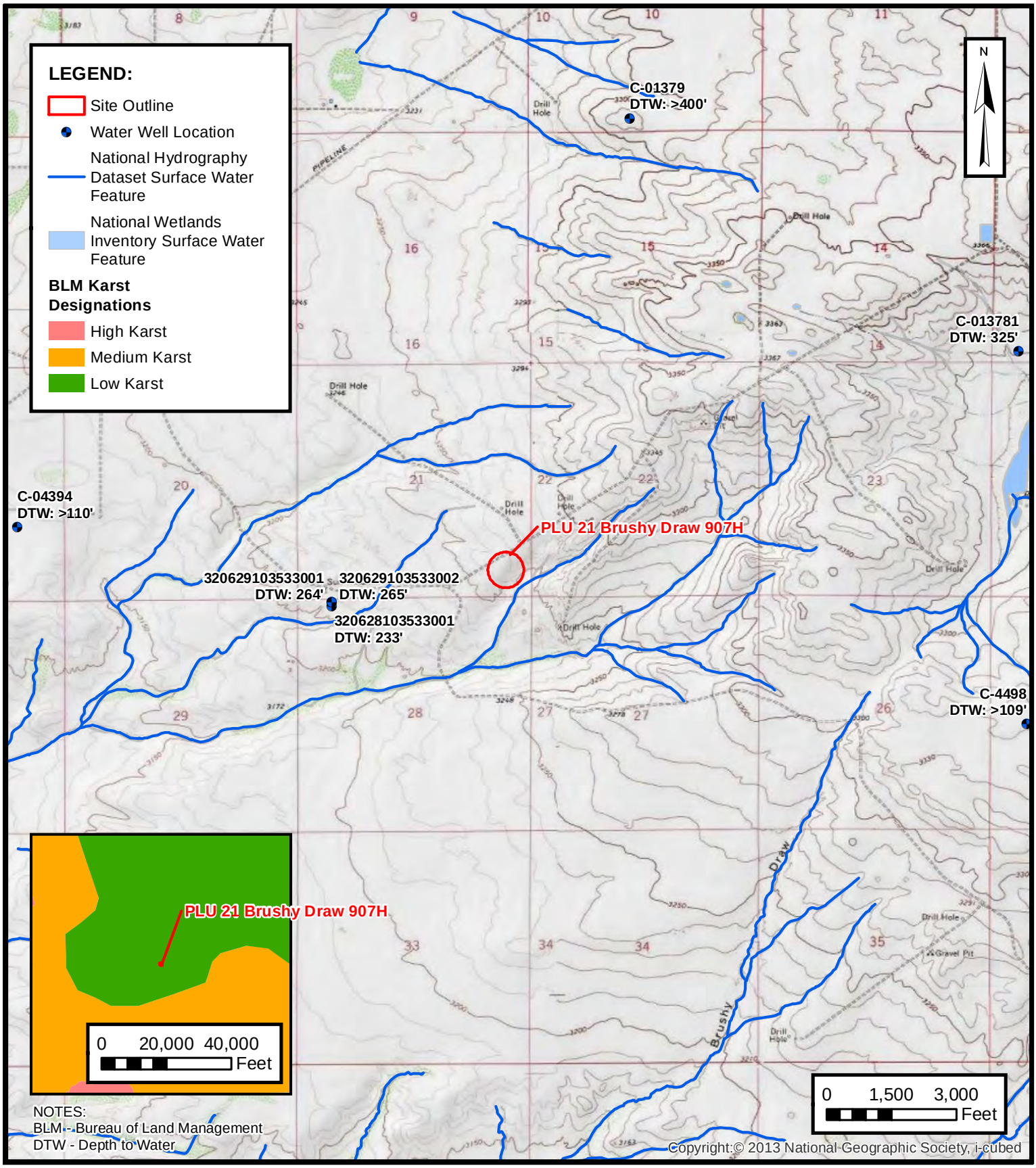
Ashley L. Ager, M.S., P.G.
Program Director

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

Appendices:

ENSOLUM

FIGURES



ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

SITE RECEPTOR MAP

XTO ENERGY, INC
PLU 21 BRUSHY DRAW 907H
NAPP2215947887
Unit P, Sec 21, T25S, R30E
Eddy County, New Mexico

FIGURE
1

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Environmental, Engineering and Hydrogeologic Consultants

PRELIMINARY SOIL SAMPLE LOCATIONS

XTO ENERGY, INC
PLU 21 BRUSHY DRAW 907H
NAPP2215947887
Unit P, Sec 21, T25S, R30E
Eddy County, New Mexico

FIGURE
2

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

DELINEATION SOIL SAMPLE LOCATIONS

XTO ENERGY, INC
PLU 21 BRUSHY DRAW 907H
NAPP2215947887
Unit P, Sec 21, T25S, R30E
Eddy County, New Mexico

FIGURE

3

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
PLU 21 Brushy Draw 907H
XTO Energy, Inc.
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			**10**	**50**	**NE**	**NE**	**NE**	**1,000**	**2,500**	**20,000**
Preliminary Soil Samples										
SS01	08/31/2022	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	2,280
SS02	08/31/2022	0.5	<0.00200	<0.00399	51.5	<50.0	<50.0	<50.0	51.5	9,250
SS03	09/08/2022	0.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	181
SS04	09/08/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	79.5
SS05	09/08/2022	0.5	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	125
SS06	09/08/2022	0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	32.8
Delineation Soil Samples										
PH01	09/08/2022	1	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	706
PH01A	09/08/2022	2	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	1,470
PH02	09/08/2022	1	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	1,850
PH02A	09/08/2022	2	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	871

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

Concentrations in bold exceed the NMOCD Table 1 Closure Criteria or reclamation standard where applicable.

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

NMAC: New Mexico Administrative Code

Grey text indicates soil sample removed during excavation activities

ENSOLUM

APPENDIX A

Referenced Well Records

USGS 320628103533001 25S.30E.21.333424

Eddy County, New Mexico
Latitude 32°06'28", Longitude 103°53'30" NAD27
Land-surface elevation 3,207 feet above NAVD88
The depth of the well is 288 feet below land surface.
This well is completed in the Pecos River Basin alluvial aquifer (N100PCSRVR) national aquifer.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

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

Date	Time	Water-level date-time accuracy	Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	Status	Method of measurement	Measuring agency
1958-08-21		D	62610		2972.36	NGVD29	1	Z	
1958-08-21		D	62611		2974.00	NAVD88	1	Z	
1958-08-21		D	72019	233.00			1	Z	
1959-02-05		D	62610		2939.26	NGVD29	P	Z	
1959-02-05		D	62611		2940.90	NAVD88	P	Z	
1959-02-05		D	72019	266.10			P	Z	
1983-02-01		D	62610		2945.48	NGVD29	1	Z	
1983-02-01		D	62611		2947.12	NAVD88	1	Z	
1983-02-01		D	72019	259.88			1	Z	
1998-01-28		D	62610		2940.76	NGVD29	1	S	
1998-01-28		D	62611		2942.40	NAVD88	1	S	
1998-01-28		D	72019	264.60			1	S	

New Mexico Office of the State Engineer

Water Right Summary

get image list

WR File Number: C 04394 **Subbasin:** CUB **Cross Reference:** -

Primary Purpose: MON MONITORING WELL

Primary Status: PMT PERMIT

Total Acres: **Subfile:** - **Header:** -

Total Diversion: 0 **Cause/Case:** -

Agent: LT ENVIRONMENTAL INC

Contact: AIMEE COLE

User: XTO ENERGY INC

Contact: KYLE LITTRELL

Documents on File

	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
get images	666404	EXPL	2020-01-27	PMT	APR	C 04394 POD1	T	0	0	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q 64	Q16	Q4	Sec	Tws	Rng	X	Y	Other Location Desc
C 04394 POD1	NA		3	2	4	19	25S	30E	602316	3553464	MW01

ENSOLUM

APPENDIX B

Photographic Log

Photographic Log
XTO Energy, Inc.
PLU 21 Brushy Draw 907H
Incident Number NAPP2215947887

Photograph 1 Date: June 4, 2022

Description: View of initial release area.

Photograph 2 Date: September 8, 2022

Description: View of area during delineation activities.

ENSOLUM

APPENDIX C

Lithologic Soil Sampling Logs

ENSOLUM

	Sample Name: PH01	Date: 9-8-22
	Site Name: PLU 21 BD 907H (086)	
	Incident Number: NAPP2215947887	
	Job Number: 03E1558086	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Meredith Roberts	Method: Backhoe
Coordinates: 32.110022, -103.879254	Hole Diameter: N/A	Total Depth: 2' bgs

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
D	956.6	2.8	N	PH01	1	1	CCHE	Caliche, tan and brown, no odor, no stain, dry
D	3259	16.4	N	PH01	2	2		
								TD: 2' feet bgs

ENSOLUM

	Sample Name: PH02	Date: 9-8-22
	Site Name: PLU 21 BD 907H (086)	
	Incident Number: NAPP2215947887	
	Job Number: 03E1558086	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Meredith Roberts	Method: Backhoe
Coordinates: 32.110041, -103.879312	Hole Diameter: N/A	Total Depth: 2' BGS

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
D	5062	10.2	N	PH02	1	1	CCHE	Caliche, tan and brown, no odor, no stain, dry
D	3024	1.8	N	PH02	2	2		
								TD: 2' feet bgs

ENSOLUM

APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-2872-1
Laboratory Sample Delivery Group: 03E1558086
Client Project/Site: PLU 21 BD 907H

For:
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Kalei Jennings

JKramer

Authorized for release by:
9/12/2022 9:19:28 AM

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

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Ensolum
Project/Site: PLU 21 BD 907H

Laboratory Job ID: 890-2872-1
SDG: 03E1558086

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2872-1
SDG: 03E1558086

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
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.

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2872-1
SDG: 03E1558086

Job ID: 890-2872-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2872-1

Receipt
The samples were received on 9/1/2022 9:21 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 1.4°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-34107 and analytical batch 880-34153 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: Surrogate recovery for the following samples were outside control limits: (LCS 880-33646/2-A) and (LCSD 880-33646/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: SS02 (890-2872-2). 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 880-33646 and analytical batch 880-33680 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 (MS/MSD) recoveries for preparation batch 880-33646 and analytical batch 880-33680 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.

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 21 BD 907H

Job ID: 890-2872-1
SDG: 03E1558086

Client Sample ID: SS01
Date Collected: 08/31/22 15:15
Date Received: 09/01/22 09:21
Sample Depth: .5

Lab Sample ID: 890-2872-1
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/09/22 12:37	09/11/22 00:58	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/09/22 12:37	09/11/22 00:58	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/09/22 12:37	09/11/22 00:58	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/09/22 12:37	09/11/22 00:58	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/09/22 12:37	09/11/22 00:58	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/09/22 12:37	09/11/22 00:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*09/09/22 12:37*	*09/11/22 00:58*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*09/09/22 12:37*	*09/11/22 00:58*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/12/22 09:52	1

Method: 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			09/06/22 13:04	1

Method: 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		09/02/22 11:29	09/04/22 03:54	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/02/22 11:29	09/04/22 03:54	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/02/22 11:29	09/04/22 03:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*09/02/22 11:29*	*09/04/22 03:54*	*1*
o-Terphenyl	*106*		*70 - 130*	*09/02/22 11:29*	*09/04/22 03:54*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2280**		25.1		mg/Kg			09/09/22 08:19	5

Client Sample ID: SS02
Date Collected: 08/31/22 15:30
Date Received: 09/01/22 09:21
Sample Depth: .6

Lab Sample ID: 890-2872-2
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:37	09/11/22 01:19	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:37	09/11/22 01:19	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:37	09/11/22 01:19	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/09/22 12:37	09/11/22 01:19	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:37	09/11/22 01:19	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/09/22 12:37	09/11/22 01:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*09/09/22 12:37*	*09/11/22 01:19*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2872-1
SDG: 03E1558086

Client Sample ID: SS02

Date Collected: 08/31/22 15:30
Date Received: 09/01/22 09:21
Sample Depth: .6

Lab Sample ID: 890-2872-2

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*09/09/22 12:37*	*09/11/22 01:19*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			09/12/22 09:52	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**51.5**		50.0		mg/Kg			09/06/22 13:04	1

Method: 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		09/02/22 11:29	09/04/22 04:15	1
Diesel Range Organics (Over C10-C28)	**51.5**		50.0		mg/Kg		09/02/22 11:29	09/04/22 04:15	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/02/22 11:29	09/04/22 04:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*133*	*S1+*	*70 - 130*	*09/02/22 11:29*	*09/04/22 04:15*	*1*
o-Terphenyl	*136*	*S1+*	*70 - 130*	*09/02/22 11:29*	*09/04/22 04:15*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9250**		99.4		mg/Kg			09/09/22 08:34	20

Surrogate Summary

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2872-1
SDG: 03E1558086

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-2865-A-1-C MS	Matrix Spike	85	92
890-2865-A-1-D MSD	Matrix Spike Duplicate	116	98
890-2872-1	SS01	90	87
890-2872-2	SS02	111	87
LCS 880-34107/1-A	Lab Control Sample	103	107
LCSD 880-34107/2-A	Lab Control Sample Dup	132 S1+	105
MB 880-34107/5-A	Method Blank	96	89

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-2870-A-1-D MS	Matrix Spike	85	74
890-2870-A-1-E MSD	Matrix Spike Duplicate	86	75
890-2872-1	SS01	104	106
890-2872-2	SS02	133 S1+	136 S1+
LCS 880-33646/2-A	Lab Control Sample	150 S1+	151 S1+
LCSD 880-33646/3-A	Lab Control Sample Dup	147 S1+	152 S1+
MB 880-33646/1-A	Method Blank	116	121

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2872-1
SDG: 03E1558086

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-34107/5-A
Matrix: Solid
Analysis Batch: 34153

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34107

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:37	09/10/22 19:08	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:37	09/10/22 19:08	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:37	09/10/22 19:08	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/09/22 12:37	09/10/22 19:08	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:37	09/10/22 19:08	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/09/22 12:37	09/10/22 19:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*09/09/22 12:37*	*09/10/22 19:08*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*09/09/22 12:37*	*09/10/22 19:08*	*1*

Lab Sample ID: LCS 880-34107/1-A
Matrix: Solid
Analysis Batch: 34153

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34107

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08977		mg/Kg		90	70 - 130		
Toluene			0.100	0.08000		mg/Kg		80	70 - 130		
Ethylbenzene			0.100	0.07969		mg/Kg		80	70 - 130		
m-Xylene & p-Xylene			0.200	0.1624		mg/Kg		81	70 - 130		
o-Xylene			0.100	0.09238		mg/Kg		92	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: LCSD 880-34107/2-A
Matrix: Solid
Analysis Batch: 34153

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34107

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09121		mg/Kg		91	70 - 130	2	35
Toluene			0.100	0.08741		mg/Kg		87	70 - 130	9	35
Ethylbenzene			0.100	0.1010		mg/Kg		101	70 - 130	24	35
m-Xylene & p-Xylene			0.200	0.2099		mg/Kg		105	70 - 130	26	35
o-Xylene			0.100	0.1206		mg/Kg		121	70 - 130	26	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*132*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: 890-2865-A-1-C MS
Matrix: Solid
Analysis Batch: 34153

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 34107

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U F1	0.0998	0.03247	F1	mg/Kg		33	70 - 130		
Toluene	<0.00201	U F1	0.0998	0.03634	F1	mg/Kg		36	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2872-1
SDG: 03E1558086

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

Lab Sample ID: 890-2865-A-1-C MS
Matrix: Solid
Analysis Batch: 34153

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 34107

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U F1 F2	0.0998	0.03705	F1	mg/Kg		37	70 - 130
m-Xylene & p-Xylene	<0.00402	U F1 F2	0.200	0.07196	F1	mg/Kg		36	70 - 130
o-Xylene	<0.00201	U F1 F2	0.0998	0.04226	F1	mg/Kg		42	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*

Lab Sample ID: 890-2865-A-1-D MSD
Matrix: Solid
Analysis Batch: 34153

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 34107

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U F1	0.0996	0.04628	F1	mg/Kg		46	70 - 130	35	35
Toluene	<0.00201	U F1	0.0996	0.04928	F1	mg/Kg		49	70 - 130	30	35
Ethylbenzene	<0.00201	U F1 F2	0.0996	0.05680	F1 F2	mg/Kg		57	70 - 130	42	35
m-Xylene & p-Xylene	<0.00402	U F1 F2	0.199	0.1146	F1 F2	mg/Kg		58	70 - 130	46	35
o-Xylene	<0.00201	U F1 F2	0.0996	0.06608	F1 F2	mg/Kg		66	70 - 130	44	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

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

Lab Sample ID: MB 880-33646/1-A
Matrix: Solid
Analysis Batch: 33680

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 33646

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		09/02/22 11:29	09/03/22 20:31	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/02/22 11:29	09/03/22 20:31	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/02/22 11:29	09/03/22 20:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*116*		*70 - 130*	*09/02/22 11:29*	*09/03/22 20:31*	*1*
o-Terphenyl	*121*		*70 - 130*	*09/02/22 11:29*	*09/03/22 20:31*	*1*

Lab Sample ID: LCS 880-33646/2-A
Matrix: Solid
Analysis Batch: 33680

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 33646

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	867.1		mg/Kg		87	70 - 130
Diesel Range Organics (Over C10-C28)			1000	989.5		mg/Kg		99	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2872-1
SDG: 03E1558086

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

Lab Sample ID: LCS 880-33646/2-A
Matrix: Solid
Analysis Batch: 33680

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 33646

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	150	S1+	70 - 130
o-Terphenyl	151	S1+	70 - 130

Lab Sample ID: LCSD 880-33646/3-A
Matrix: Solid
Analysis Batch: 33680

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 33646

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1054		mg/Kg		105	70 - 130	19	20
Diesel Range Organics (Over C10-C28)			1000	1053		mg/Kg		105	70 - 130	6	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	147	S1+	70 - 130
o-Terphenyl	152	S1+	70 - 130

Lab Sample ID: 890-2870-A-1-D MS
Matrix: Solid
Analysis Batch: 33680

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 33646

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F1	999	570.6	F1	mg/Kg		55	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	999	840.3		mg/Kg		82	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	85		70 - 130
o-Terphenyl	74		70 - 130

Lab Sample ID: 890-2870-A-1-E MSD
Matrix: Solid
Analysis Batch: 33680

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 33646

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F1	998	613.1	F1	mg/Kg		59	70 - 130	7	20
Diesel Range Organics (Over C10-C28)	<49.9	U	998	847.6		mg/Kg		83	70 - 130	1	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	86		70 - 130
o-Terphenyl	75		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2872-1
SDG: 03E1558086

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-33691/1-A
Matrix: Solid
Analysis Batch: 33933

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			09/09/22 02:38	1

Lab Sample ID: LCS 880-33691/2-A
Matrix: Solid
Analysis Batch: 33933

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	240.6		mg/Kg		96	90 - 110		

Lab Sample ID: LCSD 880-33691/3-A
Matrix: Solid
Analysis Batch: 33933

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	241.4		mg/Kg		97	90 - 110	0	20

Lab Sample ID: 890-2872-1 MS
Matrix: Solid
Analysis Batch: 33933

Client Sample ID: SS01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	2280		1260	3628		mg/Kg		107	90 - 110		

Lab Sample ID: 890-2872-1 MSD
Matrix: Solid
Analysis Batch: 33933

Client Sample ID: SS01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	2280		1260	3643		mg/Kg		108	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2872-1
SDG: 03E1558086

GC VOA

Prep Batch: 34107

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2872-1	SS01	Total/NA	Solid	5035	
890-2872-2	SS02	Total/NA	Solid	5035	
MB 880-34107/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-34107/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-34107/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2865-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-2865-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 34153

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2872-1	SS01	Total/NA	Solid	8021B	34107
890-2872-2	SS02	Total/NA	Solid	8021B	34107
MB 880-34107/5-A	Method Blank	Total/NA	Solid	8021B	34107
LCS 880-34107/1-A	Lab Control Sample	Total/NA	Solid	8021B	34107
LCSD 880-34107/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	34107
890-2865-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	34107
890-2865-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	34107

Analysis Batch: 34238

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2872-1	SS01	Total/NA	Solid	Total BTEX	
890-2872-2	SS02	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 33646

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2872-1	SS01	Total/NA	Solid	8015NM Prep	
890-2872-2	SS02	Total/NA	Solid	8015NM Prep	
MB 880-33646/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-33646/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-33646/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2870-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2870-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 33680

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2872-1	SS01	Total/NA	Solid	8015B NM	33646
890-2872-2	SS02	Total/NA	Solid	8015B NM	33646
MB 880-33646/1-A	Method Blank	Total/NA	Solid	8015B NM	33646
LCS 880-33646/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	33646
LCSD 880-33646/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	33646
890-2870-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	33646
890-2870-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	33646

Analysis Batch: 33850

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2872-1	SS01	Total/NA	Solid	8015 NM	
890-2872-2	SS02	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2872-1
SDG: 03E1558086

HPLC/IC

Leach Batch: 33691

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2872-1	SS01	Soluble	Solid	DI Leach	
890-2872-2	SS02	Soluble	Solid	DI Leach	
MB 880-33691/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-33691/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-33691/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2872-1 MS	SS01	Soluble	Solid	DI Leach	
890-2872-1 MSD	SS01	Soluble	Solid	DI Leach	

Analysis Batch: 33933

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2872-1	SS01	Soluble	Solid	300.0	33691
890-2872-2	SS02	Soluble	Solid	300.0	33691
MB 880-33691/1-A	Method Blank	Soluble	Solid	300.0	33691
LCS 880-33691/2-A	Lab Control Sample	Soluble	Solid	300.0	33691
LCSD 880-33691/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	33691
890-2872-1 MS	SS01	Soluble	Solid	300.0	33691
890-2872-1 MSD	SS01	Soluble	Solid	300.0	33691

Lab Chronicle

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2872-1
SDG: 03E1558086

Client Sample ID: SS01

Date Collected: 08/31/22 15:15
Date Received: 09/01/22 09:21

Lab Sample ID: 890-2872-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	34107	09/09/22 12:37	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34153	09/11/22 00:58	MR	EET MID
Total/NA	Analysis	Total BTEX		1			34238	09/12/22 09:52	AJ	EET MID
Total/NA	Analysis	8015 NM		1			33850	09/06/22 13:04	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	33646	09/02/22 11:29	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33680	09/04/22 03:54	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	33691	09/03/22 13:12	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	33933	09/09/22 08:19	CH	EET MID

Client Sample ID: SS02

Date Collected: 08/31/22 15:30
Date Received: 09/01/22 09:21

Lab Sample ID: 890-2872-2
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			5.01 g	5 mL	34107	09/09/22 12:37	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34153	09/11/22 01:19	MR	EET MID
Total/NA	Analysis	Total BTEX		1			34238	09/12/22 09:52	AJ	EET MID
Total/NA	Analysis	8015 NM		1			33850	09/06/22 13:04	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	33646	09/02/22 11:29	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33680	09/04/22 04:15	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	33691	09/03/22 13:12	KS	EET MID
Soluble	Analysis	300.0		20	50 mL	50 mL	33933	09/09/22 08:34	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 21 BD 907H

Job ID: 890-2872-1
SDG: 03E1558086

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 21 BD 907H

Job ID: 890-2872-1
SDG: 03E1558086

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 21 BD 907H

Job ID: 890-2872-1
SDG: 03E1558086

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2872-1	SS01	Solid	08/31/22 15:15	09/01/22 09:21	.5
890-2872-2	SS02	Solid	08/31/22 15:30	09/01/22 09:21	.6

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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:	Kalei Jennings	Bill to: (if different)	Garrett Green
Company Name:	Ensolum	Company Name:	XTO Energy
Address:	3122 National Parks	Address:	3104 E Greene St
City, State ZIP:	Carlsbad NM 88220	City, State ZIP:	
Phone:	817-683-2503	Email:	Kjennings@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 21 BD 907H	Turn Around	☑ Routine ☐ Rush
Project Number:	03E1558086	Pres. Code	
Project Location:	Eddy Co	Due Date:	
Sampler's Name:	CB	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	TWM007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	1.6
Total Containers:		Corrected Temperature:	1.4

ANALYSIS REQUEST — Parameters: CHL, BTEX, TPH

890-2872 Chain of Custody

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	CHL	BTEX	TPH	Sample Comments
SS01	S	8-31	1515	.5ft	G	1	/	/	/	NAPP2215147887
SS02	S	8-31	1520	.5ft	G	1	/	/	/	

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 [signature]	[signature]	9.1.2022	2		
3			4		
5			6		

Revised Date 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2872-1
SDG Number: 03E1558086

Login Number: 2872
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.	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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2872-1
SDG Number: 03E1558086

Login Number: 2872
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 09/02/22 10:54 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

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-2914-1
Laboratory Sample Delivery Group: 03E1558086
Client Project/Site: PLU 21 BD 907H

For:
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Kalei Jennings

JKramer

Authorized for release by:
9/21/2022 5:14:54 PM

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

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Ensolum
Project/Site: PLU 21 BD 907H

Laboratory Job ID: 890-2914-1
SDG: 03E1558086

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-2914-1
Project/Site: PLU 21 BD 907H SDG: 03E1558086

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
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 21 BD 907H

Job ID: 890-2914-1
SDG: 03E1558086

Job ID: 890-2914-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2914-1

Receipt
The sample was received on 9/9/2022 9:22 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.2°C

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

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

HPLC/IC
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 21 BD 907H

Job ID: 890-2914-1
SDG: 03E1558086

Client Sample ID: SS06

Date Collected: 09/08/22 09:55
Date Received: 09/09/22 09:22
Sample Depth: 6

Lab Sample ID: 890-2914-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/19/22 15:06	09/21/22 07:23	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/19/22 15:06	09/21/22 07:23	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/19/22 15:06	09/21/22 07:23	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/19/22 15:06	09/21/22 07:23	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/19/22 15:06	09/21/22 07:23	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/19/22 15:06	09/21/22 07:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*09/19/22 15:06*	*09/21/22 07:23*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*09/19/22 15:06*	*09/21/22 07:23*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			09/21/22 15:17	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/14/22 08:52	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/13/22 08:23	09/13/22 10:46	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/13/22 08:23	09/13/22 10:46	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/13/22 08:23	09/13/22 10:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*85*		*70 - 130*	*09/13/22 08:23*	*09/13/22 10:46*	*1*
o-Terphenyl	*94*		*70 - 130*	*09/13/22 08:23*	*09/13/22 10:46*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**32.8**		5.04		mg/Kg			09/14/22 16:19	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2914-1
SDG: 03E1558086

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)
890-2914-1	SS06	94	112
LCS 880-34858/1-A	Lab Control Sample	91	102
LCSD 880-34858/2-A	Lab Control Sample Dup	94	103
MB 880-34692/5-A	Method Blank	102	116
MB 880-34858/5-A	Method Blank	104	116

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)
890-2914-1	SS06	85	94
890-2914-1 MS	SS06	91	87
890-2914-1 MSD	SS06	95	91
LCS 880-34341/2-A	Lab Control Sample	74	84
LCSD 880-34341/3-A	Lab Control Sample Dup	79	88
MB 880-34341/1-A	Method Blank	102	114

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2914-1
SDG: 03E1558086

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-34692/5-A
Matrix: Solid
Analysis Batch: 34895

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34692

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/16/22 16:15	09/20/22 17:37	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/16/22 16:15	09/20/22 17:37	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/16/22 16:15	09/20/22 17:37	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/16/22 16:15	09/20/22 17:37	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/16/22 16:15	09/20/22 17:37	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/16/22 16:15	09/20/22 17:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*09/16/22 16:15*	*09/20/22 17:37*	*1*
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*	*09/16/22 16:15*	*09/20/22 17:37*	*1*

Lab Sample ID: MB 880-34858/5-A
Matrix: Solid
Analysis Batch: 34895

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34858

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/19/22 15:06	09/21/22 05:13	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/19/22 15:06	09/21/22 05:13	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/19/22 15:06	09/21/22 05:13	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/19/22 15:06	09/21/22 05:13	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/19/22 15:06	09/21/22 05:13	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/19/22 15:06	09/21/22 05:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*09/19/22 15:06*	*09/21/22 05:13*	*1*
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*	*09/19/22 15:06*	*09/21/22 05:13*	*1*

Lab Sample ID: LCS 880-34858/1-A
Matrix: Solid
Analysis Batch: 34895

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34858

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09802		mg/Kg		98	70 - 130
Toluene	0.100	0.08583		mg/Kg		86	70 - 130
Ethylbenzene	0.100	0.08534		mg/Kg		85	70 - 130
m-Xylene & p-Xylene	0.200	0.1780		mg/Kg		89	70 - 130
o-Xylene	0.100	0.08903		mg/Kg		89	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: LCSD 880-34858/2-A
Matrix: Solid
Analysis Batch: 34895

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34858

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.09393		mg/Kg		94	70 - 130	4	35

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2914-1
SDG: 03E1558086

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

Lab Sample ID: LCSD 880-34858/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 34895 — **Prep Batch: 34858**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.08451		mg/Kg		85	70 - 130	2	35
Ethylbenzene			0.100	0.08316		mg/Kg		83	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1731		mg/Kg		87	70 - 130	3	35
o-Xylene			0.100	0.08797		mg/Kg		88	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

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

Lab Sample ID: MB 880-34341/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 34338 — **Prep Batch: 34341**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 09:38	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 09:38	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 09:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*09/13/22 08:23*	*09/13/22 09:38*	*1*
o-Terphenyl	*114*		*70 - 130*	*09/13/22 08:23*	*09/13/22 09:38*	*1*

Lab Sample ID: LCS 880-34341/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 34338 — **Prep Batch: 34341**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	948.0		mg/Kg		95	70 - 130
Diesel Range Organics (Over C10-C28)			1000	846.8		mg/Kg		85	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*74*		*70 - 130*
o-Terphenyl	*84*		*70 - 130*

Lab Sample ID: LCSD 880-34341/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 34338 — **Prep Batch: 34341**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	893.7		mg/Kg		89	70 - 130	6	20
Diesel Range Organics (Over C10-C28)			1000	800.1		mg/Kg		80	70 - 130	6	20

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2914-1
SDG: 03E1558086

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

Lab Sample ID: LCSD 880-34341/3-A
Matrix: Solid
Analysis Batch: 34338

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34341

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	79		70 - 130
o-Terphenyl	88		70 - 130

Lab Sample ID: 890-2914-1 MS
Matrix: Solid
Analysis Batch: 34338

Client Sample ID: SS06
Prep Type: Total/NA
Prep Batch: 34341

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	996	827.2		mg/Kg		80	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	996	738.7		mg/Kg		74	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	91		70 - 130
o-Terphenyl	87		70 - 130

Lab Sample ID: 890-2914-1 MSD
Matrix: Solid
Analysis Batch: 34338

Client Sample ID: SS06
Prep Type: Total/NA
Prep Batch: 34341

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	867.5		mg/Kg		84	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	783.4		mg/Kg		78	70 - 130	6	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	95		70 - 130
o-Terphenyl	91		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-34286/1-A
Matrix: Solid
Analysis Batch: 34491

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			09/14/22 14:13	1

Lab Sample ID: LCS 880-34286/2-A
Matrix: Solid
Analysis Batch: 34491

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	237.4		mg/Kg		95	90 - 110

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2914-1
SDG: 03E1558086

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 880-34286/3-A
Matrix: Solid
Analysis Batch: 34491

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	238.4		mg/Kg		95	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2914-1
SDG: 03E1558086

GC VOA

Prep Batch: 34692

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-34692/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 34858

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2914-1	SS06	Total/NA	Solid	5035	
MB 880-34858/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-34858/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-34858/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 34895

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2914-1	SS06	Total/NA	Solid	8021B	34858
MB 880-34692/5-A	Method Blank	Total/NA	Solid	8021B	34692
MB 880-34858/5-A	Method Blank	Total/NA	Solid	8021B	34858
LCS 880-34858/1-A	Lab Control Sample	Total/NA	Solid	8021B	34858
LCSD 880-34858/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	34858

Analysis Batch: 35085

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2914-1	SS06	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 34338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2914-1	SS06	Total/NA	Solid	8015B NM	34341
MB 880-34341/1-A	Method Blank	Total/NA	Solid	8015B NM	34341
LCS 880-34341/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	34341
LCSD 880-34341/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	34341
890-2914-1 MS	SS06	Total/NA	Solid	8015B NM	34341
890-2914-1 MSD	SS06	Total/NA	Solid	8015B NM	34341

Prep Batch: 34341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2914-1	SS06	Total/NA	Solid	8015NM Prep	
MB 880-34341/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-34341/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-34341/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2914-1 MS	SS06	Total/NA	Solid	8015NM Prep	
890-2914-1 MSD	SS06	Total/NA	Solid	8015NM Prep	

Analysis Batch: 34445

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2914-1	SS06	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 34286

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2914-1	SS06	Soluble	Solid	DI Leach	
MB 880-34286/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-34286/2-A	Lab Control Sample	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2914-1
SDG: 03E1558086

HPLC/IC (Continued)

Leach Batch: 34286 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-34286/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 34491

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2914-1	SS06	Soluble	Solid	300.0	34286
MB 880-34286/1-A	Method Blank	Soluble	Solid	300.0	34286
LCS 880-34286/2-A	Lab Control Sample	Soluble	Solid	300.0	34286
LCSD 880-34286/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	34286

Lab Chronicle

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2914-1
SDG: 03E1558086

Client Sample ID: SS06

Date Collected: 09/08/22 09:55
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2914-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	34858	09/19/22 15:06	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34895	09/21/22 07:23	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35085	09/21/22 15:17	SM	EET MID
Total/NA	Analysis	8015 NM		1			34445	09/14/22 08:52	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	34341	09/13/22 08:23	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34338	09/13/22 10:46	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	34286	09/12/22 11:45	KS	EET MID
Soluble	Analysis	300.0		1			34491	09/14/22 16:19	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 21 BD 907H

Job ID: 890-2914-1
SDG: 03E1558086

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 21 BD 907H

Job ID: 890-2914-1
SDG: 03E1558086

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 21 BD 907H

Job ID: 890-2914-1
SDG: 03E1558086

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2914-1	SS06	Solid	09/08/22 09:55	09/09/22 09:22	6

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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:	Kaici Jennings	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:	817-683-2503	Email:	kjennings@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 21 BD 904H	Turn Around	
Project Number:	D3E1558086	☑ Routine	☐ Rush
Project Location:	32.11019, -103.87932	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:	TWM007
Cooler Custody Seals:	Yes No (N/A)		Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)		Temperature Reading:	1.4
Total Containers:			Corrected Temperature:	1.2

ANALYSIS REQUEST (Parameters): BTEX, TPH, Chlorides

890-2914 Chain of Custody

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	BTEX	TPH	Chlorides	Sample Comments
SS06	S	9/8/22	0955	6"	G	1		X	X	X	Incident #: NAPP2215947887
										→MR	
											Cost Center: 1666331001

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 [signature]	[signature]	9.9.22 928			
3			4		
5			6		

Revised Date 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2914-1
SDG Number: 03E1558086

Login Number: 2914
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.	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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2914-1
SDG Number: 03E1558086

Login Number: 2914
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 09/12/22 09:08 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

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-2916-1
Laboratory Sample Delivery Group: 03E1558086
Client Project/Site: PLU 21 BD 907H

For:
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Kalei Jennings

JKramer

Authorized for release by:
9/22/2022 9:09:24 AM

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

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Ensolum
Project/Site: PLU 21 BD 907H

Laboratory Job ID: 890-2916-1
SDG: 03E1558086

Table of Contents

Eurofins Carlsbad
9/22/2022

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2916-1
SDG: 03E1558086

Qualifiers

GC VOA

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2916-1
SDG: 03E1558086

Job ID: 890-2916-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2916-1

Receipt
The samples were received on 9/9/2022 9:22 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 1.2°C

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (LCS 880-34181/2-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-34181 and analytical batch 880-34171 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-34181 and analytical batch 880-34171 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.

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-34287 and analytical batch 880-34493 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 21 BD 907H

Job ID: 890-2916-1
SDG: 03E1558086

Client Sample ID: PH01

Date Collected: 09/08/22 09:00
Date Received: 09/09/22 09:22
Sample Depth: 1

Lab Sample ID: 890-2916-1
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/19/22 14:33	09/21/22 22:24	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/19/22 14:33	09/21/22 22:24	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/19/22 14:33	09/21/22 22:24	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/19/22 14:33	09/21/22 22:24	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/19/22 14:33	09/21/22 22:24	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/19/22 14:33	09/21/22 22:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*09/19/22 14:33*	*09/21/22 22:24*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*09/19/22 14:33*	*09/21/22 22:24*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/22/22 09:55	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			09/13/22 10:25	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U *1	49.8		mg/Kg		09/12/22 08:48	09/12/22 17:28	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/12/22 08:48	09/12/22 17:28	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/12/22 08:48	09/12/22 17:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*09/12/22 08:48*	*09/12/22 17:28*	*1*
o-Terphenyl	*96*		*70 - 130*	*09/12/22 08:48*	*09/12/22 17:28*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**706**		25.2		mg/Kg			09/14/22 18:16	5

Client Sample ID: PH01A

Date Collected: 09/08/22 09:05
Date Received: 09/09/22 09:22
Sample Depth: 2

Lab Sample ID: 890-2916-2
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/21/22 22:44	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/21/22 22:44	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/21/22 22:44	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/19/22 14:33	09/21/22 22:44	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/21/22 22:44	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/19/22 14:33	09/21/22 22:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*09/19/22 14:33*	*09/21/22 22:44*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2916-1
SDG: 03E1558086

Client Sample ID: PH01A

Date Collected: 09/08/22 09:05
Date Received: 09/09/22 09:22
Sample Depth: 2

Lab Sample ID: 890-2916-2

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*09/19/22 14:33*	*09/21/22 22:44*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			09/22/22 09:55	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			09/13/22 10:25	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1	50.0		mg/Kg		09/12/22 08:48	09/12/22 17:49	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/12/22 08:48	09/12/22 17:49	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/12/22 08:48	09/12/22 17:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*09/12/22 08:48*	*09/12/22 17:49*	*1*
o-Terphenyl	*97*		*70 - 130*	*09/12/22 08:48*	*09/12/22 17:49*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1470**		25.2		mg/Kg			09/14/22 18:23	5

Client Sample ID: PH02

Date Collected: 09/08/22 09:10
Date Received: 09/09/22 09:22
Sample Depth: 1

Lab Sample ID: 890-2916-3

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/19/22 14:33	09/21/22 23:05	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/19/22 14:33	09/21/22 23:05	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/19/22 14:33	09/21/22 23:05	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/19/22 14:33	09/21/22 23:05	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/19/22 14:33	09/21/22 23:05	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/19/22 14:33	09/21/22 23:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*09/19/22 14:33*	*09/21/22 23:05*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*09/19/22 14:33*	*09/21/22 23:05*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			09/22/22 09:55	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			09/13/22 10:25	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2916-1
SDG: 03E1558086

Client Sample ID: PH02

Lab Sample ID: 890-2916-3
Matrix: Solid
Date Collected: 09/08/22 09:10
Date Received: 09/09/22 09:22
Sample Depth: 1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U *1	49.8		mg/Kg		09/12/22 08:48	09/12/22 18:11	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/12/22 08:48	09/12/22 18:11	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/12/22 08:48	09/12/22 18:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*09/12/22 08:48*	*09/12/22 18:11*	*1*
o-Terphenyl	*95*		*70 - 130*	*09/12/22 08:48*	*09/12/22 18:11*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1850**		24.8		mg/Kg			09/14/22 18:30	5

Client Sample ID: PH02A

Lab Sample ID: 890-2916-4
Matrix: Solid
Date Collected: 09/08/22 09:15
Date Received: 09/09/22 09:22
Sample Depth: 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/19/22 14:33	09/21/22 23:25	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/19/22 14:33	09/21/22 23:25	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/19/22 14:33	09/21/22 23:25	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/19/22 14:33	09/21/22 23:25	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/19/22 14:33	09/21/22 23:25	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/19/22 14:33	09/21/22 23:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*09/19/22 14:33*	*09/21/22 23:25*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*09/19/22 14:33*	*09/21/22 23:25*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/22/22 09:55	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/13/22 10:25	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9		mg/Kg		09/12/22 08:48	09/12/22 18:32	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/12/22 08:48	09/12/22 18:32	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/12/22 08:48	09/12/22 18:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*114*		*70 - 130*	*09/12/22 08:48*	*09/12/22 18:32*	*1*
o-Terphenyl	*116*		*70 - 130*	*09/12/22 08:48*	*09/12/22 18:32*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2916-1
SDG: 03E1558086

Client Sample ID: PH02A
Date Collected: 09/08/22 09:15
Date Received: 09/09/22 09:22
Sample Depth: 2

Lab Sample ID: 890-2916-4
Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	871		5.03		mg/Kg			09/14/22 18:37	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2916-1
SDG: 03E1558086

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)
890-2915-A-1-C MS	Matrix Spike	115	109
890-2915-A-1-D MSD	Matrix Spike Duplicate	117	102
890-2916-1	PH01	116	88
890-2916-2	PH01A	112	86
890-2916-3	PH02	107	86
890-2916-4	PH02A	115	93
LCS 880-34851/1-A	Lab Control Sample	114	106
LCSD 880-34851/2-A	Lab Control Sample Dup	115	108
MB 880-34851/5-A	Method Blank	88	77
MB 880-34941/5-A	Method Blank	100	93

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)
890-2907-A-1-C MS	Matrix Spike	98	93
890-2907-A-1-D MSD	Matrix Spike Duplicate	99	93
890-2916-1	PH01	92	96
890-2916-2	PH01A	93	97
890-2916-3	PH02	94	95
890-2916-4	PH02A	114	116
LCS 880-34181/2-A	Lab Control Sample	144 S1+	151 S1+
LCSD 880-34181/3-A	Lab Control Sample Dup	122	130
MB 880-34181/1-A	Method Blank	105	109

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2916-1
SDG: 03E1558086

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-34851/5-A
Matrix: Solid
Analysis Batch: 35013

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34851

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/21/22 20:40	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/21/22 20:40	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/21/22 20:40	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/19/22 14:33	09/21/22 20:40	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/21/22 20:40	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/19/22 14:33	09/21/22 20:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*	*09/19/22 14:33*	*09/21/22 20:40*	*1*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*	*09/19/22 14:33*	*09/21/22 20:40*	*1*

Lab Sample ID: LCS 880-34851/1-A
Matrix: Solid
Analysis Batch: 35013

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34851

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09662		mg/Kg		97	70 - 130
Toluene	0.100	0.08888		mg/Kg		89	70 - 130
Ethylbenzene	0.100	0.09395		mg/Kg		94	70 - 130
m-Xylene & p-Xylene	0.200	0.1964		mg/Kg		98	70 - 130
o-Xylene	0.100	0.1106		mg/Kg		111	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: LCSD 880-34851/2-A
Matrix: Solid
Analysis Batch: 35013

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34851

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.09096		mg/Kg		91	70 - 130	6	35
Toluene	0.100	0.08531		mg/Kg		85	70 - 130	4	35
Ethylbenzene	0.100	0.08835		mg/Kg		88	70 - 130	6	35
m-Xylene & p-Xylene	0.200	0.1845		mg/Kg		92	70 - 130	6	35
o-Xylene	0.100	0.1080		mg/Kg		108	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: 890-2915-A-1-C MS
Matrix: Solid
Analysis Batch: 35013

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 34851

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00202	U	0.101	0.09155		mg/Kg		91	70 - 130
Toluene	<0.00202	U	0.101	0.08263		mg/Kg		82	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2916-1
SDG: 03E1558086

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

Lab Sample ID: 890-2915-A-1-C MS
Matrix: Solid
Analysis Batch: 35013

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 34851

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U	0.101	0.08658		mg/Kg		86	70 - 130
m-Xylene & p-Xylene	<0.00403	U	0.202	0.1775		mg/Kg		88	70 - 130
o-Xylene	<0.00202	U	0.101	0.1042		mg/Kg		103	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: 890-2915-A-1-D MSD
Matrix: Solid
Analysis Batch: 35013

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 34851

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.0996	0.08776		mg/Kg		88	70 - 130	4	35
Toluene	<0.00202	U	0.0996	0.08175		mg/Kg		82	70 - 130	1	35
Ethylbenzene	<0.00202	U	0.0996	0.08872		mg/Kg		89	70 - 130	2	35
m-Xylene & p-Xylene	<0.00403	U	0.199	0.1777		mg/Kg		89	70 - 130	0	35
o-Xylene	<0.00202	U	0.0996	0.1037		mg/Kg		104	70 - 130	1	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: MB 880-34941/5-A
Matrix: Solid
Analysis Batch: 35013

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34941

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/20/22 12:51	09/21/22 10:04	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/20/22 12:51	09/21/22 10:04	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/20/22 12:51	09/21/22 10:04	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/20/22 12:51	09/21/22 10:04	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/20/22 12:51	09/21/22 10:04	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/20/22 12:51	09/21/22 10:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*09/20/22 12:51*	*09/21/22 10:04*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*09/20/22 12:51*	*09/21/22 10:04*	*1*

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

Lab Sample ID: MB 880-34181/1-A
Matrix: Solid
Analysis Batch: 34171

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34181

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/12/22 08:48	09/12/22 10:56	1

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2916-1
SDG: 03E1558086

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

Lab Sample ID: MB 880-34181/1-A
Matrix: Solid
Analysis Batch: 34171

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34181

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/12/22 08:48	09/12/22 10:56	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/12/22 08:48	09/12/22 10:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*105*		*70 - 130*	*09/12/22 08:48*	*09/12/22 10:56*	*1*
o-Terphenyl	*109*		*70 - 130*	*09/12/22 08:48*	*09/12/22 10:56*	*1*

Lab Sample ID: LCS 880-34181/2-A
Matrix: Solid
Analysis Batch: 34171

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34181

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	984.6		mg/Kg		98	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1000		mg/Kg		100	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*144*	*S1+*	*70 - 130*
o-Terphenyl	*151*	*S1+*	*70 - 130*

Lab Sample ID: LCSD 880-34181/3-A
Matrix: Solid
Analysis Batch: 34171

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34181

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	765.3	*1	mg/Kg		77	70 - 130	25	20
Diesel Range Organics (Over C10-C28)	1000	859.3		mg/Kg		86	70 - 130	15	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*122*		*70 - 130*
o-Terphenyl	*130*		*70 - 130*

Lab Sample ID: 890-2907-A-1-C MS
Matrix: Solid
Analysis Batch: 34171

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 34181

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 F1 *1	998	611.1	F1	mg/Kg		59	70 - 130
Diesel Range Organics (Over C10-C28)	<49.8	U	998	859.4		mg/Kg		83	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*98*		*70 - 130*
o-Terphenyl	*93*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2916-1
SDG: 03E1558086

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

Lab Sample ID: 890-2907-A-1-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 34171 — **Prep Batch: 34181**

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 F1 *1	995	585.4	F1	mg/Kg		57	70 - 130	4	20
Diesel Range Organics (Over C10-C28)	<49.8	U	995	865.7		mg/Kg		84	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*99*		*70 - 130*
o-Terphenyl	*93*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-34287/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 34493

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			09/14/22 15:01	1

Lab Sample ID: LCS 880-34287/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 34493

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	231.1		mg/Kg		92	90 - 110

Lab Sample ID: LCSD 880-34287/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 34493

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	234.5		mg/Kg		94	90 - 110	1	20

Lab Sample ID: 880-19052-A-1-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 34493

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	476		250	700.4		mg/Kg		90	90 - 110

Lab Sample ID: 880-19052-A-1-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 34493

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	476		250	705.2		mg/Kg		92	90 - 110	1	20

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2916-1
SDG: 03E1558086

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-19054-A-2-B MS
Matrix: Solid
Analysis Batch: 34493

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	1790	F1	1260	3112		mg/Kg		106	90 - 110

Lab Sample ID: 880-19054-A-2-C MSD
Matrix: Solid
Analysis Batch: 34493

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	1790	F1	1260	3178	F1	mg/Kg		111	90 - 110	2	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2916-1
SDG: 03E1558086

GC VOA

Prep Batch: 34851

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2916-1	PH01	Total/NA	Solid	5035	
890-2916-2	PH01A	Total/NA	Solid	5035	
890-2916-3	PH02	Total/NA	Solid	5035	
890-2916-4	PH02A	Total/NA	Solid	5035	
MB 880-34851/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-34851/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-34851/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2915-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-2915-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 34941

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-34941/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 35013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2916-1	PH01	Total/NA	Solid	8021B	34851
890-2916-2	PH01A	Total/NA	Solid	8021B	34851
890-2916-3	PH02	Total/NA	Solid	8021B	34851
890-2916-4	PH02A	Total/NA	Solid	8021B	34851
MB 880-34851/5-A	Method Blank	Total/NA	Solid	8021B	34851
MB 880-34941/5-A	Method Blank	Total/NA	Solid	8021B	34941
LCS 880-34851/1-A	Lab Control Sample	Total/NA	Solid	8021B	34851
LCSD 880-34851/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	34851
890-2915-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	34851
890-2915-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	34851

Analysis Batch: 35141

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2916-1	PH01	Total/NA	Solid	Total BTEX	
890-2916-2	PH01A	Total/NA	Solid	Total BTEX	
890-2916-3	PH02	Total/NA	Solid	Total BTEX	
890-2916-4	PH02A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 34171

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2916-1	PH01	Total/NA	Solid	8015B NM	34181
890-2916-2	PH01A	Total/NA	Solid	8015B NM	34181
890-2916-3	PH02	Total/NA	Solid	8015B NM	34181
890-2916-4	PH02A	Total/NA	Solid	8015B NM	34181
MB 880-34181/1-A	Method Blank	Total/NA	Solid	8015B NM	34181
LCS 880-34181/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	34181
LCSD 880-34181/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	34181
890-2907-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	34181
890-2907-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	34181

Prep Batch: 34181

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2916-1	PH01	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2916-1
SDG: 03E1558086

GC Semi VOA (Continued)

Prep Batch: 34181 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2916-2	PH01A	Total/NA	Solid	8015NM Prep	
890-2916-3	PH02	Total/NA	Solid	8015NM Prep	
890-2916-4	PH02A	Total/NA	Solid	8015NM Prep	
MB 880-34181/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-34181/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-34181/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2907-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2907-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 34382

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2916-1	PH01	Total/NA	Solid	8015 NM	
890-2916-2	PH01A	Total/NA	Solid	8015 NM	
890-2916-3	PH02	Total/NA	Solid	8015 NM	
890-2916-4	PH02A	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 34287

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2916-1	PH01	Soluble	Solid	DI Leach	
890-2916-2	PH01A	Soluble	Solid	DI Leach	
890-2916-3	PH02	Soluble	Solid	DI Leach	
890-2916-4	PH02A	Soluble	Solid	DI Leach	
MB 880-34287/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-34287/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-34287/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-19052-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-19052-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
880-19054-A-2-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-19054-A-2-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 34493

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2916-1	PH01	Soluble	Solid	300.0	34287
890-2916-2	PH01A	Soluble	Solid	300.0	34287
890-2916-3	PH02	Soluble	Solid	300.0	34287
890-2916-4	PH02A	Soluble	Solid	300.0	34287
MB 880-34287/1-A	Method Blank	Soluble	Solid	300.0	34287
LCS 880-34287/2-A	Lab Control Sample	Soluble	Solid	300.0	34287
LCSD 880-34287/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	34287
880-19052-A-1-C MS	Matrix Spike	Soluble	Solid	300.0	34287
880-19052-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	34287
880-19054-A-2-B MS	Matrix Spike	Soluble	Solid	300.0	34287
880-19054-A-2-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	34287

Lab Chronicle

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2916-1
SDG: 03E1558086

Client Sample ID: PH01
Date Collected: 09/08/22 09:00
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2916-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	34851	09/19/22 14:33	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35013	09/21/22 22:24	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35141	09/22/22 09:55	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34382	09/13/22 10:25	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	34181	09/12/22 08:48	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34171	09/12/22 17:28	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	34287	09/12/22 11:48	KS	EET MID
Soluble	Analysis	300.0		5			34493	09/14/22 18:16	CH	EET MID

Client Sample ID: PH01A
Date Collected: 09/08/22 09:05
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2916-2
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			5.00 g	5 mL	34851	09/19/22 14:33	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35013	09/21/22 22:44	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35141	09/22/22 09:55	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34382	09/13/22 10:25	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	34181	09/12/22 08:48	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34171	09/12/22 17:49	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	34287	09/12/22 11:48	KS	EET MID
Soluble	Analysis	300.0		5			34493	09/14/22 18:23	CH	EET MID

Client Sample ID: PH02
Date Collected: 09/08/22 09:10
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2916-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	34851	09/19/22 14:33	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35013	09/21/22 23:05	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35141	09/22/22 09:55	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34382	09/13/22 10:25	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	34181	09/12/22 08:48	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34171	09/12/22 18:11	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	34287	09/12/22 11:48	KS	EET MID
Soluble	Analysis	300.0		5			34493	09/14/22 18:30	CH	EET MID

Client Sample ID: PH02A
Date Collected: 09/08/22 09:15
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2916-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	34851	09/19/22 14:33	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35013	09/21/22 23:25	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35141	09/22/22 09:55	AJ	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2916-1
SDG: 03E1558086

Client Sample ID: PH02A

Date Collected: 09/08/22 09:15
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2916-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			34382	09/13/22 10:25	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	34181	09/12/22 08:48	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34171	09/12/22 18:32	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	34287	09/12/22 11:48	KS	EET MID
Soluble	Analysis	300.0		1			34493	09/14/22 18:37	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 21 BD 907H

Job ID: 890-2916-1
SDG: 03E1558086

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 21 BD 907H

Job ID: 890-2916-1
SDG: 03E1558086

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 21 BD 907H

Job ID: 890-2916-1
SDG: 03E1558086

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2916-1	PH01	Solid	09/08/22 09:00	09/09/22 09:22	1
890-2916-2	PH01A	Solid	09/08/22 09:05	09/09/22 09:22	2
890-2916-3	PH02	Solid	09/08/22 09:10	09/09/22 09:22	1
890-2916-4	PH02A	Solid	09/08/22 09:15	09/09/22 09:22	2

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Kalei Jennings	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:	817.683.2503	Email:	kjennings@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:	~~Pkl 21 BD 90 TH~~	Turn Around	
Project Number:	03E1558086	☑ Routine ☐ Rush	
Project Location:	32.11019, -103.87932	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:	TM007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	1.4
Total Containers:		Corrected Temperature:	1.2

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	BTEX	TPH	Chlorides
PH01	S	9/8/22	0900	1'	G	1		X	X	X
PH01A	S	9/8/22	0905	2'	G	1		X	X	X
PH02	S	9/8/22	0910	1'	G	1		X	X	X
PH02A	S	9/8/22	0915	2'	G	1		X	X	X

ANALYSIS REQUEST

890-2916 Chain of Custody

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 #:
NAPP2215947887

Cost Center:
1666331001

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		9.9.22 9:20	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2916-1
SDG Number: 03E1558086

Login Number: 2916
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.	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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2916-1
SDG Number: 03E1558086

Login Number: 2916
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 09/12/22 09:08 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

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-2918-1
Laboratory Sample Delivery Group: 03E1558086
Client Project/Site: PLU 21 BD 907H

For:
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Kalei Jennings

JKramer

Authorized for release by:
9/22/2022 9:09:24 AM

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

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Ensolum
Project/Site: PLU 21 BD 907H

Laboratory Job ID: 890-2918-1
SDG: 03E1558086

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2918-1
SDG: 03E1558086

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
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 21 BD 907H

Job ID: 890-2918-1
SDG: 03E1558086

Job ID: 890-2918-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2918-1

Receipt
The sample was received on 9/9/2022 9:22 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.2°C

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

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

HPLC/IC
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 21 BD 907H

Job ID: 890-2918-1
SDG: 03E1558086

Client Sample ID: SS05

Date Collected: 09/08/22 09:50
Date Received: 09/09/22 09:22
Sample Depth: 6

Lab Sample ID: 890-2918-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/21/22 23:46	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/21/22 23:46	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/21/22 23:46	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/19/22 14:33	09/21/22 23:46	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/21/22 23:46	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/19/22 14:33	09/21/22 23:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*09/19/22 14:33*	*09/21/22 23:46*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*09/19/22 14:33*	*09/21/22 23:46*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			09/22/22 09:55	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/14/22 08:52	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/13/22 08:23	09/13/22 17:46	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/13/22 08:23	09/13/22 17:46	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/13/22 08:23	09/13/22 17:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*09/13/22 08:23*	*09/13/22 17:46*	*1*
o-Terphenyl	*119*		*70 - 130*	*09/13/22 08:23*	*09/13/22 17:46*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**125**		4.96		mg/Kg			09/14/22 23:35	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2918-1
SDG: 03E1558086

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-2915-A-1-C MS	Matrix Spike	115	109
890-2915-A-1-D MSD	Matrix Spike Duplicate	117	102
890-2918-1	SS05	112	92
LCS 880-34851/1-A	Lab Control Sample	114	106
LCSD 880-34851/2-A	Lab Control Sample Dup	115	108
MB 880-34851/5-A	Method Blank	88	77
MB 880-34941/5-A	Method Blank	100	93

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)
890-2914-A-1-D MS	Matrix Spike	91	87
890-2914-A-1-E MSD	Matrix Spike Duplicate	95	91
890-2918-1	SS05	106	119
LCS 880-34341/2-A	Lab Control Sample	74	84
LCSD 880-34341/3-A	Lab Control Sample Dup	79	88
MB 880-34341/1-A	Method Blank	102	114

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2918-1
SDG: 03E1558086

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-34851/5-A
Matrix: Solid
Analysis Batch: 35013

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34851

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/21/22 20:40	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/21/22 20:40	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/21/22 20:40	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/19/22 14:33	09/21/22 20:40	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/21/22 20:40	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/19/22 14:33	09/21/22 20:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*	*09/19/22 14:33*	*09/21/22 20:40*	*1*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*	*09/19/22 14:33*	*09/21/22 20:40*	*1*

Lab Sample ID: LCS 880-34851/1-A
Matrix: Solid
Analysis Batch: 35013

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34851

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09662		mg/Kg		97	70 - 130		
Toluene			0.100	0.08888		mg/Kg		89	70 - 130		
Ethylbenzene			0.100	0.09395		mg/Kg		94	70 - 130		
m-Xylene & p-Xylene			0.200	0.1964		mg/Kg		98	70 - 130		
o-Xylene			0.100	0.1106		mg/Kg		111	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: LCSD 880-34851/2-A
Matrix: Solid
Analysis Batch: 35013

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34851

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09096		mg/Kg		91	70 - 130	6	35
Toluene			0.100	0.08531		mg/Kg		85	70 - 130	4	35
Ethylbenzene			0.100	0.08835		mg/Kg		88	70 - 130	6	35
m-Xylene & p-Xylene			0.200	0.1845		mg/Kg		92	70 - 130	6	35
o-Xylene			0.100	0.1080		mg/Kg		108	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: 890-2915-A-1-C MS
Matrix: Solid
Analysis Batch: 35013

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 34851

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U	0.101	0.09155		mg/Kg		91	70 - 130		
Toluene	<0.00202	U	0.101	0.08263		mg/Kg		82	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2918-1
SDG: 03E1558086

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

Lab Sample ID: 890-2915-A-1-C MS
Matrix: Solid
Analysis Batch: 35013

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 34851

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U	0.101	0.08658		mg/Kg		86	70 - 130
m-Xylene & p-Xylene	<0.00403	U	0.202	0.1775		mg/Kg		88	70 - 130
o-Xylene	<0.00202	U	0.101	0.1042		mg/Kg		103	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: 890-2915-A-1-D MSD
Matrix: Solid
Analysis Batch: 35013

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 34851

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.0996	0.08776		mg/Kg		88	70 - 130	4	35
Toluene	<0.00202	U	0.0996	0.08175		mg/Kg		82	70 - 130	1	35
Ethylbenzene	<0.00202	U	0.0996	0.08872		mg/Kg		89	70 - 130	2	35
m-Xylene & p-Xylene	<0.00403	U	0.199	0.1777		mg/Kg		89	70 - 130	0	35
o-Xylene	<0.00202	U	0.0996	0.1037		mg/Kg		104	70 - 130	1	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: MB 880-34941/5-A
Matrix: Solid
Analysis Batch: 35013

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34941

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/20/22 12:51	09/21/22 10:04	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/20/22 12:51	09/21/22 10:04	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/20/22 12:51	09/21/22 10:04	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/20/22 12:51	09/21/22 10:04	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/20/22 12:51	09/21/22 10:04	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/20/22 12:51	09/21/22 10:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*09/20/22 12:51*	*09/21/22 10:04*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*09/20/22 12:51*	*09/21/22 10:04*	*1*

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

Lab Sample ID: MB 880-34341/1-A
Matrix: Solid
Analysis Batch: 34338

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34341

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 09:38	1

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2918-1
SDG: 03E1558086

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

Lab Sample ID: MB 880-34341/1-A
Matrix: Solid
Analysis Batch: 34338

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34341

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 09:38	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 09:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*09/13/22 08:23*	*09/13/22 09:38*	*1*
o-Terphenyl	*114*		*70 - 130*	*09/13/22 08:23*	*09/13/22 09:38*	*1*

Lab Sample ID: LCS 880-34341/2-A
Matrix: Solid
Analysis Batch: 34338

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34341

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	948.0		mg/Kg		95	70 - 130
Diesel Range Organics (Over C10-C28)	1000	846.8		mg/Kg		85	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*74*		*70 - 130*
o-Terphenyl	*84*		*70 - 130*

Lab Sample ID: LCSD 880-34341/3-A
Matrix: Solid
Analysis Batch: 34338

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34341

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	893.7		mg/Kg		89	70 - 130	6	20
Diesel Range Organics (Over C10-C28)	1000	800.1		mg/Kg		80	70 - 130	6	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*79*		*70 - 130*
o-Terphenyl	*88*		*70 - 130*

Lab Sample ID: 890-2914-A-1-D MS
Matrix: Solid
Analysis Batch: 34338

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 34341

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	996	827.2		mg/Kg		80	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	996	738.7		mg/Kg		74	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*91*		*70 - 130*
o-Terphenyl	*87*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2918-1
SDG: 03E1558086

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

Lab Sample ID: 890-2914-A-1-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 34338 — **Prep Batch: 34341**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	867.5		mg/Kg		84	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	783.4		mg/Kg		78	70 - 130	6	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*95*		*70 - 130*
o-Terphenyl	*91*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-34288/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 34499

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			09/14/22 22:32	1

Lab Sample ID: LCS 880-34288/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 34499

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	241.4		mg/Kg		97	90 - 110

Lab Sample ID: LCSD 880-34288/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 34499

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	242.0		mg/Kg		97	90 - 110	0	20

Lab Sample ID: 890-2913-A-1-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 34499

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	22.1		250	276.5		mg/Kg		102	90 - 110

Lab Sample ID: 890-2913-A-1-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 34499

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	22.1		250	277.5		mg/Kg		102	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2918-1
SDG: 03E1558086

GC VOA

Prep Batch: 34851

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2918-1	SS05	Total/NA	Solid	5035	
MB 880-34851/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-34851/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-34851/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2915-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-2915-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 34941

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-34941/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 35013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2918-1	SS05	Total/NA	Solid	8021B	34851
MB 880-34851/5-A	Method Blank	Total/NA	Solid	8021B	34851
MB 880-34941/5-A	Method Blank	Total/NA	Solid	8021B	34941
LCS 880-34851/1-A	Lab Control Sample	Total/NA	Solid	8021B	34851
LCSD 880-34851/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	34851
890-2915-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	34851
890-2915-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	34851

Analysis Batch: 35142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2918-1	SS05	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 34338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2918-1	SS05	Total/NA	Solid	8015B NM	34341
MB 880-34341/1-A	Method Blank	Total/NA	Solid	8015B NM	34341
LCS 880-34341/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	34341
LCSD 880-34341/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	34341
890-2914-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	34341
890-2914-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	34341

Prep Batch: 34341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2918-1	SS05	Total/NA	Solid	8015NM Prep	
MB 880-34341/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-34341/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-34341/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2914-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2914-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 34448

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2918-1	SS05	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2918-1
SDG: 03E1558086

HPLC/IC

Leach Batch: 34288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2918-1	SS05	Soluble	Solid	DI Leach	
MB 880-34288/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-34288/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-34288/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2913-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2913-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 34499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2918-1	SS05	Soluble	Solid	300.0	34288
MB 880-34288/1-A	Method Blank	Soluble	Solid	300.0	34288
LCS 880-34288/2-A	Lab Control Sample	Soluble	Solid	300.0	34288
LCSD 880-34288/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	34288
890-2913-A-1-C MS	Matrix Spike	Soluble	Solid	300.0	34288
890-2913-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	34288

Lab Chronicle

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2918-1
SDG: 03E1558086

Client Sample ID: SS05

Date Collected: 09/08/22 09:50
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2918-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	34851	09/19/22 14:33	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35013	09/21/22 23:46	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35142	09/22/22 09:55	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34448	09/14/22 08:52	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	34341	09/13/22 08:23	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34338	09/13/22 17:46	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	34288	09/12/22 11:50	KS	EET MID
Soluble	Analysis	300.0		1			34499	09/14/22 23:35	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 21 BD 907H

Job ID: 890-2918-1
SDG: 03E1558086

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 21 BD 907H

Job ID: 890-2918-1
SDG: 03E1558086

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 21 BD 907H

Job ID: 890-2918-1
SDG: 03E1558086

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2918-1	SS05	Solid	09/08/22 09:50	09/09/22 09:22	6

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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:	Kalei Jennings	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:	817-683-2503	Email:	kjennings@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 21 BD 907H	Turn Around	☑ Routine ☐ Rush
Project Number:	03E1558086		
Project Location:	32.11019, -103.87932	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:	TNM 007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	1.4
Total Containers:		Corrected Temperature:	1.2

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	BTEX	TPH	Chlorides	Sample Comments
SS05	S	9/8/22	0950	6"	G	1	X	X	X	Incident #: NAPP2215947887
									MR	Cost Center: 1666331001

890-2918 Chain of Custody

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

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 [signature]	[signature]	9.9.22 922	2		
3			4		
5			6		

Revised Date 08/25/2020 Rev 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2918-1
SDG Number: 03E1558086

Login Number: 2918
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.	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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2918-1
SDG Number: 03E1558086

Login Number: 2918
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 09/12/22 09:08 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

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-2919-1
Laboratory Sample Delivery Group: 03E1558086
Client Project/Site: PLU 21 BD 907H

For:
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Kalei Jennings

JKramer

Authorized for release by:
9/22/2022 11:58:35 AM

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

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2919-1
SDG: 03E1558086

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
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 21 BD 907H

Job ID: 890-2919-1
SDG: 03E1558086

Job ID: 890-2919-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2919-1

Receipt
The sample was received on 9/9/2022 9:22 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.2°C

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

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

HPLC/IC
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 21 BD 907H

Job ID: 890-2919-1
SDG: 03E1558086

Client Sample ID: SS04

Date Collected: 09/08/22 09:45
Date Received: 09/09/22 09:22
Sample Depth: 6

Lab Sample ID: 890-2919-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/20/22 16:00	09/21/22 17:58	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/21/22 13:04	09/22/22 11:59	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/20/22 16:00	09/21/22 17:58	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/20/22 16:00	09/21/22 17:58	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/20/22 16:00	09/21/22 17:58	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/20/22 16:00	09/21/22 17:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*09/20/22 16:00*	*09/21/22 17:58*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*09/20/22 16:00*	*09/21/22 17:58*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/22/22 09:55	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/14/22 08:52	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/13/22 08:23	09/13/22 18:07	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/13/22 08:23	09/13/22 18:07	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/13/22 08:23	09/13/22 18:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*116*		*70 - 130*	*09/13/22 08:23*	*09/13/22 18:07*	*1*
o-Terphenyl	*127*		*70 - 130*	*09/13/22 08:23*	*09/13/22 18:07*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**79.5**		4.97		mg/Kg			09/14/22 23:40	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2919-1
SDG: 03E1558086

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)
890-2919-1	SS04	112	94
LCS 880-34941/1-A	Lab Control Sample	125	111
LCS 880-35061/1-A	Lab Control Sample	130	117
LCSD 880-34941/2-A	Lab Control Sample Dup	112	107
LCSD 880-35061/2-A	Lab Control Sample Dup	154 S1+	121
MB 880-34941/5-A	Method Blank	100	93
MB 880-35060/5-A	Method Blank	86	106
MB 880-35061/5-A	Method Blank	112	106

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-2919-1	SS04	116	127
LCS 880-34341/2-A	Lab Control Sample	74	84
LCSD 880-34341/3-A	Lab Control Sample Dup	79	88
MB 880-34341/1-A	Method Blank	102	114

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2919-1
SDG: 03E1558086

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-34941/5-A
Matrix: Solid
Analysis Batch: 35013

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34941

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/20/22 12:51	09/21/22 10:04	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/20/22 12:51	09/21/22 10:04	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/20/22 12:51	09/21/22 10:04	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/20/22 12:51	09/21/22 10:04	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/20/22 12:51	09/21/22 10:04	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/20/22 12:51	09/21/22 10:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*09/20/22 12:51*	*09/21/22 10:04*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*09/20/22 12:51*	*09/21/22 10:04*	*1*

Lab Sample ID: LCS 880-34941/1-A
Matrix: Solid
Analysis Batch: 35013

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34941

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09016		mg/Kg		90	70 - 130
Toluene	0.100	0.08354		mg/Kg		84	70 - 130
Ethylbenzene	0.100	0.09804		mg/Kg		98	70 - 130
m-Xylene & p-Xylene	0.200	0.2015		mg/Kg		101	70 - 130
o-Xylene	0.100	0.1140		mg/Kg		114	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*

Lab Sample ID: LCSD 880-34941/2-A
Matrix: Solid
Analysis Batch: 35013

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34941

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.08653		mg/Kg		87	70 - 130	4	35
Toluene	0.100	0.07902		mg/Kg		79	70 - 130	6	35
Ethylbenzene	0.100	0.08170		mg/Kg		82	70 - 130	18	35
m-Xylene & p-Xylene	0.200	0.1706		mg/Kg		85	70 - 130	17	35
o-Xylene	0.100	0.09761		mg/Kg		98	70 - 130	16	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: MB 880-35060/5-A
Matrix: Solid
Analysis Batch: 35073

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 35060

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/21/22 12:57	09/21/22 16:55	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/21/22 12:57	09/21/22 16:55	1

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QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2919-1
SDG: 03E1558086

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

Lab Sample ID: MB 880-35060/5-A
Matrix: Solid
Analysis Batch: 35073

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 35060

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/21/22 12:57	09/21/22 16:55	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/21/22 12:57	09/21/22 16:55	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/21/22 12:57	09/21/22 16:55	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/21/22 12:57	09/21/22 16:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*	*09/21/22 12:57*	*09/21/22 16:55*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*09/21/22 12:57*	*09/21/22 16:55*	*1*

Lab Sample ID: MB 880-35061/5-A
Matrix: Solid
Analysis Batch: 35073

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 35061

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/21/22 13:04	09/22/22 03:37	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/21/22 13:04	09/22/22 03:37	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/21/22 13:04	09/22/22 03:37	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/21/22 13:04	09/22/22 03:37	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/21/22 13:04	09/22/22 03:37	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/21/22 13:04	09/22/22 03:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*09/21/22 13:04*	*09/22/22 03:37*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*09/21/22 13:04*	*09/22/22 03:37*	*1*

Lab Sample ID: LCS 880-35061/1-A
Matrix: Solid
Analysis Batch: 35073

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 35061

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.07370		mg/Kg		74	70 - 130		
Toluene			0.100	0.07810		mg/Kg		78	70 - 130		
Ethylbenzene			0.100	0.08578		mg/Kg		86	70 - 130		
m-Xylene & p-Xylene			0.200	0.1910		mg/Kg		96	70 - 130		
o-Xylene			0.100	0.09680		mg/Kg		97	70 - 130		

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

Lab Sample ID: LCSD 880-35061/2-A
Matrix: Solid
Analysis Batch: 35073

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 35061

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08829		mg/Kg		88	70 - 130	18	35
Toluene			0.100	0.09815		mg/Kg		98	70 - 130	23	35
Ethylbenzene			0.100	0.1069		mg/Kg		107	70 - 130	22	35

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QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2919-1
SDG: 03E1558086

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

Lab Sample ID: LCSD 880-35061/2-A
Matrix: Solid
Analysis Batch: 35073

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 35061

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
m-Xylene & p-Xylene			0.200	0.2382		mg/Kg		119	70 - 130	22	35
o-Xylene			0.100	0.1184		mg/Kg		118	70 - 130	20	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*154*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*121*		*70 - 130*

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

Lab Sample ID: MB 880-34341/1-A
Matrix: Solid
Analysis Batch: 34338

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34341

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 09:38	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 09:38	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 09:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*09/13/22 08:23*	*09/13/22 09:38*	*1*
o-Terphenyl	*114*		*70 - 130*	*09/13/22 08:23*	*09/13/22 09:38*	*1*

Lab Sample ID: LCS 880-34341/2-A
Matrix: Solid
Analysis Batch: 34338

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34341

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	948.0		mg/Kg		95	70 - 130
Diesel Range Organics (Over C10-C28)			1000	846.8		mg/Kg		85	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*74*		*70 - 130*
o-Terphenyl	*84*		*70 - 130*

Lab Sample ID: LCSD 880-34341/3-A
Matrix: Solid
Analysis Batch: 34338

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34341

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	893.7		mg/Kg		89	70 - 130	6	20
Diesel Range Organics (Over C10-C28)			1000	800.1		mg/Kg		80	70 - 130	6	20

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2919-1
SDG: 03E1558086

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

Lab Sample ID: LCSD 880-34341/3-A
Matrix: Solid
Analysis Batch: 34338

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34341

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*79*		*70 - 130*
o-Terphenyl	*88*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-34288/1-A
Matrix: Solid
Analysis Batch: 34499

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			09/14/22 22:32	1

Lab Sample ID: LCS 880-34288/2-A
Matrix: Solid
Analysis Batch: 34499

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	241.4		mg/Kg		97	90 - 110		

Lab Sample ID: LCSD 880-34288/3-A
Matrix: Solid
Analysis Batch: 34499

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	242.0		mg/Kg		97	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2919-1
SDG: 03E1558086

GC VOA

Prep Batch: 34941

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2919-1	SS04	Total/NA	Solid	5035	
MB 880-34941/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-34941/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-34941/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 35013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2919-1	SS04	Total/NA	Solid	8021B	34941
MB 880-34941/5-A	Method Blank	Total/NA	Solid	8021B	34941
LCS 880-34941/1-A	Lab Control Sample	Total/NA	Solid	8021B	34941
LCSD 880-34941/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	34941

Prep Batch: 35060

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-35060/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 35061

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2919-1	SS04	Total/NA	Solid	5035	
MB 880-35061/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-35061/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-35061/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 35073

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2919-1	SS04	Total/NA	Solid	8021B	35061
MB 880-35060/5-A	Method Blank	Total/NA	Solid	8021B	35060
MB 880-35061/5-A	Method Blank	Total/NA	Solid	8021B	35061
LCS 880-35061/1-A	Lab Control Sample	Total/NA	Solid	8021B	35061
LCSD 880-35061/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	35061

Analysis Batch: 35139

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2919-1	SS04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 34338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2919-1	SS04	Total/NA	Solid	8015B NM	34341
MB 880-34341/1-A	Method Blank	Total/NA	Solid	8015B NM	34341
LCS 880-34341/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	34341
LCSD 880-34341/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	34341

Prep Batch: 34341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2919-1	SS04	Total/NA	Solid	8015NM Prep	
MB 880-34341/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-34341/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-34341/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2919-1
SDG: 03E1558086

GC Semi VOA

Analysis Batch: 34449

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2919-1	SS04	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 34288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2919-1	SS04	Soluble	Solid	DI Leach	
MB 880-34288/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-34288/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-34288/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 34499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2919-1	SS04	Soluble	Solid	300.0	34288
MB 880-34288/1-A	Method Blank	Soluble	Solid	300.0	34288
LCS 880-34288/2-A	Lab Control Sample	Soluble	Solid	300.0	34288
LCSD 880-34288/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	34288

Lab Chronicle

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2919-1
SDG: 03E1558086

Client Sample ID: SS04

Date Collected: 09/08/22 09:45
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2919-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	35061	09/21/22 13:04	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35073	09/22/22 11:59	MR	EET MID
Total/NA	Prep	5035			5.03 g	5 mL	34941	09/20/22 16:00	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35013	09/21/22 17:58	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35139	09/22/22 09:55	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34449	09/14/22 08:52	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	34341	09/13/22 08:23	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34338	09/13/22 18:07	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	34288	09/12/22 11:50	KS	EET MID
Soluble	Analysis	300.0		1			34499	09/14/22 23:40	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 21 BD 907H

Job ID: 890-2919-1
SDG: 03E1558086

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 21 BD 907H

Job ID: 890-2919-1
SDG: 03E1558086

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 21 BD 907H

Job ID: 890-2919-1
SDG: 03E1558086

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2919-1	SS04	Solid	09/08/22 09:45	09/09/22 09:22	6

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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:	Kalei Jennings	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:	817-683-2503	Email:	kjennings@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 21 BD 907H	Turn Around	☑ Routine ☐ Rush
Project Number:	03E1558086	Due Date:	
Project Location:	32.1109, -103.87932	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Meredith Roberts		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	TNM007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	1.4
Total Containers:		Corrected Temperature:	1.2

ANALYSIS REQUEST — Parameters

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	BTEX	TPH	Chlorides	Sample Comments
SS04	S	9/8/22	0945	6"	G	1	X	X	X	Incident #: NAPP2215947887 Cost Center: 1666331001

MR

890-2919 Chain of Custody

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	

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 [signature]	[signature]	9.9.22 923	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2919-1
SDG Number: 03E1558086

Login Number: 2919
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.	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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2919-1
SDG Number: 03E1558086

Login Number: 2919
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 09/12/22 09:08 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

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-2920-1
Laboratory Sample Delivery Group: 03E1558086
Client Project/Site: PLU 21 BD 907H

For:
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Kalei Jennings

JKramer

Authorized for release by:
9/22/2022 9:10:13 AM

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

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Ensolum
Project/Site: PLU 21 BD 907H

Laboratory Job ID: 890-2920-1
SDG: 03E1558086

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-2920-1
Project/Site: PLU 21 BD 907H SDG: 03E1558086

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
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 21 BD 907H

Job ID: 890-2920-1
SDG: 03E1558086

Job ID: 890-2920-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2920-1

Receipt
The sample was received on 9/9/2022 9:22 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.2°C

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

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

HPLC/IC
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 21 BD 907H

Job ID: 890-2920-1
SDG: 03E1558086

Client Sample ID: SS03

Date Collected: 09/08/22 09:40
Date Received: 09/09/22 09:22
Sample Depth: 6

Lab Sample ID: 890-2920-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/19/22 14:33	09/22/22 00:06	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/19/22 14:33	09/22/22 00:06	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/19/22 14:33	09/22/22 00:06	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/19/22 14:33	09/22/22 00:06	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/19/22 14:33	09/22/22 00:06	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/19/22 14:33	09/22/22 00:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*09/19/22 14:33*	*09/22/22 00:06*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*09/19/22 14:33*	*09/22/22 00:06*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			09/22/22 09:55	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/14/22 08:58	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/13/22 08:25	09/13/22 10:46	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/13/22 08:25	09/13/22 10:46	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/13/22 08:25	09/13/22 10:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*09/13/22 08:25*	*09/13/22 10:46*	*1*
o-Terphenyl	*96*		*70 - 130*	*09/13/22 08:25*	*09/13/22 10:46*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**181**		25.2		mg/Kg			09/14/22 23:45	5

Surrogate Summary

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2920-1
SDG: 03E1558086

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)										
890-2920-1	SS03	115	84										
LCS 880-34851/1-A	Lab Control Sample	114	106										
LCSD 880-34851/2-A	Lab Control Sample Dup	115	108										
MB 880-34851/5-A	Method Blank	88	77										
MB 880-34941/5-A	Method Blank	100	93										

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)										
890-2920-1	SS03	95	96										
890-2920-1 MS	SS03	107	95										
890-2920-1 MSD	SS03	108	97										
LCS 880-34342/2-A	Lab Control Sample	85	92										
LCSD 880-34342/3-A	Lab Control Sample Dup	87	94										
MB 880-34342/1-A	Method Blank	103	106										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2920-1
SDG: 03E1558086

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-34851/5-A
Matrix: Solid
Analysis Batch: 35013

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34851

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/21/22 20:40	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/21/22 20:40	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/21/22 20:40	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/19/22 14:33	09/21/22 20:40	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/21/22 20:40	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/19/22 14:33	09/21/22 20:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*	*09/19/22 14:33*	*09/21/22 20:40*	*1*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*	*09/19/22 14:33*	*09/21/22 20:40*	*1*

Lab Sample ID: LCS 880-34851/1-A
Matrix: Solid
Analysis Batch: 35013

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34851

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09662		mg/Kg		97	70 - 130
Toluene	0.100	0.08888		mg/Kg		89	70 - 130
Ethylbenzene	0.100	0.09395		mg/Kg		94	70 - 130
m-Xylene & p-Xylene	0.200	0.1964		mg/Kg		98	70 - 130
o-Xylene	0.100	0.1106		mg/Kg		111	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: LCSD 880-34851/2-A
Matrix: Solid
Analysis Batch: 35013

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34851

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.09096		mg/Kg		91	70 - 130	6	35
Toluene	0.100	0.08531		mg/Kg		85	70 - 130	4	35
Ethylbenzene	0.100	0.08835		mg/Kg		88	70 - 130	6	35
m-Xylene & p-Xylene	0.200	0.1845		mg/Kg		92	70 - 130	6	35
o-Xylene	0.100	0.1080		mg/Kg		108	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: MB 880-34941/5-A
Matrix: Solid
Analysis Batch: 35013

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34941

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/20/22 12:51	09/21/22 10:04	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/20/22 12:51	09/21/22 10:04	1

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2920-1
SDG: 03E1558086

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

Lab Sample ID: MB 880-34941/5-A
Matrix: Solid
Analysis Batch: 35013

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34941

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/20/22 12:51	09/21/22 10:04	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/20/22 12:51	09/21/22 10:04	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/20/22 12:51	09/21/22 10:04	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/20/22 12:51	09/21/22 10:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*09/20/22 12:51*	*09/21/22 10:04*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*09/20/22 12:51*	*09/21/22 10:04*	*1*

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

Lab Sample ID: MB 880-34342/1-A
Matrix: Solid
Analysis Batch: 34336

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34342

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/13/22 08:25	09/13/22 09:38	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/13/22 08:25	09/13/22 09:38	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/13/22 08:25	09/13/22 09:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*103*		*70 - 130*	*09/13/22 08:25*	*09/13/22 09:38*	*1*
o-Terphenyl	*106*		*70 - 130*	*09/13/22 08:25*	*09/13/22 09:38*	*1*

Lab Sample ID: LCS 880-34342/2-A
Matrix: Solid
Analysis Batch: 34336

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34342

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	897.2		mg/Kg		90	70 - 130
Diesel Range Organics (Over C10-C28)	1000	840.2		mg/Kg		84	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*85*		*70 - 130*
o-Terphenyl	*92*		*70 - 130*

Lab Sample ID: LCSD 880-34342/3-A
Matrix: Solid
Analysis Batch: 34336

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34342

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	923.4		mg/Kg		92	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	1000	857.9		mg/Kg		86	70 - 130	2	20

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2920-1
SDG: 03E1558086

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

Lab Sample ID: LCSD 880-34342/3-A
Matrix: Solid
Analysis Batch: 34336

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34342

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	87		70 - 130
o-Terphenyl	94		70 - 130

Lab Sample ID: 890-2920-1 MS
Matrix: Solid
Analysis Batch: 34336

Client Sample ID: SS03
Prep Type: Total/NA
Prep Batch: 34342

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	996	1179		mg/Kg		117	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	996	878.6		mg/Kg		84	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	107		70 - 130
o-Terphenyl	95		70 - 130

Lab Sample ID: 890-2920-1 MSD
Matrix: Solid
Analysis Batch: 34336

Client Sample ID: SS03
Prep Type: Total/NA
Prep Batch: 34342

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	1187		mg/Kg		117	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	891.5		mg/Kg		86	70 - 130	1	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	108		70 - 130
o-Terphenyl	97		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-34288/1-A
Matrix: Solid
Analysis Batch: 34499

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			09/14/22 22:32	1

Lab Sample ID: LCS 880-34288/2-A
Matrix: Solid
Analysis Batch: 34499

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	241.4		mg/Kg		97	90 - 110

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2920-1
SDG: 03E1558086

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 880-34288/3-A
Matrix: Solid
Analysis Batch: 34499

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	242.0		mg/Kg		97	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2920-1
SDG: 03E1558086

GC VOA

Prep Batch: 34851

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2920-1	SS03	Total/NA	Solid	5035	
MB 880-34851/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-34851/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-34851/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Prep Batch: 34941

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-34941/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 35013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2920-1	SS03	Total/NA	Solid	8021B	34851
MB 880-34851/5-A	Method Blank	Total/NA	Solid	8021B	34851
MB 880-34941/5-A	Method Blank	Total/NA	Solid	8021B	34941
LCS 880-34851/1-A	Lab Control Sample	Total/NA	Solid	8021B	34851
LCSD 880-34851/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	34851

Analysis Batch: 35143

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2920-1	SS03	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 34336

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2920-1	SS03	Total/NA	Solid	8015B NM	34342
MB 880-34342/1-A	Method Blank	Total/NA	Solid	8015B NM	34342
LCS 880-34342/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	34342
LCSD 880-34342/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	34342
890-2920-1 MS	SS03	Total/NA	Solid	8015B NM	34342
890-2920-1 MSD	SS03	Total/NA	Solid	8015B NM	34342

Prep Batch: 34342

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2920-1	SS03	Total/NA	Solid	8015NM Prep	
MB 880-34342/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-34342/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-34342/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2920-1 MS	SS03	Total/NA	Solid	8015NM Prep	
890-2920-1 MSD	SS03	Total/NA	Solid	8015NM Prep	

Analysis Batch: 34458

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2920-1	SS03	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 34288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2920-1	SS03	Soluble	Solid	DI Leach	
MB 880-34288/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-34288/2-A	Lab Control Sample	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2920-1
SDG: 03E1558086

HPLC/IC (Continued)

Leach Batch: 34288 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-34288/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 34499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2920-1	SS03	Soluble	Solid	300.0	34288
MB 880-34288/1-A	Method Blank	Soluble	Solid	300.0	34288
LCS 880-34288/2-A	Lab Control Sample	Soluble	Solid	300.0	34288
LCSD 880-34288/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	34288

Lab Chronicle

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2920-1
SDG: 03E1558086

Client Sample ID: SS03

Date Collected: 09/08/22 09:40
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2920-1

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			4.98 g	5 mL	34851	09/19/22 14:33	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35013	09/22/22 00:06	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35143	09/22/22 09:55	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34458	09/14/22 08:58	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	34342	09/13/22 08:25	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34336	09/13/22 10:46	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	34288	09/12/22 11:50	KS	EET MID
Soluble	Analysis	300.0		5			34499	09/14/22 23:45	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 21 BD 907H

Job ID: 890-2920-1
SDG: 03E1558086

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 21 BD 907H

Job ID: 890-2920-1
SDG: 03E1558086

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 21 BD 907H

Job ID: 890-2920-1
SDG: 03E1558086

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2920-1	SS03	Solid	09/08/22 09:40	09/09/22 09:22	6

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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:	Kalei Jennings	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:	817-683-2503 Email:	Email:	Kjennings@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 21 BD 907H	Turn Around	
Project Number:	03E1558086	☑ Routine ☐ Rush	
Project Location:	32.11019, -103.87932	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:	TM009
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	1.4
Total Containers:		Corrected Temperature:	1.2

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	BTEX	TPH	Chlorides
SS03	S	9/8/22	0940	6"	G	1		X	X	X

ANALYSIS REQUEST

890-2920 Chain of Custody

Sample Comments

Incident #: NAPP2215947887

Cost Center: 1666331001

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		Ice Cup	9-9-22982			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

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Chain of Custody

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

Work Order No: ____________

www.xenco.com Page 1 of 1

Project Manager:	Kalei Jennings	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:	817-683-2503	Email:	kjennings@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 21 BD 907H	Turn Around	☑ Routine ☐ Rush
Project Number:	03E1558086	Pres. Code	
Project Location:	32.11019, -103.87932	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:	TNM007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	1.4
Total Containers:		Corrected Temperature:	1.2

ANALYSIS REQUEST — Parameters: BTEX, TPH, Chlorides

890-2919 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	BTEX	TPH	Chlorides	Sample Comments
SS04	S	9/8/22	0945	6"	G	1	X	X	X	Incident #: NAPP2215947887
									MR	
										Cost Center: 1066331001

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

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	[signature]	[signature]	9.9.22 923	2			
3				4			
5				6			

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2920-1
SDG Number: 03E1558086

Login Number: 2920
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.	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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2920-1
SDG Number: 03E1558086

Login Number: 2920
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 09/12/22 09:08 AM

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

ENSOLUM

APPENDIX E

NMOCD Notifications

From: Hamlet, Robert, EMNRD
To: Collins, Melanie
Cc: DelawareSpills /SM; Kalei Jennings; Green, Garrett J; Pennington, Shelby G; Bratcher, Mike, EMNRD; Nobui, Jennifer, EMNRD; Harimon, Jocelyn, EMNRD
Subject: (Extension Approval) PLU 21 Brushy Draw 907H (Incident Number NAPP2215947887)
Date: Thursday, September 1, 2022 2:32:10 PM
Attachments: image002.jpg
image003.png

[**EXTERNAL EMAIL**]

RE: Incident #**NAPP2215947887**

Melanie,

Your request for an extension to **November 1st, 2022** is approved. Please include this e-mail correspondence in the remediation and/or closure report.

Robert Hamlet ● Environmental Specialist - Advanced
Environmental Bureau
EMNRD - Oil Conservation Division
811 S. First Street | Artesia, NM 88210
575.909.0302 | robert.hamlet@state.nm.us
http://www.emnrd.state.nm.us/OCD/

From: Collins, Melanie <melanie.collins@exxonmobil.com>
Sent: Thursday, September 1, 2022 11:50 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>
Cc: DelawareSpills /SM <DelawareSpills@exxonmobil.com>; Kalei Jennings <kjennings@ensolum.com>; Green, Garrett J <garrett.green@exxonmobil.com>; Pennington, Shelby G <shelby.g.pennington@exxonmobil.com>
Subject: [EXTERNAL] PLU 21 Brushy Draw 907H (Incident Number NAPP2215947887)

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

All,

XTO is requesting an extension for the current deadline of September 2, 2022 for submitting a remediation work plan or closure report required in 19.15.29.12.B.(1) NMAC at the PLU 21 Brushy Draw 907H (Incident Number NAPP2215947887). The release occurred on June 4, 2022. Initial assessment of the release could not be completed due to ongoing operations. XTO operations

provided a status update once the Site was cleared and initial Site assessment activities were completed this week. XTO anticipates completing delineation of the release by the end of the week. XTO is requesting a 60-day extension to complete delineation and excavation of the impacted soil. In order to complete the field activities and submit a remediation work plan or closure report, XTO requests an extension until November 1, 2022.

Thank you

Melanie Collins

Environmental Technician
melanie.collins@exxonmobil.com
432-556-3756

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 155376

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 155376
	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 #NAPP2215947887 PLU 21 BRUSHY DRAW 907H, 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.	1/11/2023