State of New Mexico
Oil Conservation Division

Incident ID	NAPP2232537823
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: __02/08/2023_____

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

OCD Only

Received by: ____Jocelyn Harimon_____ Date: ___02/08/2023___

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

Closure Approved by: _____ Date: 5/30/2023

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	NAPP2232537823
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 32.10185 Longitude -103.84166

(NAD 83 in decimal degrees to 5 decimal places)

Site Name PLU 25 Brushy Draw 901H	Site Type Production Well
Date Release Discovered 11/10/2022	API# *(if applicable)*

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

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 0.43	Volume Recovered (bbls) 0.35
☒ Produced Water	Volume Released (bbls) 5.69	Volume Recovered (bbls) 4.65
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☒ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: Corrosion caused a pinhole on a 4" steel flowline to release fluids. Vac truck was dispatched and recovered all free-standing fluid. A third-party contractor has been retained for remediation purposes.

State of New Mexico
Oil Conservation Division

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Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release? N/A

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

Initial Response

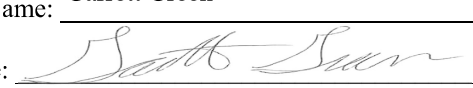
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

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

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

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

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

Printed Name: Garrett Green
Title: SSHE Coordinator
Signature: 
Date: 11/18/2022
email: garrett.green@exxonmobil.com
Telephone: 575-200-0729

OCD Only

Received by:
Date:

Location:	**PLU 25 Brushy Draw 901H**	
Spill Date:	**11/10/2022**	
Area 1		
Approximate Area =	1260.00	sq. ft.
Average Saturation (or depth) of spill =	2.00	inches
Average Porosity Factor =	0.03	
VOLUME OF LEAK		
Total Crude Oil =	0.43	bbls
Total Produced Water =	5.69	bbls
TOTAL VOLUME OF LEAK		
Total Crude Oil =	**0.43**	**bbls**
Total Produced Water =	**5.69**	**bbls**
TOTAL VOLUME RECOVERED		
Total Crude Oil =	**0.35**	**bbls**
Total Produced Water =	**4.65**	**bbls**

Incident ID	NAPP2232537823
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.

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2232537823
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Printed Name: Garrett Green Title: Environmental Coordinator

Signature: Date: 02/08/2023

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

OCD Only

Received by: Jocelyn Harimon Date: 02/08/2023

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2232537823
District RP	
Facility ID	
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Closure

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

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

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

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

☒ Description of remediation activities

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: __02/08/2023_____

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

OCD Only

Received by: ____Jocelyn Harimon_____ Date: ___02/08/2023___

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

ENSOLUM

February 8, 2023

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

Re: Closure Request
PLU 25 Brushy Draw 901H
Incident Number NAPP2232537823
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared the following *Closure Request* to document excavation and soil sampling activities completed to address impacted soil at the PLU 25 Brushy Draw 901H (Site). Soil was impacted by a release of crude oil and produced water onto the surface of the well pad. Based on excavation activities and analytical results from soil sampling events, XTO is submitting this *Closure Request*, describing remediation that has occurred and requesting closure for Incident Number NAPP2232537823.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit E, Section 25, Township 25 South, Range 30 East, in Eddy County, New Mexico (32.10185°, -103.84166°) and is associated with oil and gas exploration and production operations on federal land managed by the Bureau of Land Management (BLM).

On November 10, 2022, corrosion on a 4-inch steel flowline resulted in the release of approximately 0.43 barrels (bbls) of crude oil and 5.69 bbls of produced water. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; approximately 0.35 bbls of crude oil and 4.65 bbls of produced water were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) and submitted a Release Notification Form C-141 (Form C-141) on November 18, 2022. The release was assigned Incident Number NAPP2232537823.

SITE CHARATERIZATION AND CLOSURE CRITERIA

The Site was characterized according to Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented on page 4 of the Form C-141, Site Assessment/Characterization.

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on a recent soil boring drilled for determination of regional groundwater depth. On February 24, 2021, a soil boring permitted by the New Mexico Office of the State Engineer (NMOSE) under file number C-4498 was drilled 0.12 miles southeast of the Site utilizing a truck-mounted hollow-stem auger rig. Soil boring C-4498 was drilled to a depth of 109 feet bgs. A field geologist logged and described soils continuously. No moisture or groundwater was encountered during drilling activities. The borehole was

left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period without observing groundwater, it was confirmed that groundwater beneath the Site is greater than 109 feet bgs. The borehole was properly abandoned with drill cuttings and hydrated bentonite chips. The Well Log is included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is a dry wash approximately 640 feet northeast 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 AND SAMPLING ACTIVITIES

On January 6, 2023, Ensolum personnel visited the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. Seven delineation soil samples (SS01 through SS07) were collected within and around the release extent at a depth of 0.5 feet bgs. The delineation soil samples were field screened for volatile organic compounds (VOCs) utilizaing a calibrated photoionization detector (PID) and chloride utilizing Hach® chloride QuanTab® test strips. The release extent and delineation soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was completed during the Site visit and a photographic log 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 under strict chain-of-custody procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of the following contaminants of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0. Soil samples delivered to the laboratory the same day they were collected may not have equilabrated to 6 degrees Celcius required for shipment and long term storage, but are considered to have been received in acceptable condition by the laboratory.

Laboratory analytical results for delineation soil samples SS01 through SS03 and SS05, collected within the release extent, indicated TPH-GRO/TPH-DRO and/or TPH concentrations exceeded the Closure Criteria. Laboratory analytical results for delineation soil samples SS04, SS06, and SS07, collected around the release extent, indicated all COC concentrations were compliant with the Closure Criteria the strictest Table I Closure Criteria, confirming the lateral extent of the release. Laboratory analytical results are summarized on Table 1 and the complete laboratory analytical reports are included in Appendix C. Based on the laboratory analytical results, additional remediation activities appeared to be warranted.

EXCAVATION SOIL SAMPLING ACTIVITIES AND ANALYTICAL RESULTS

On January 12 and 13, 2023, Ensolum personnel returned to the Site to oversee excavation activities. Upon arrival on Site, personnel noted a trench of flowlines ran underneath the release extent. Utilizing a hydrovac, the trench was spotted in three locations throughout the release extent, confirming a line depth of 4 feet bgs. Upon confirmation of line depth, excavation activities commenced. Impacted soil was excavated from the release area as indicated by visible staining and laboratory analytical results for the delineation soil samples. Excavation activies were performed using a track-mounted backhoe. To direct excavation activities, soil was screened for VOCs and chloride. The excavation was completed to a depth of 2 feet bgs. Photographic documentation of the excavation activities is included in Appendix B.

Following removal of impacted soil, 5-point composite soil samples were collected at least every 200 square feet from the floor of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples FS01 through FS07 were collected from the floor of the excavation at a depth of 2 feet bgs. Composite soil samples SW01 and SW02 were collected from the sidewalls of the excavation at depths ranging from ground surface to 2 feet bgs. The soil samples were collected, handled, and analyzed following the same procedures as described above. The excavation extent and excavation soil sample locations are presented on Figure 3.

The excavation area measured approximately 1,400 square feet. A total of approximately 104 cubic yards of impacted soil were removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Facility in Carlsbad, New Mexico.

Laboratory analytical results for excavation floor samples FS01 through FS07 and sidewall samples SW01 and SW02 indicated all COC concentrations were compliant with the Closure Criteria and no further remediation was required. The laboratory analytical results are summarized on Table 1 and the complete laboratory analytical reports are included in Appendix C.

CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the November 10, 2022 release of crude oil and produced water. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated all COC concentrations were compliant with the Site Closure Criteria. Based on soil sample laboratory analytical results, no further remediation is required. XTO will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions. XTO believes remedial actions taken at the Site have been protective of human health, the environment, and groundwater. As such, XTO respectfully requests closure for Incident Number NAPP2232537823.

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

Sincerely,
Ensolum, LLC

Meredith Roberts
Field Geologist

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

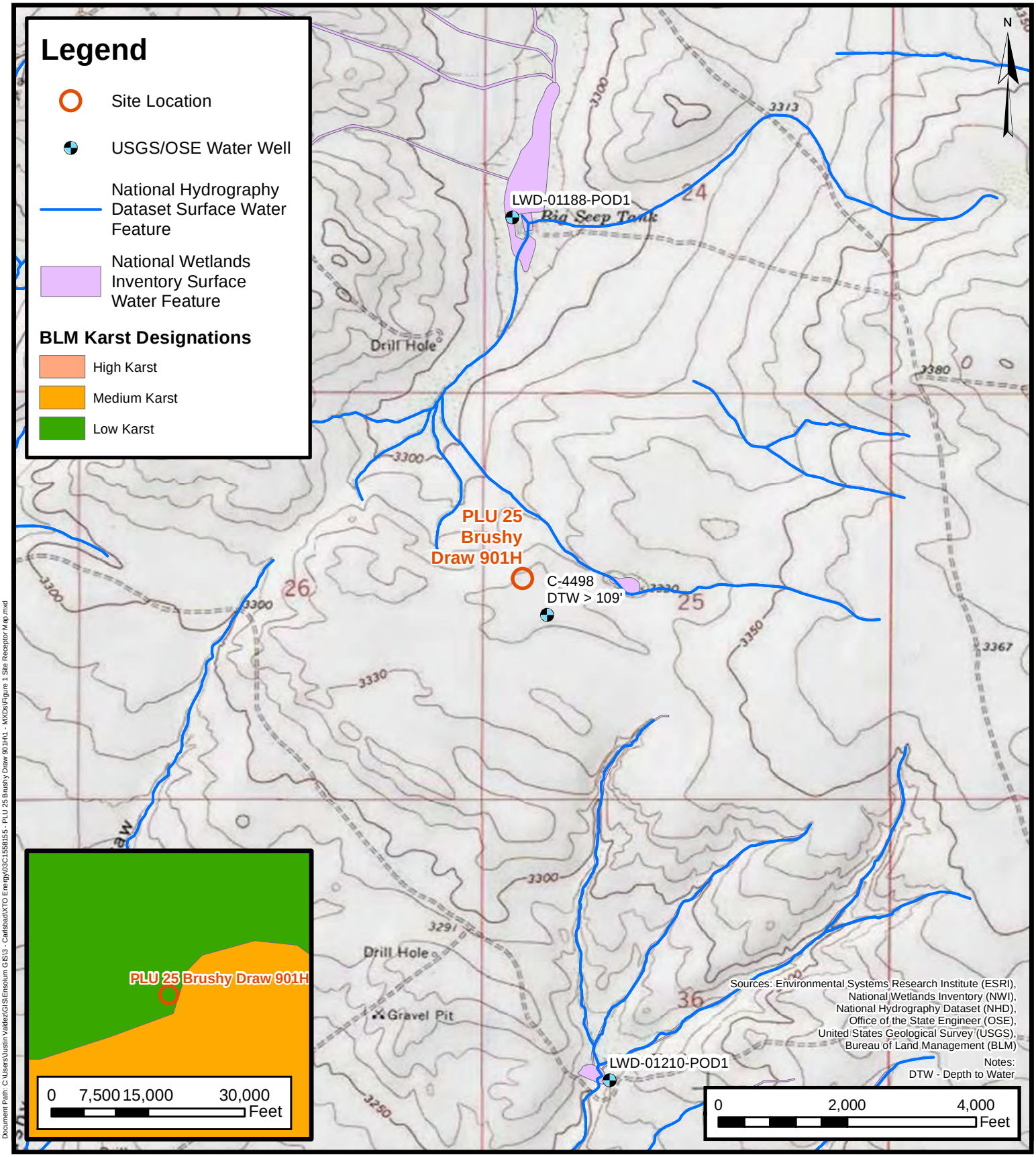
cc: Garrett Green, XTO
Shelby Pennington, XTO
Bureau of Land Management

Appendices:

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

ENSOLUM

FIGURES



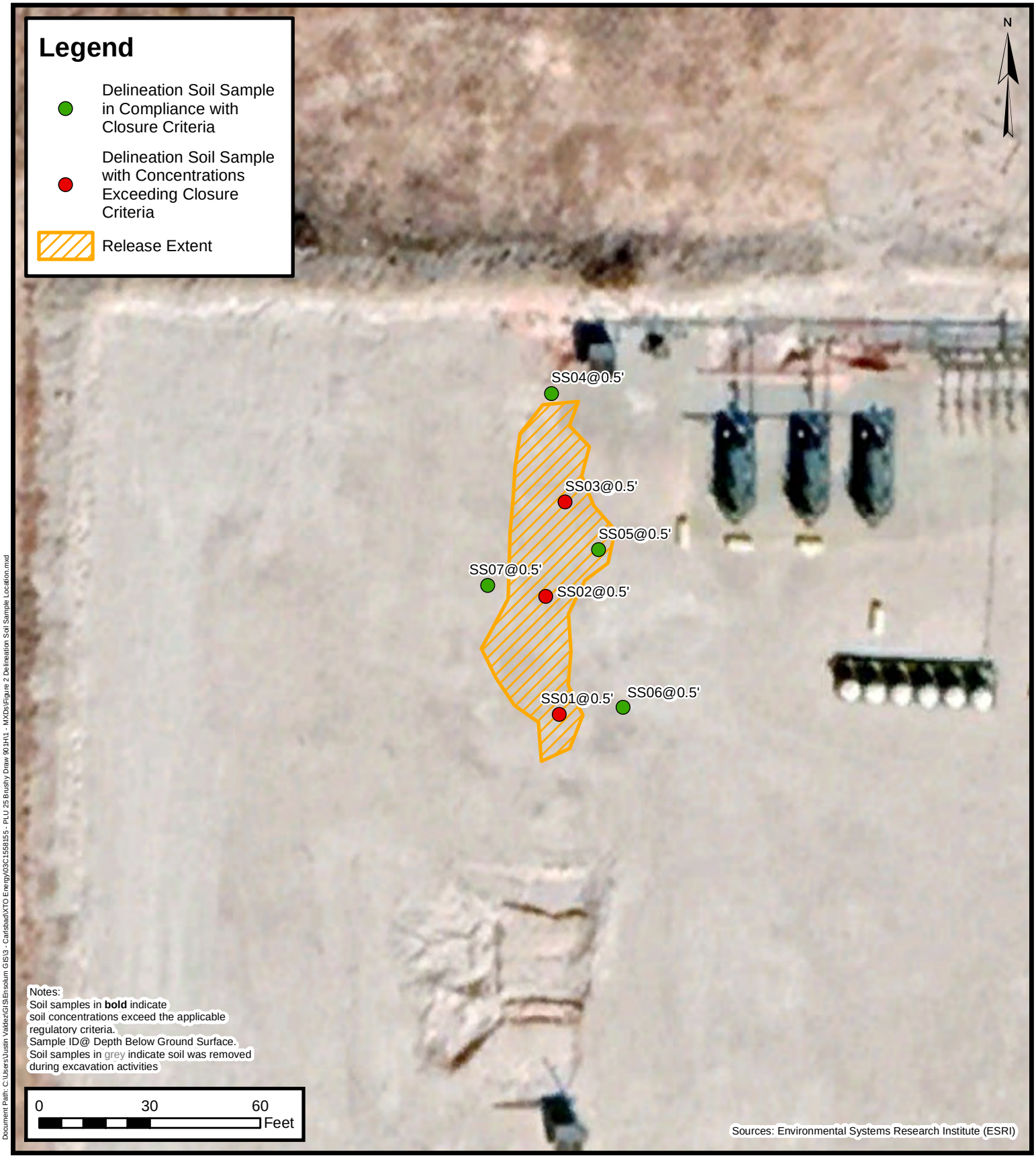
Document Path: C:\Users\Justin Valdez\GIS\Ensolum GIS\3 - Carlsbad\XTO Energy\02C1558155 - PLU 25 Brushy Draw 901H\1 - MXDs\Figure 1 Site Receptor Map.mxd

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

PLU 25 Brushy Draw 901H
XTO Energy, Inc
Unit E Sec 25 T25S R30E
Eddy County, New Mexico
Incident Number: NAPP2232537823

FIGURE
1



Document Path: C:\Users\Justin Valdez\GIS\Ensolum GIS\3 - Carlsbad\XTO Energy\03C1558155 - PLU 25 Brushy Draw 901H\1 - MXDs\Figure 2 Delineation Soil Sample Location.mxd

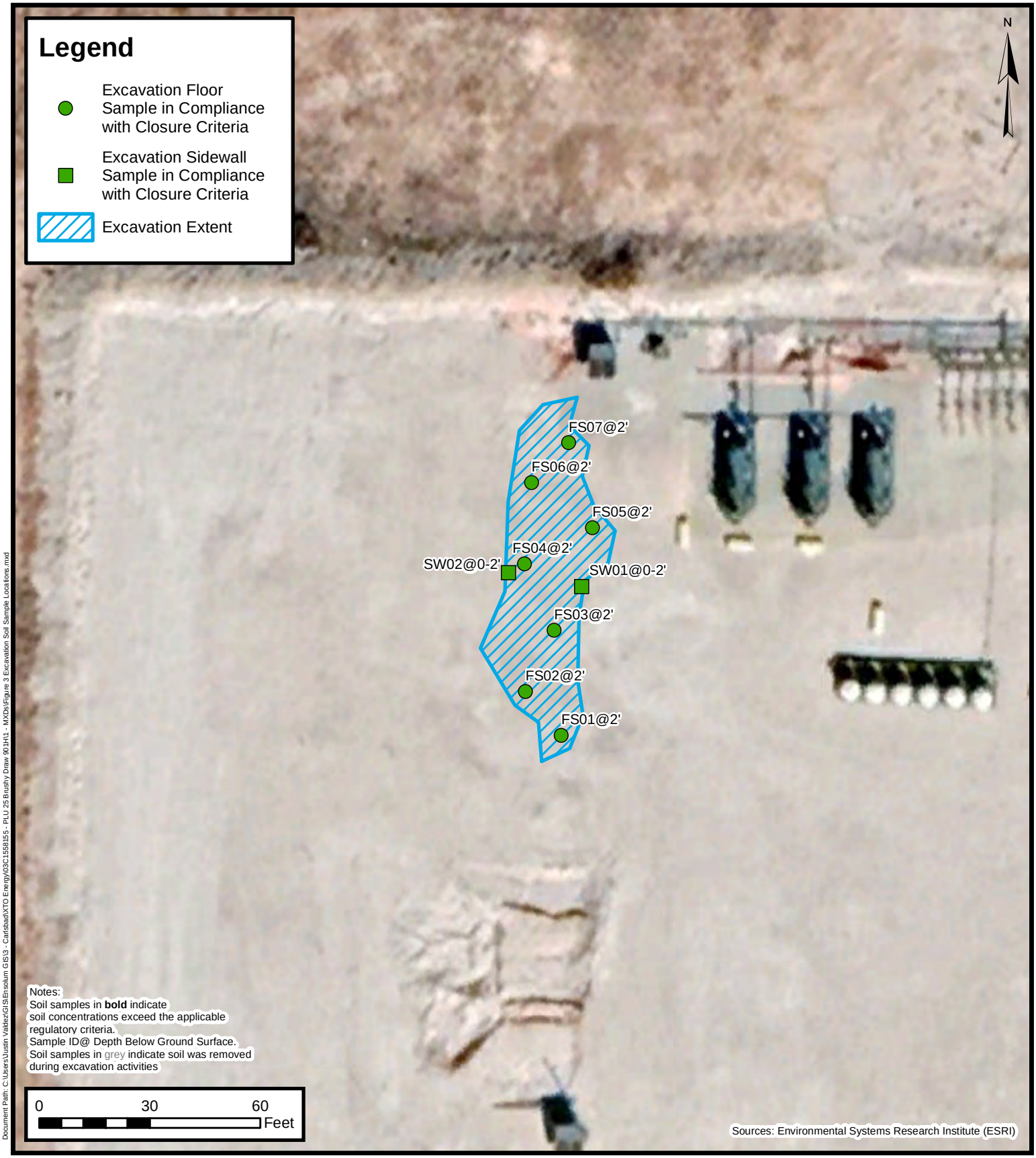
ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Delineation Soil Sample Locations

PLU 25 Brushy Draw 901H
XTO Energy, Inc
Unit E Sec 25 T25S R30E
Eddy County, New Mexico
Incident Number: NAPP2232537823

FIGURE

2



Document Path: C:\Users\Justin Valdez\GIS\Ensolum GIS\3 - Carlsbad\XTO Energy\03C155815S - PLU 25 Brushy Draw 901H\1 - MXDs\Figure 3 Excavation Soil Sample Locations.mxd

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Excavation Soil Sample Locations

PLU 25 Brushy Draw 901H
XTO Energy, Inc
Unit E Sec 25 T25S R30E
Eddy County, New Mexico
Incident Number: NAPP2232537823

FIGURE
3

ENSOLUM

TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
PLU 25 Brushy Draw 901H
XTO Energy, Inc
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Delineation Soil Samples										
~~SS01~~	~~01/06/2023~~	~~0.5~~	~~<0.00200~~	~~0.00826~~	~~245~~	~~7,450~~	~~<49.9~~	~~**7,695**~~	~~**7,700**~~	~~10,000~~
~~SS02~~	~~01/06/2023~~	~~0.5~~	~~<0.00200~~	~~0.0164~~	~~451~~	~~15,500~~	~~<249~~	~~**15,951**~~	~~**16,000**~~	~~12,400~~
~~SS03~~	~~01/06/2023~~	~~0.5~~	~~<0.00200~~	~~<0.00401~~	~~1,230~~	~~8,000~~	~~<49.9~~	~~**9,230**~~	~~**9,230**~~	~~8,990~~
SS04	01/06/2023	0.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	321
~~SS05~~	~~01/06/2023~~	~~0.5~~	~~<0.00199~~	~~<0.00398~~	~~<49.9~~	~~58.7~~	~~<49.9~~	~~58.7~~	~~58.7~~	~~670~~
SS06	01/06/2023	0.5	<0.00198	<0.00396	<49.9	63.2	<49.9	63.2	63.2	549
SS07	01/06/2023	0.5	<0.00200	<0.00401	<50.0	65.4	<50.0	65.4	65.4	253
Excavation Soil Samples										
FS01	01/13/2023	2	<0.00200	<0.00401	<49.9	150	<49.9	150	150	2,140
FS02	01/13/2023	2	<0.00199	0.00514	<50.0	214	51.6	214	266	1,390
FS03	01/13/2023	2	<0.00199	<0.00398	<49.9	64	<49.9	64.0	64.0	4,110
FS04	01/13/2023	2	<0.00200	<0.00399	<49.9	73	<49.9	73.0	73.0	3,810
FS05	01/13/2023	2	<0.00201	<0.00402	<50.0	97	<50.0	97.0	97.0	3,810
FS06	01/13/2023	2	<0.00202	<0.00404	<50.0	118	<50.0	118	118	2,380
FS07	01/13/2023	2	<0.00199	<0.00398	<49.9	191	<49.9	191	191	1,960
SW01	01/13/2023	0-2	<0.00199	<0.00398	<49.9	119	<49.9	119	119	1,200
SW02	01/13/2023	0-2	<0.00200	<0.00399	<50.0	101	<50.0	101	101	3,580

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

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

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

NMAC: New Mexico Administrative Code

~~Grey~~ text indicates soil sample removed during excavation activities

ENSOLUM

APPENDIX A

Referenced Well Records

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
POD1 (BH-01)	n/a	C-4498

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

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

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32°	6'	1.96"	N
	LONGITUDE	-103°	50'	26.19"	W

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

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

NW SW NE Sec. 25 T25S R30E

2. DRILLING & CASING INFORMATION

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

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
02/24/2021	02/24/2021	temporary well material	109	n/a

COMPLETED WELL IS: ☐ ARTESIAN ☑ DRY HOLE ☐ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): n/a

DRILLING FLUID: ☐ AIR ☐ MUD ADDITIVES – SPECIFY:

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

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	109	±6.5	Boring- HSA	--	--	--	--
					RECEIVED MAR 11 2021 PM4:26		

3. ANNULAR MATERIAL

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

FOR OSE INTERNAL USE

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

FILE NO. C-4498	POD NO. 1	TRN NO. 682528	
LOCATION 132 T25S R30E Sec 25		WELL TAG ID NO. NA	PAGE 1 OF 2

4. HYDROGEOLOGIC ~~LOG~~ OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	34	34	Caliche, tan, no odor, no stain, gravel, dry	Y ✓ N	
34	40	6	sand/ cacliche, tan, no odor, no stain, m-f grain, well sorted, dry	Y ✓ N	
40	56	16	sand, tan, no odor, no stain, m-f grain, well sorted, dry	Y ✓ N	
56	72	16	sandstone, low consolidation, tan, no odor, no stain, m-f grain, well sorted, dry	Y ✓ N	
72	79	7	sand, tan, no odor, no stain, m-f grain, well sorted, dry	Y ✓ N	
79	109	30	sandstone, low - medium consolidation, tan, no odor, m-f grained, well sorted, m	Y ✓ N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

~~METHOD~~ USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

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

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

5. TEST; RIG SUPERVISION

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

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

OSE DII MAR 11 2021 PM4:28

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

Shane Eldridge

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:

Jack Atkins — Jackie D. Atkins — 03/11/2021

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

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

FILE NO. C-4498	POD NO. 1	TRN NO. 682528	
LOCATION 132 T25S R30E Sec25		WELL TAG ID NO. NA	PAGE 2 OF 2

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

Roswell Office
1900 WEST SECOND STREET
ROSWELL, NM 88201

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER

Trn Nbr: 682528
File Nbr: C 04498
Well File Nbr: C 04498 POD1

Mar. 11, 2021

TACOMA MORRISEY
WSP USA
3300 NORTH A STREET
BLDG 1 #222
MIDLAND, TX 79705

Greetings:

The above numbered permit was issued in your name on 12/01/2020.

The Well Record was received in this office on 03/11/2021, stating that it had been completed on 02/24/2021, and was a dry well. The well is to be plugged according to 19.27.4.30 NMAC.

Please note that another well can be drilled under this permit if the well is completed and the well log filed on or before 12/01/2021.

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

Sincerely,

Andrew Dennis
(575)622-6521

drywell

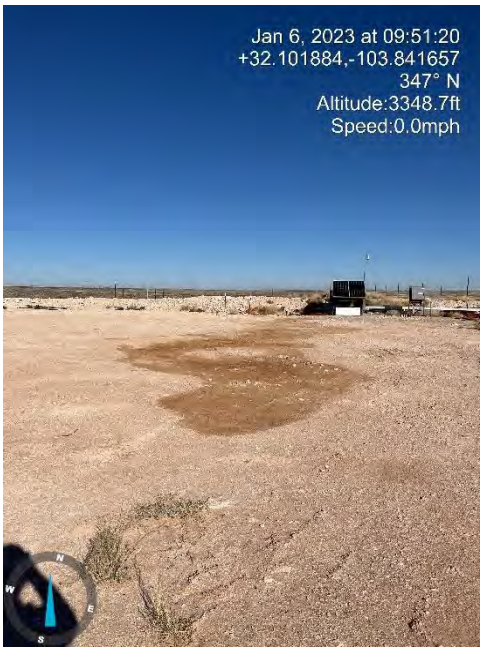
ENSOLUM

APPENDIX B

Photographic Log

ENSOLUM

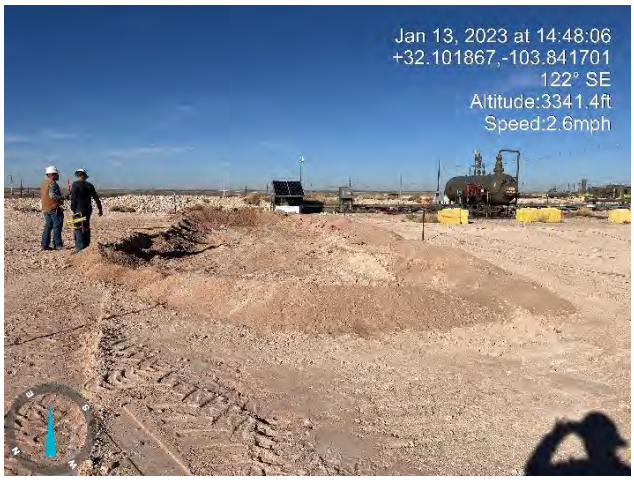
Photographic Log
XTO Energy, Inc
PLU 25 Brushy Draw 901H
NAPP2232537823



Photograph 1 Date: 1/06/2023
Description: Initial release extent
View: North

Photograph 2 Date: 1/12/2023
Description: Flagged lines running underneath release
View: North

Photograph 3 Date: 1/12/2023
Description: Excavation; trenches for line spotting
View: North



Photograph 4 Date: 1/13/2023
Description: Completed excavation with berm
View: North

ENSOLUM

APPENDIX C

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 1/13/2023 12:07:49 PM

JOB DESCRIPTION

PLU 25 Brushy Draw 901H
SDG NUMBER 03C1558155

JOB NUMBER

890-3775-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

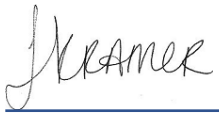
my EOL

Eurofins Carlsbad

Job Notes

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

Authorization



Generated
1/13/2023 12:07:49 PM

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

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Laboratory Job ID: 890-3775-1
SDG: 03C1558155

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3775-1
SDG: 03C1558155

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
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 25 Brushy Draw 901H

Job ID: 890-3775-1
SDG: 03C1558155

Job ID: 890-3775-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3775-1

Receipt
The samples were received on 1/6/2023 1:17 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.1°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SS01 (890-3775-1), SS02 (890-3775-2) and SS03 (890-3775-3).

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: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-43713 and analytical batch 880-43779 recovered outside control limits for the following analytes: Diesel Range Organics (Over C10-C28).

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: SS01 (890-3775-1), SS02 (890-3775-2), SS03 (890-3775-3) and (MB 880-43713/1-A). Evidence of matrix interferences is not obvious.

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

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

Client Sample Results

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3775-1
SDG: 03C1558155

Client Sample ID: SS01

Lab Sample ID: 890-3775-1
Matrix: Solid
Date Collected: 01/06/23 10:35
Date Received: 01/06/23 13:17
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/09/23 11:16	01/10/23 20:11	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/09/23 11:16	01/10/23 20:11	1
Ethylbenzene	**0.00826**		0.00200		mg/Kg		01/09/23 11:16	01/10/23 20:11	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/09/23 11:16	01/10/23 20:11	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/09/23 11:16	01/10/23 20:11	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/09/23 11:16	01/10/23 20:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*	*01/09/23 11:16*	*01/10/23 20:11*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*01/09/23 11:16*	*01/10/23 20:11*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.00826**		0.00400		mg/Kg			01/11/23 10:30	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**7700**		49.9		mg/Kg			01/13/23 12:46	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**245**		49.9		mg/Kg		01/11/23 09:47	01/13/23 04:07	1
Diesel Range Organics (Over C10-C28)	**7450**	***1**	49.9		mg/Kg		01/11/23 09:47	01/13/23 04:07	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/11/23 09:47	01/13/23 04:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*01/11/23 09:47*	*01/13/23 04:07*	*1*
o-Terphenyl	*185*	*S1+*	*70 - 130*	*01/11/23 09:47*	*01/13/23 04:07*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10000**		49.8		mg/Kg			01/10/23 14:47	10

Client Sample ID: SS02

Lab Sample ID: 890-3775-2
Matrix: Solid
Date Collected: 01/06/23 10:40
Date Received: 01/06/23 13:17
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/09/23 11:16	01/10/23 20:32	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/09/23 11:16	01/10/23 20:32	1
Ethylbenzene	**0.00480**		0.00200		mg/Kg		01/09/23 11:16	01/10/23 20:32	1
m-Xylene & p-Xylene	**0.0116**		0.00399		mg/Kg		01/09/23 11:16	01/10/23 20:32	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/09/23 11:16	01/10/23 20:32	1
Xylenes, Total	**0.0116**		0.00399		mg/Kg		01/09/23 11:16	01/10/23 20:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*70 - 130*	*01/09/23 11:16*	*01/10/23 20:32*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3775-1
SDG: 03C1558155

Client Sample ID: SS02

Date Collected: 01/06/23 10:40
Date Received: 01/06/23 13:17
Sample Depth: 0.5'

Lab Sample ID: 890-3775-2

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*75*		*70 - 130*	*01/09/23 11:16*	*01/10/23 20:32*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0164**		0.00399		mg/Kg			01/11/23 10:30	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**16000**		249		mg/Kg			01/13/23 12:46	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**451**		249		mg/Kg		01/11/23 09:47	01/13/23 04:29	5
Diesel Range Organics (Over C10-C28)	**15500**	***1**	249		mg/Kg		01/11/23 09:47	01/13/23 04:29	5
Oil Range Organics (Over C28-C36)	<249	U	249		mg/Kg		01/11/23 09:47	01/13/23 04:29	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*73*		*70 - 130*	*01/11/23 09:47*	*01/13/23 04:29*	*5*
o-Terphenyl	*399*	*S1+*	*70 - 130*	*01/11/23 09:47*	*01/13/23 04:29*	*5*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**12400**		99.0		mg/Kg			01/10/23 14:52	20

Client Sample ID: SS03

Date Collected: 01/06/23 10:45
Date Received: 01/06/23 13:17
Sample Depth: 0.5'

Lab Sample ID: 890-3775-3

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/09/23 11:16	01/10/23 20:52	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/09/23 11:16	01/10/23 20:52	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/09/23 11:16	01/10/23 20:52	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		01/09/23 11:16	01/10/23 20:52	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/09/23 11:16	01/10/23 20:52	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		01/09/23 11:16	01/10/23 20:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*01/09/23 11:16*	*01/10/23 20:52*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*01/09/23 11:16*	*01/10/23 20:52*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			01/11/23 10:30	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**9230**		250		mg/Kg			01/13/23 12:46	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3775-1
SDG: 03C1558155

Client Sample ID: SS03
Date Collected: 01/06/23 10:45
Date Received: 01/06/23 13:17
Sample Depth: 0.5'

Lab Sample ID: 890-3775-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	1230		49.9		mg/Kg		01/11/23 09:47	01/13/23 04:52	1
Diesel Range Organics (Over C10-C28)	8000	*1	250		mg/Kg		01/11/23 09:47	01/13/23 07:05	5
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/11/23 09:47	01/13/23 04:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*01/11/23 09:47*	*01/13/23 04:52*	*1*
1-Chlorooctane	*86*		*70 - 130*	*01/11/23 09:47*	*01/13/23 07:05*	*5*
o-Terphenyl	*193*	*S1+*	*70 - 130*	*01/11/23 09:47*	*01/13/23 04:52*	*1*
o-Terphenyl	*201*	*S1+*	*70 - 130*	*01/11/23 09:47*	*01/13/23 07:05*	*5*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8990		50.0		mg/Kg			01/10/23 14:57	10

Surrogate Summary

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3775-1
SDG: 03C1558155

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)											
		BFB1	DFBZ1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
880-23405-A-1-A MS	Matrix Spike	112	99										
880-23405-A-1-B MSD	Matrix Spike Duplicate	102	107										
890-3775-1	SS01	92	89										
890-3775-2	SS02	82	75										
890-3775-3	SS03	103	104										
LCS 880-43514/1-A	Lab Control Sample	104	109										
LCSD 880-43514/2-A	Lab Control Sample Dup	103	106										
MB 880-43514/5-A	Method Blank	100	105										

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)										
890-3775-1	SS01	106	185 S1+										
890-3775-2	SS02	73	399 S1+										
890-3775-3	SS03	95	193 S1+										
890-3775-3	SS03	86	201 S1+										
890-3781-A-21-D MS	Matrix Spike	87	82										
890-3781-A-21-E MSD	Matrix Spike Duplicate	105	94										
LCS 880-43713/2-A	Lab Control Sample	125	108										
LCSD 880-43713/3-A	Lab Control Sample Dup	101	85										
MB 880-43713/1-A	Method Blank	140 S1+	123										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3775-1
SDG: 03C1558155

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-43514/5-A
Matrix: Solid
Analysis Batch: 43599

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43514

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/09/23 11:16	01/10/23 12:50	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/09/23 11:16	01/10/23 12:50	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/09/23 11:16	01/10/23 12:50	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/09/23 11:16	01/10/23 12:50	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/09/23 11:16	01/10/23 12:50	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/09/23 11:16	01/10/23 12:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*01/09/23 11:16*	*01/10/23 12:50*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*01/09/23 11:16*	*01/10/23 12:50*	*1*

Lab Sample ID: LCS 880-43514/1-A
Matrix: Solid
Analysis Batch: 43599

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43514

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1049		mg/Kg		105	70 - 130		
Toluene			0.100	0.1007		mg/Kg		101	70 - 130		
Ethylbenzene			0.100	0.09799		mg/Kg		98	70 - 130		
m-Xylene & p-Xylene			0.200	0.2008		mg/Kg		100	70 - 130		
o-Xylene			0.100	0.09693		mg/Kg		97	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: LCSD 880-43514/2-A
Matrix: Solid
Analysis Batch: 43599

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 43514

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1036		mg/Kg		104	70 - 130	1	35
Toluene			0.100	0.09817		mg/Kg		98	70 - 130	3	35
Ethylbenzene			0.100	0.09733		mg/Kg		97	70 - 130	1	35
m-Xylene & p-Xylene			0.200	0.2012		mg/Kg		101	70 - 130	0	35
o-Xylene			0.100	0.09640		mg/Kg		96	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: 880-23405-A-1-A MS
Matrix: Solid
Analysis Batch: 43599

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 43514

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U F1	0.0996	0.06305	F1	mg/Kg		63	70 - 130		
Toluene	<0.00202	U F1	0.0996	0.06776	F1	mg/Kg		68	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3775-1
SDG: 03C1558155

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

Lab Sample ID: 880-23405-A-1-A MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 43599 — **Prep Batch: 43514**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U	0.0996	0.07235		mg/Kg		73	70 - 130
m-Xylene & p-Xylene	<0.00403	U	0.199	0.1515		mg/Kg		76	70 - 130
o-Xylene	<0.00202	U	0.0996	0.07547		mg/Kg		75	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 880-23405-A-1-B MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 43599 — **Prep Batch: 43514**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U F1	0.0990	0.07917		mg/Kg		80	70 - 130	23	35
Toluene	<0.00202	U F1	0.0990	0.07562		mg/Kg		76	70 - 130	11	35
Ethylbenzene	<0.00202	U	0.0990	0.07569		mg/Kg		76	70 - 130	5	35
m-Xylene & p-Xylene	<0.00403	U	0.198	0.1576		mg/Kg		80	70 - 130	4	35
o-Xylene	<0.00202	U	0.0990	0.07736		mg/Kg		78	70 - 130	2	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

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

Lab Sample ID: MB 880-43713/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 43779 — **Prep Batch: 43713**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/11/23 09:47	01/12/23 19:44	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/11/23 09:47	01/12/23 19:44	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/11/23 09:47	01/12/23 19:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*140*	*S1+*	*70 - 130*	*01/11/23 09:47*	*01/12/23 19:44*	*1*
o-Terphenyl	*123*		*70 - 130*	*01/11/23 09:47*	*01/12/23 19:44*	*1*

Lab Sample ID: LCS 880-43713/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 43779 — **Prep Batch: 43713**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1063		mg/Kg		106	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1036		mg/Kg		104	70 - 130

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3775-1
SDG: 03C1558155

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

Lab Sample ID: LCS 880-43713/2-A
Matrix: Solid
Analysis Batch: 43779

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43713

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	125		70 - 130
o-Terphenyl	108		70 - 130

Lab Sample ID: LCSD 880-43713/3-A
Matrix: Solid
Analysis Batch: 43779

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 43713

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	978.4		mg/Kg		98	70 - 130	8	20
Diesel Range Organics (Over C10-C28)			1000	766.4	*1	mg/Kg		77	70 - 130	30	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	101		70 - 130
o-Terphenyl	85		70 - 130

Lab Sample ID: 890-3781-A-21-D MS
Matrix: Solid
Analysis Batch: 43779

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 43713

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	927.5		mg/Kg		89	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U *1	998	862.9		mg/Kg		86	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	87		70 - 130
o-Terphenyl	82		70 - 130

Lab Sample ID: 890-3781-A-21-E MSD
Matrix: Solid
Analysis Batch: 43779

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 43713

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	997	1064		mg/Kg		103	70 - 130	14	20
Diesel Range Organics (Over C10-C28)	<50.0	U *1	997	993.4		mg/Kg		100	70 - 130	14	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	105		70 - 130
o-Terphenyl	94		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3775-1
SDG: 03C1558155

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-43541/1-A
Matrix: Solid
Analysis Batch: 43614

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			01/10/23 12:53	1

Lab Sample ID: LCS 880-43541/2-A
Matrix: Solid
Analysis Batch: 43614

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	249.6		mg/Kg		100	90 - 110		

Lab Sample ID: LCSD 880-43541/3-A
Matrix: Solid
Analysis Batch: 43614

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	249.7		mg/Kg		100	90 - 110	0	20

Lab Sample ID: 890-3774-A-2-C MS
Matrix: Solid
Analysis Batch: 43614

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	550		250	825.5		mg/Kg		110	90 - 110		

Lab Sample ID: 890-3774-A-2-D MSD
Matrix: Solid
Analysis Batch: 43614

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	550		250	799.5		mg/Kg		100	90 - 110	3	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3775-1
SDG: 03C1558155

GC VOA

Prep Batch: 43514

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3775-1	SS01	Total/NA	Solid	5035	
890-3775-2	SS02	Total/NA	Solid	5035	
890-3775-3	SS03	Total/NA	Solid	5035	
MB 880-43514/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-43514/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-43514/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-23405-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-23405-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 43599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3775-1	SS01	Total/NA	Solid	8021B	43514
890-3775-2	SS02	Total/NA	Solid	8021B	43514
890-3775-3	SS03	Total/NA	Solid	8021B	43514
MB 880-43514/5-A	Method Blank	Total/NA	Solid	8021B	43514
LCS 880-43514/1-A	Lab Control Sample	Total/NA	Solid	8021B	43514
LCSD 880-43514/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	43514
880-23405-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	43514
880-23405-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	43514

Analysis Batch: 43727

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3775-1	SS01	Total/NA	Solid	Total BTEX	
890-3775-2	SS02	Total/NA	Solid	Total BTEX	
890-3775-3	SS03	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 43713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3775-1	SS01	Total/NA	Solid	8015NM Prep	
890-3775-2	SS02	Total/NA	Solid	8015NM Prep	
890-3775-3	SS03	Total/NA	Solid	8015NM Prep	
MB 880-43713/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-43713/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-43713/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3781-A-21-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3781-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 43779

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3775-1	SS01	Total/NA	Solid	8015B NM	43713
890-3775-2	SS02	Total/NA	Solid	8015B NM	43713
890-3775-3	SS03	Total/NA	Solid	8015B NM	43713
890-3775-3	SS03	Total/NA	Solid	8015B NM	43713
MB 880-43713/1-A	Method Blank	Total/NA	Solid	8015B NM	43713
LCS 880-43713/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	43713
LCSD 880-43713/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	43713
890-3781-A-21-D MS	Matrix Spike	Total/NA	Solid	8015B NM	43713
890-3781-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	43713

QC Association Summary

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3775-1
SDG: 03C1558155

GC Semi VOA

Analysis Batch: 43897

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3775-1	SS01	Total/NA	Solid	8015 NM	
890-3775-2	SS02	Total/NA	Solid	8015 NM	
890-3775-3	SS03	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 43541

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3775-1	SS01	Soluble	Solid	DI Leach	
890-3775-2	SS02	Soluble	Solid	DI Leach	
890-3775-3	SS03	Soluble	Solid	DI Leach	
MB 880-43541/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-43541/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-43541/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3774-A-2-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3774-A-2-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 43614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3775-1	SS01	Soluble	Solid	300.0	43541
890-3775-2	SS02	Soluble	Solid	300.0	43541
890-3775-3	SS03	Soluble	Solid	300.0	43541
MB 880-43541/1-A	Method Blank	Soluble	Solid	300.0	43541
LCS 880-43541/2-A	Lab Control Sample	Soluble	Solid	300.0	43541
LCSD 880-43541/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	43541
890-3774-A-2-C MS	Matrix Spike	Soluble	Solid	300.0	43541
890-3774-A-2-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	43541

Lab Chronicle

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3775-1
SDG: 03C1558155

Client Sample ID: SS01

Lab Sample ID: 890-3775-1
Matrix: Solid
Date Collected: 01/06/23 10:35
Date Received: 01/06/23 13:17

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	43514	01/09/23 11:16	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43599	01/10/23 20:11	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43727	01/11/23 10:30	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43897	01/13/23 12:46	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	43713	01/11/23 09:47	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43779	01/13/23 04:07	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	43541	01/09/23 12:54	KS	EET MID
Soluble	Analysis	300.0		10			43614	01/10/23 14:47	CH	EET MID

Client Sample ID: SS02

Lab Sample ID: 890-3775-2
Matrix: Solid
Date Collected: 01/06/23 10:40
Date Received: 01/06/23 13:17

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	43514	01/09/23 11:16	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43599	01/10/23 20:32	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43727	01/11/23 10:30	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43897	01/13/23 12:46	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	43713	01/11/23 09:47	DM	EET MID
Total/NA	Analysis	8015B NM		5	1 uL	1 uL	43779	01/13/23 04:29	AJ	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	43541	01/09/23 12:54	KS	EET MID
Soluble	Analysis	300.0		20			43614	01/10/23 14:52	CH	EET MID

Client Sample ID: SS03

Lab Sample ID: 890-3775-3
Matrix: Solid
Date Collected: 01/06/23 10:45
Date Received: 01/06/23 13:17

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	43514	01/09/23 11:16	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43599	01/10/23 20:52	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43727	01/11/23 10:30	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43897	01/13/23 12:46	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	43713	01/11/23 09:47	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43779	01/13/23 04:52	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	43713	01/11/23 09:47	DM	EET MID
Total/NA	Analysis	8015B NM		5	1 uL	1 uL	43779	01/13/23 07:05	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	43541	01/09/23 12:54	KS	EET MID
Soluble	Analysis	300.0		10			43614	01/10/23 14:57	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3775-1
SDG: 03C1558155

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3775-1
SDG: 03C1558155

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 25 Brushy Draw 901H

Job ID: 890-3775-1
SDG: 03C1558155

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3775-1	SS01	Solid	01/06/23 10:35	01/06/23 13:17	0.5'
890-3775-2	SS02	Solid	01/06/23 10:40	01/06/23 13:17	0.5'
890-3775-3	SS03	Solid	01/06/23 10:45	01/06/23 13:17	0.5'

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy, Inc
Address:	3122 Nat'l Parks Hwy	Address:	3104 E Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	337.257.8307	Email:	tmorrissey@ensolum.com

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 25 Brushy Draw 9H	Turn Around	☑ Routine ☐ Rush
Project Number:	03C1558155	Due Date:	
Project Location:	32.10185, -103.84166	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:	IR-007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	4.3
Total Containers:		Corrected Temperature:	4.1

ANALYSIS REQUEST

Pres. Code / Parameters: BTEX, TPH, Chlorides

890-3775 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	BTEX	TPH	Chlorides
SS01	S	1/6/23	1035	0.5'	G	1	X	X	X
SS02	↓	↓	1040	↓	↓	↓	↓	↓	↓
SS03	↓	↓	1045	↓	↓	↓	↓	↓	↓ MR

Sample Comments

Incident #:
~~nAPP2232536~~ MR
nAPP2232537823

Cost Center:
1666621001

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

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

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

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3775-1
SDG Number: 03C1558155

Login Number: 3775
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3775-1
SDG Number: 03C1558155

Login Number: 3775
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 01/09/23 08:26 AM

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

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 1/13/2023 12:07:49 PM

JOB DESCRIPTION

PLU 25 Brushy Draw 901H
SDG NUMBER 03C1558155

JOB NUMBER

890-3776-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

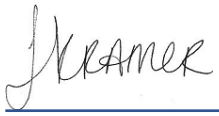
my EOL

Eurofins Carlsbad

Job Notes

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

Authorization



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1/13/2023 12:07:49 PM

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

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Laboratory Job ID: 890-3776-1
SDG: 03C1558155

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3776-1
SDG: 03C1558155

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.
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 25 Brushy Draw 901H

Job ID: 890-3776-1
SDG: 03C1558155

Job ID: 890-3776-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3776-1

Receipt
The sample was received on 1/6/2023 1:17 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.1°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SS06 (890-3776-1).

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: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-43713 and analytical batch 880-43779 recovered outside control limits for the following analytes: Diesel Range Organics (Over C10-C28).

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (MB 880-43713/1-A). Evidence of matrix interferences is not obvious.

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

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

Client Sample Results

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3776-1
SDG: 03C1558155

Client Sample ID: SS06

Date Collected: 01/06/23 10:15
Date Received: 01/06/23 13:17
Sample Depth: 0.5'

Lab Sample ID: 890-3776-1

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		01/10/23 15:19	01/11/23 11:32	1
Toluene	<0.00198	U	0.00198		mg/Kg		01/10/23 15:19	01/11/23 11:32	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		01/10/23 15:19	01/11/23 11:32	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		01/10/23 15:19	01/11/23 11:32	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		01/10/23 15:19	01/11/23 11:32	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		01/10/23 15:19	01/11/23 11:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*	*01/10/23 15:19*	*01/11/23 11:32*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*01/10/23 15:19*	*01/11/23 11:32*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			01/11/23 13:19	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**63.2**		49.9		mg/Kg			01/13/23 12:46	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		01/11/23 09:47	01/12/23 22:59	1
Diesel Range Organics (Over C10-C28)	**63.2**	***1**	49.9		mg/Kg		01/11/23 09:47	01/12/23 22:59	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/11/23 09:47	01/12/23 22:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*01/11/23 09:47*	*01/12/23 22:59*	*1*
o-Terphenyl	*92*		*70 - 130*	*01/11/23 09:47*	*01/12/23 22:59*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**549**		4.99		mg/Kg			01/10/23 15:02	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3776-1
SDG: 03C1558155

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)
890-3776-1	SS06	117	94
890-3776-1 MS	SS06	99	98
890-3776-1 MSD	SS06	91	101
LCS 880-43675/1-A	Lab Control Sample	89	104
LCSD 880-43675/2-A	Lab Control Sample Dup	92	101
MB 880-43675/5-A	Method Blank	86	94

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)
890-3776-1	SS06	94	92
890-3781-A-21-D MS	Matrix Spike	87	82
890-3781-A-21-E MSD	Matrix Spike Duplicate	105	94
LCS 880-43713/2-A	Lab Control Sample	125	108
LCSD 880-43713/3-A	Lab Control Sample Dup	101	85
MB 880-43713/1-A	Method Blank	140 S1+	123

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3776-1
SDG: 03C1558155

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-43675/5-A
Matrix: Solid
Analysis Batch: 43697

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43675

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/10/23 15:19	01/11/23 11:10	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/10/23 15:19	01/11/23 11:10	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/10/23 15:19	01/11/23 11:10	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/10/23 15:19	01/11/23 11:10	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/10/23 15:19	01/11/23 11:10	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/10/23 15:19	01/11/23 11:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*	*01/10/23 15:19*	*01/11/23 11:10*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*01/10/23 15:19*	*01/11/23 11:10*	*1*

Lab Sample ID: LCS 880-43675/1-A
Matrix: Solid
Analysis Batch: 43697

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43675

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1055		mg/Kg		106	70 - 130		
Toluene			0.100	0.1010		mg/Kg		101	70 - 130		
Ethylbenzene			0.100	0.08629		mg/Kg		86	70 - 130		
m-Xylene & p-Xylene			0.200	0.1771		mg/Kg		89	70 - 130		
o-Xylene			0.100	0.1024		mg/Kg		102	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 880-43675/2-A
Matrix: Solid
Analysis Batch: 43697

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 43675

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09843		mg/Kg		98	70 - 130	7	35
Toluene			0.100	0.09734		mg/Kg		97	70 - 130	4	35
Ethylbenzene			0.100	0.08392		mg/Kg		84	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1750		mg/Kg		88	70 - 130	1	35
o-Xylene			0.100	0.09879		mg/Kg		99	70 - 130	4	35

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

Lab Sample ID: 890-3776-1 MS
Matrix: Solid
Analysis Batch: 43697

Client Sample ID: SS06
Prep Type: Total/NA
Prep Batch: 43675

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00198	U	0.0998	0.09320		mg/Kg		93	70 - 130		
Toluene	<0.00198	U	0.0998	0.09451		mg/Kg		95	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3776-1
SDG: 03C1558155

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

Lab Sample ID: 890-3776-1 MS
Matrix: Solid
Analysis Batch: 43697

Client Sample ID: SS06
Prep Type: Total/NA
Prep Batch: 43675

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00198	U	0.0998	0.08225		mg/Kg		82	70 - 130
m-Xylene & p-Xylene	<0.00396	U	0.200	0.1716		mg/Kg		86	70 - 130
o-Xylene	<0.00198	U	0.0998	0.09664		mg/Kg		97	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: 890-3776-1 MSD
Matrix: Solid
Analysis Batch: 43697

Client Sample ID: SS06
Prep Type: Total/NA
Prep Batch: 43675

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00198	U	0.101	0.09630		mg/Kg		96	70 - 130	3	35
Toluene	<0.00198	U	0.101	0.09074		mg/Kg		90	70 - 130	4	35
Ethylbenzene	<0.00198	U	0.101	0.07746		mg/Kg		77	70 - 130	6	35
m-Xylene & p-Xylene	<0.00396	U	0.202	0.1595		mg/Kg		79	70 - 130	7	35
o-Xylene	<0.00198	U	0.101	0.08869		mg/Kg		88	70 - 130	9	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

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

Lab Sample ID: MB 880-43713/1-A
Matrix: Solid
Analysis Batch: 43779

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43713

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/11/23 09:47	01/12/23 19:44	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/11/23 09:47	01/12/23 19:44	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/11/23 09:47	01/12/23 19:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*140*	*S1+*	*70 - 130*	*01/11/23 09:47*	*01/12/23 19:44*	*1*
o-Terphenyl	*123*		*70 - 130*	*01/11/23 09:47*	*01/12/23 19:44*	*1*

Lab Sample ID: LCS 880-43713/2-A
Matrix: Solid
Analysis Batch: 43779

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43713

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1063		mg/Kg		106	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1036		mg/Kg		104	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3776-1
SDG: 03C1558155

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

Lab Sample ID: LCS 880-43713/2-A
Matrix: Solid
Analysis Batch: 43779

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43713

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	125		70 - 130
o-Terphenyl	108		70 - 130

Lab Sample ID: LCSD 880-43713/3-A
Matrix: Solid
Analysis Batch: 43779

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 43713

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	978.4		mg/Kg		98	70 - 130	8	20
Diesel Range Organics (Over C10-C28)			1000	766.4	*1	mg/Kg		77	70 - 130	30	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	101		70 - 130
o-Terphenyl	85		70 - 130

Lab Sample ID: 890-3781-A-21-D MS
Matrix: Solid
Analysis Batch: 43779

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 43713

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	927.5		mg/Kg		89	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U *1	998	862.9		mg/Kg		86	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	87		70 - 130
o-Terphenyl	82		70 - 130

Lab Sample ID: 890-3781-A-21-E MSD
Matrix: Solid
Analysis Batch: 43779

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 43713

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	997	1064		mg/Kg		103	70 - 130	14	20
Diesel Range Organics (Over C10-C28)	<50.0	U *1	997	993.4		mg/Kg		100	70 - 130	14	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	105		70 - 130
o-Terphenyl	94		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3776-1
SDG: 03C1558155

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-43541/1-A
Matrix: Solid
Analysis Batch: 43614

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			01/10/23 12:53	1

Lab Sample ID: LCS 880-43541/2-A
Matrix: Solid
Analysis Batch: 43614

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	249.6		mg/Kg		100	90 - 110		

Lab Sample ID: LCSD 880-43541/3-A
Matrix: Solid
Analysis Batch: 43614

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	249.7		mg/Kg		100	90 - 110	0	20

Lab Sample ID: 890-3774-A-2-C MS
Matrix: Solid
Analysis Batch: 43614

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	550		250	825.5		mg/Kg		110	90 - 110		

Lab Sample ID: 890-3774-A-2-D MSD
Matrix: Solid
Analysis Batch: 43614

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	550		250	799.5		mg/Kg		100	90 - 110	3	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3776-1
SDG: 03C1558155

GC VOA

Prep Batch: 43675

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3776-1	SS06	Total/NA	Solid	5035	
MB 880-43675/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-43675/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-43675/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3776-1 MS	SS06	Total/NA	Solid	5035	
890-3776-1 MSD	SS06	Total/NA	Solid	5035	

Analysis Batch: 43697

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3776-1	SS06	Total/NA	Solid	8021B	43675
MB 880-43675/5-A	Method Blank	Total/NA	Solid	8021B	43675
LCS 880-43675/1-A	Lab Control Sample	Total/NA	Solid	8021B	43675
LCSD 880-43675/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	43675
890-3776-1 MS	SS06	Total/NA	Solid	8021B	43675
890-3776-1 MSD	SS06	Total/NA	Solid	8021B	43675

Analysis Batch: 43741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3776-1	SS06	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 43713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3776-1	SS06	Total/NA	Solid	8015NM Prep	
MB 880-43713/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-43713/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-43713/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3781-A-21-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3781-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 43779

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3776-1	SS06	Total/NA	Solid	8015B NM	43713
MB 880-43713/1-A	Method Blank	Total/NA	Solid	8015B NM	43713
LCS 880-43713/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	43713
LCSD 880-43713/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	43713
890-3781-A-21-D MS	Matrix Spike	Total/NA	Solid	8015B NM	43713
890-3781-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	43713

Analysis Batch: 43892

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3776-1	SS06	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 43541

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3776-1	SS06	Soluble	Solid	DI Leach	
MB 880-43541/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-43541/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-43541/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3776-1
SDG: 03C1558155

HPLC/IC (Continued)

Leach Batch: 43541 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3774-A-2-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3774-A-2-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 43614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3776-1	SS06	Soluble	Solid	300.0	43541
MB 880-43541/1-A	Method Blank	Soluble	Solid	300.0	43541
LCS 880-43541/2-A	Lab Control Sample	Soluble	Solid	300.0	43541
LCSD 880-43541/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	43541
890-3774-A-2-C MS	Matrix Spike	Soluble	Solid	300.0	43541
890-3774-A-2-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	43541

Lab Chronicle

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3776-1
SDG: 03C1558155

Client Sample ID: SS06

Date Collected: 01/06/23 10:15
Date Received: 01/06/23 13:17

Lab Sample ID: 890-3776-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	43675	01/10/23 15:19	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43697	01/11/23 11:32	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43741	01/11/23 13:19	SM	EET MID
Total/NA	Analysis	8015 NM		1			43892	01/13/23 12:46	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	43713	01/11/23 09:47	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43779	01/12/23 22:59	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	43541	01/09/23 12:54	KS	EET MID
Soluble	Analysis	300.0		1			43614	01/10/23 15:02	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 25 Brushy Draw 901H

Job ID: 890-3776-1
SDG: 03C1558155

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3776-1
SDG: 03C1558155

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 25 Brushy Draw 901H

Job ID: 890-3776-1
SDG: 03C1558155

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3776-1	SS06	Solid	01/06/23 10:15	01/06/23 13:17	0.5'

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Chain of Custody

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

Work Order No: _____

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

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 25 Brushy Draw 901H	Turn Around	
Project Number:	03C1558155	☑ Routine ☐ Rush	
Project Location:	32.10185, -103.84166	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:	Tham-007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	4.3
Total Containers:		Corrected Temperature:	4.1

ANALYSIS REQUEST

Preservative Codes

None: NO | DI Water: H_2O
Cool: Cool | MeOH: Me
HCL: HC | HNO_3: HN
H_2SO_4: H_2 | NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: NaSO$_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	BTEX	TPH	Chlorides	Sample Comments
SS06	S	1/6/23	1015	0.5'	G	1		X	X	X	Incident #: nAPP2232537823
										MR	Cost Center: 1666621001

890-3776 Chain of Custody

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		1-6-23 1317	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3776-1
SDG Number: 03C1558155

Login Number: 3776
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3776-1
SDG Number: 03C1558155

Login Number: 3776
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 01/09/23 08:26 AM

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

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 1/13/2023 12:08:19 PM

JOB DESCRIPTION

PLU 25 Brushy Draw 901H
SDG NUMBER 03C1558155

JOB NUMBER

890-3777-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

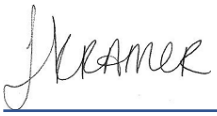
my EOL

Eurofins Carlsbad

Job Notes

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

Authorization



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

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Laboratory Job ID: 890-3777-1
SDG: 03C1558155

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3777-1
SDG: 03C1558155

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
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 25 Brushy Draw 901H

Job ID: 890-3777-1
SDG: 03C1558155

Job ID: 890-3777-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3777-1

Receipt
The sample was received on 1/6/2023 1:17 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.1°C

Receipt Exceptions
The following sample was received and analyzed from an unpreserved bulk soil jar: SS05 (890-3777-1).

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: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-43713 and analytical batch 880-43779 recovered outside control limits for the following analytes: Diesel Range Organics (Over C10-C28).

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (MB 880-43713/1-A). Evidence of matrix interferences is not obvious.

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

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

Client Sample Results

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3777-1
SDG: 03C1558155

Client Sample ID: SS05

Date Collected: 01/06/23 10:10
Date Received: 01/06/23 13:17
Sample Depth: 0.5'

Lab Sample ID: 890-3777-1

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		01/09/23 11:16	01/10/23 21:13	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/09/23 11:16	01/10/23 21:13	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/09/23 11:16	01/10/23 21:13	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/09/23 11:16	01/10/23 21:13	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/09/23 11:16	01/10/23 21:13	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/09/23 11:16	01/10/23 21:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*01/09/23 11:16*	*01/10/23 21:13*	*1*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*	*01/09/23 11:16*	*01/10/23 21:13*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			01/11/23 10:30	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**58.7**		49.9		mg/Kg			01/13/23 12:46	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		01/11/23 09:47	01/12/23 23:21	1
Diesel Range Organics (Over C10-C28)	**58.7**	***1**	49.9		mg/Kg		01/11/23 09:47	01/12/23 23:21	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/11/23 09:47	01/12/23 23:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*01/11/23 09:47*	*01/12/23 23:21*	*1*
o-Terphenyl	*88*		*70 - 130*	*01/11/23 09:47*	*01/12/23 23:21*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**670**		5.01		mg/Kg			01/10/23 15:06	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3777-1
SDG: 03C1558155

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)											
		BFB1	DFBZ1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
880-23405-A-1-A MS	Matrix Spike	112	99										
880-23405-A-1-B MSD	Matrix Spike Duplicate	102	107										
890-3777-1	SS05	112	108										
LCS 880-43514/1-A	Lab Control Sample	104	109										
LCSD 880-43514/2-A	Lab Control Sample Dup	103	106										
MB 880-43514/5-A	Method Blank	100	105										

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)										
890-3777-1	SS05	92	88										
890-3781-A-21-D MS	Matrix Spike	87	82										
890-3781-A-21-E MSD	Matrix Spike Duplicate	105	94										
LCS 880-43713/2-A	Lab Control Sample	125	108										
LCSD 880-43713/3-A	Lab Control Sample Dup	101	85										
MB 880-43713/1-A	Method Blank	140 S1+	123										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3777-1
SDG: 03C1558155

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-43514/5-A
Matrix: Solid
Analysis Batch: 43599

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43514

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/09/23 11:16	01/10/23 12:50	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/09/23 11:16	01/10/23 12:50	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/09/23 11:16	01/10/23 12:50	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/09/23 11:16	01/10/23 12:50	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/09/23 11:16	01/10/23 12:50	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/09/23 11:16	01/10/23 12:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*01/09/23 11:16*	*01/10/23 12:50*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*01/09/23 11:16*	*01/10/23 12:50*	*1*

Lab Sample ID: LCS 880-43514/1-A
Matrix: Solid
Analysis Batch: 43599

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43514

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1049		mg/Kg		105	70 - 130		
Toluene			0.100	0.1007		mg/Kg		101	70 - 130		
Ethylbenzene			0.100	0.09799		mg/Kg		98	70 - 130		
m-Xylene & p-Xylene			0.200	0.2008		mg/Kg		100	70 - 130		
o-Xylene			0.100	0.09693		mg/Kg		97	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: LCSD 880-43514/2-A
Matrix: Solid
Analysis Batch: 43599

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 43514

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1036		mg/Kg		104	70 - 130	1	35
Toluene			0.100	0.09817		mg/Kg		98	70 - 130	3	35
Ethylbenzene			0.100	0.09733		mg/Kg		97	70 - 130	1	35
m-Xylene & p-Xylene			0.200	0.2012		mg/Kg		101	70 - 130	0	35
o-Xylene			0.100	0.09640		mg/Kg		96	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: 880-23405-A-1-A MS
Matrix: Solid
Analysis Batch: 43599

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 43514

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U F1	0.0996	0.06305	F1	mg/Kg		63	70 - 130		
Toluene	<0.00202	U F1	0.0996	0.06776	F1	mg/Kg		68	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3777-1
SDG: 03C1558155

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

Lab Sample ID: 880-23405-A-1-A MS
Matrix: Solid
Analysis Batch: 43599

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 43514

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U	0.0996	0.07235		mg/Kg		73	70 - 130
m-Xylene & p-Xylene	<0.00403	U	0.199	0.1515		mg/Kg		76	70 - 130
o-Xylene	<0.00202	U	0.0996	0.07547		mg/Kg		75	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 880-23405-A-1-B MSD
Matrix: Solid
Analysis Batch: 43599

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 43514

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U F1	0.0990	0.07917		mg/Kg		80	70 - 130	23	35
Toluene	<0.00202	U F1	0.0990	0.07562		mg/Kg		76	70 - 130	11	35
Ethylbenzene	<0.00202	U	0.0990	0.07569		mg/Kg		76	70 - 130	5	35
m-Xylene & p-Xylene	<0.00403	U	0.198	0.1576		mg/Kg		80	70 - 130	4	35
o-Xylene	<0.00202	U	0.0990	0.07736		mg/Kg		78	70 - 130	2	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

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

Lab Sample ID: MB 880-43713/1-A
Matrix: Solid
Analysis Batch: 43779

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43713

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/11/23 09:47	01/12/23 19:44	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/11/23 09:47	01/12/23 19:44	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/11/23 09:47	01/12/23 19:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*140*	*S1+*	*70 - 130*	*01/11/23 09:47*	*01/12/23 19:44*	*1*
o-Terphenyl	*123*		*70 - 130*	*01/11/23 09:47*	*01/12/23 19:44*	*1*

Lab Sample ID: LCS 880-43713/2-A
Matrix: Solid
Analysis Batch: 43779

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43713

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1063		mg/Kg		106	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1036		mg/Kg		104	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3777-1
SDG: 03C1558155

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

Lab Sample ID: LCS 880-43713/2-A
Matrix: Solid
Analysis Batch: 43779

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43713

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	125		70 - 130
o-Terphenyl	108		70 - 130

Lab Sample ID: LCSD 880-43713/3-A
Matrix: Solid
Analysis Batch: 43779

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 43713

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	978.4		mg/Kg		98	70 - 130	8	20
Diesel Range Organics (Over C10-C28)			1000	766.4	*1	mg/Kg		77	70 - 130	30	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	101		70 - 130
o-Terphenyl	85		70 - 130

Lab Sample ID: 890-3781-A-21-D MS
Matrix: Solid
Analysis Batch: 43779

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 43713

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	927.5		mg/Kg		89	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U *1	998	862.9		mg/Kg		86	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	87		70 - 130
o-Terphenyl	82		70 - 130

Lab Sample ID: 890-3781-A-21-E MSD
Matrix: Solid
Analysis Batch: 43779

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 43713

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	997	1064		mg/Kg		103	70 - 130	14	20
Diesel Range Organics (Over C10-C28)	<50.0	U *1	997	993.4		mg/Kg		100	70 - 130	14	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	105		70 - 130
o-Terphenyl	94		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3777-1
SDG: 03C1558155

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-43541/1-A
Matrix: Solid
Analysis Batch: 43614

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			01/10/23 12:53	1

Lab Sample ID: LCS 880-43541/2-A
Matrix: Solid
Analysis Batch: 43614

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	249.6		mg/Kg		100	90 - 110		

Lab Sample ID: LCSD 880-43541/3-A
Matrix: Solid
Analysis Batch: 43614

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	249.7		mg/Kg		100	90 - 110	0	20

Lab Sample ID: 890-3774-A-2-C MS
Matrix: Solid
Analysis Batch: 43614

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	550		250	825.5		mg/Kg		110	90 - 110		

Lab Sample ID: 890-3774-A-2-D MSD
Matrix: Solid
Analysis Batch: 43614

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	550		250	799.5		mg/Kg		100	90 - 110	3	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3777-1
SDG: 03C1558155

GC VOA

Prep Batch: 43514

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3777-1	SS05	Total/NA	Solid	5035	
MB 880-43514/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-43514/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-43514/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-23405-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-23405-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 43599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3777-1	SS05	Total/NA	Solid	8021B	43514
MB 880-43514/5-A	Method Blank	Total/NA	Solid	8021B	43514
LCS 880-43514/1-A	Lab Control Sample	Total/NA	Solid	8021B	43514
LCSD 880-43514/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	43514
880-23405-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	43514
880-23405-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	43514

Analysis Batch: 43728

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3777-1	SS05	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 43713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3777-1	SS05	Total/NA	Solid	8015NM Prep	
MB 880-43713/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-43713/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-43713/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3781-A-21-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3781-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 43779

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3777-1	SS05	Total/NA	Solid	8015B NM	43713
MB 880-43713/1-A	Method Blank	Total/NA	Solid	8015B NM	43713
LCS 880-43713/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	43713
LCSD 880-43713/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	43713
890-3781-A-21-D MS	Matrix Spike	Total/NA	Solid	8015B NM	43713
890-3781-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	43713

Analysis Batch: 43893

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3777-1	SS05	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 43541

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3777-1	SS05	Soluble	Solid	DI Leach	
MB 880-43541/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-43541/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-43541/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3777-1
SDG: 03C1558155

HPLC/IC (Continued)

Leach Batch: 43541 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3774-A-2-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3774-A-2-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 43614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3777-1	SS05	Soluble	Solid	300.0	43541
MB 880-43541/1-A	Method Blank	Soluble	Solid	300.0	43541
LCS 880-43541/2-A	Lab Control Sample	Soluble	Solid	300.0	43541
LCSD 880-43541/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	43541
890-3774-A-2-C MS	Matrix Spike	Soluble	Solid	300.0	43541
890-3774-A-2-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	43541

Lab Chronicle

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3777-1
SDG: 03C1558155

Client Sample ID: SS05

Date Collected: 01/06/23 10:10
Date Received: 01/06/23 13:17

Lab Sample ID: 890-3777-1

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	43514	01/09/23 11:16	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43599	01/10/23 21:13	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43728	01/11/23 10:30	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43893	01/13/23 12:46	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	43713	01/11/23 09:47	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43779	01/12/23 23:21	AJ	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	43541	01/09/23 12:54	KS	EET MID
Soluble	Analysis	300.0		1			43614	01/10/23 15:06	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 25 Brushy Draw 901H

Job ID: 890-3777-1
SDG: 03C1558155

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3777-1
SDG: 03C1558155

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 25 Brushy Draw 901H

Job ID: 890-3777-1
SDG: 03C1558155

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3777-1	SS05	Solid	01/06/23 10:10	01/06/23 13:17	0.5'

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy
Address:	3122 Nat'l Parks Hwy	Address:	3104 E Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	337.257.8307 Email:		tmorrissey@ensolum.com

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 25 Brushy Draw 901H	Turn Around	
Project Number:	03C1558155	☑ Routine ☐ Rush	
Project Location:	32.10185, -103.84166	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:	TAM 007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	4.3
Total Containers:		Corrected Temperature:	4.1

ANALYSIS REQUEST

Preservative Codes

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

890-3777 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: BTEX	TPH	Chlorides	Sample Comments
SS05	S	1/6/23	1010	0.5'	G	1		X	X	X	Incident #: nAPP2232537823
											Cost Center: 166662100I

MC

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]	Amanda Stef	1-6-23 1317			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3777-1
SDG Number: 03C1558155

Login Number: 3777
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3777-1
SDG Number: 03C1558155

Login Number: 3777
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 01/09/23 08:26 AM

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

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 1/13/2023 12:08:50 PM

JOB DESCRIPTION

PLU 25 Brushy Draw 901H
SDG NUMBER 03C1558155

JOB NUMBER

890-3778-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

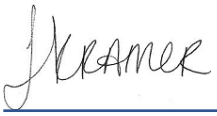
my EOL

Eurofins Carlsbad

Job Notes

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

Authorization



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1/13/2023 12:08:50 PM

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

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Laboratory Job ID: 890-3778-1
SDG: 03C1558155

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3778-1
SDG: 03C1558155

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
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 25 Brushy Draw 901H

Job ID: 890-3778-1
SDG: 03C1558155

Job ID: 890-3778-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3778-1

Receipt
The sample was received on 1/6/2023 1:17 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.1°C

Receipt Exceptions
The following sample was received and analyzed from an unpreserved bulk soil jar: SS04 (890-3778-1).

GC VOA
Method 8021B: Surrogate recovery for the following sample was outside control limits: SS04 (890-3778-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA
Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-43713 and analytical batch 880-43779 recovered outside control limits for the following analytes: Diesel Range Organics (Over C10-C28).

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (MB 880-43713/1-A). Evidence of matrix interferences is not obvious.

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

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

Client Sample Results

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3778-1
SDG: 03C1558155

Client Sample ID: SS04

Date Collected: 01/06/23 10:05
Date Received: 01/06/23 13:17
Sample Depth: 0.5'

Lab Sample ID: 890-3778-1

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		01/10/23 15:19	01/11/23 19:04	1
Toluene	<0.00201	U	0.00201		mg/Kg		01/10/23 15:19	01/11/23 19:04	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		01/10/23 15:19	01/11/23 19:04	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		01/10/23 15:19	01/11/23 19:04	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		01/10/23 15:19	01/11/23 19:04	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		01/10/23 15:19	01/11/23 19:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*77*		*70 - 130*	*01/10/23 15:19*	*01/11/23 19:04*	*1*
1,4-Difluorobenzene (Surr)	*69*	*S1-*	*70 - 130*	*01/10/23 15:19*	*01/11/23 19:04*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			01/12/23 13:07	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			01/13/23 12:46	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		01/11/23 09:47	01/12/23 23:42	1
Diesel Range Organics (Over C10-C28)	<49.9	U *1	49.9		mg/Kg		01/11/23 09:47	01/12/23 23:42	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/11/23 09:47	01/12/23 23:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*108*		*70 - 130*	*01/11/23 09:47*	*01/12/23 23:42*	*1*
o-Terphenyl	*101*		*70 - 130*	*01/11/23 09:47*	*01/12/23 23:42*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**321**		4.97		mg/Kg			01/10/23 15:11	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3778-1
SDG: 03C1558155

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)
890-3776-A-1-C MS	Matrix Spike	99	98
890-3776-A-1-D MSD	Matrix Spike Duplicate	91	101
890-3778-1	SS04	77	69 S1-
LCS 880-43675/1-A	Lab Control Sample	89	104
LCSD 880-43675/2-A	Lab Control Sample Dup	92	101
MB 880-43675/5-A	Method Blank	86	94

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)
890-3778-1	SS04	108	101
890-3781-A-21-D MS	Matrix Spike	87	82
890-3781-A-21-E MSD	Matrix Spike Duplicate	105	94
LCS 880-43713/2-A	Lab Control Sample	125	108
LCSD 880-43713/3-A	Lab Control Sample Dup	101	85
MB 880-43713/1-A	Method Blank	140 S1+	123

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3778-1
SDG: 03C1558155

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-43675/5-A
Matrix: Solid
Analysis Batch: 43697

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43675

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/10/23 15:19	01/11/23 11:10	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/10/23 15:19	01/11/23 11:10	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/10/23 15:19	01/11/23 11:10	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/10/23 15:19	01/11/23 11:10	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/10/23 15:19	01/11/23 11:10	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/10/23 15:19	01/11/23 11:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*	*01/10/23 15:19*	*01/11/23 11:10*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*01/10/23 15:19*	*01/11/23 11:10*	*1*

Lab Sample ID: LCS 880-43675/1-A
Matrix: Solid
Analysis Batch: 43697

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43675

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1055		mg/Kg		106	70 - 130		
Toluene			0.100	0.1010		mg/Kg		101	70 - 130		
Ethylbenzene			0.100	0.08629		mg/Kg		86	70 - 130		
m-Xylene & p-Xylene			0.200	0.1771		mg/Kg		89	70 - 130		
o-Xylene			0.100	0.1024		mg/Kg		102	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 880-43675/2-A
Matrix: Solid
Analysis Batch: 43697

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 43675

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09843		mg/Kg		98	70 - 130	7	35
Toluene			0.100	0.09734		mg/Kg		97	70 - 130	4	35
Ethylbenzene			0.100	0.08392		mg/Kg		84	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1750		mg/Kg		88	70 - 130	1	35
o-Xylene			0.100	0.09879		mg/Kg		99	70 - 130	4	35

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

Lab Sample ID: 890-3776-A-1-C MS
Matrix: Solid
Analysis Batch: 43697

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 43675

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00198	U	0.0998	0.09320		mg/Kg		93	70 - 130		
Toluene	<0.00198	U	0.0998	0.09451		mg/Kg		95	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3778-1
SDG: 03C1558155

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

Lab Sample ID: 890-3776-A-1-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 43697 — **Prep Batch: 43675**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00198	U	0.0998	0.08225		mg/Kg		82	70 - 130
m-Xylene & p-Xylene	<0.00396	U	0.200	0.1716		mg/Kg		86	70 - 130
o-Xylene	<0.00198	U	0.0998	0.09664		mg/Kg		97	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: 890-3776-A-1-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 43697 — **Prep Batch: 43675**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00198	U	0.101	0.09630		mg/Kg		96	70 - 130	3	35
Toluene	<0.00198	U	0.101	0.09074		mg/Kg		90	70 - 130	4	35
Ethylbenzene	<0.00198	U	0.101	0.07746		mg/Kg		77	70 - 130	6	35
m-Xylene & p-Xylene	<0.00396	U	0.202	0.1595		mg/Kg		79	70 - 130	7	35
o-Xylene	<0.00198	U	0.101	0.08869		mg/Kg		88	70 - 130	9	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

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

Lab Sample ID: MB 880-43713/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 43779 — **Prep Batch: 43713**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/11/23 09:47	01/12/23 19:44	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/11/23 09:47	01/12/23 19:44	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/11/23 09:47	01/12/23 19:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*140*	*S1+*	*70 - 130*	*01/11/23 09:47*	*01/12/23 19:44*	*1*
o-Terphenyl	*123*		*70 - 130*	*01/11/23 09:47*	*01/12/23 19:44*	*1*

Lab Sample ID: LCS 880-43713/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 43779 — **Prep Batch: 43713**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1063		mg/Kg		106	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1036		mg/Kg		104	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3778-1
SDG: 03C1558155

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

Lab Sample ID: LCS 880-43713/2-A
Matrix: Solid
Analysis Batch: 43779

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43713

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	125		70 - 130
o-Terphenyl	108		70 - 130

Lab Sample ID: LCSD 880-43713/3-A
Matrix: Solid
Analysis Batch: 43779

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 43713

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	978.4		mg/Kg		98	70 - 130	8	20
Diesel Range Organics (Over C10-C28)			1000	766.4	*1	mg/Kg		77	70 - 130	30	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	101		70 - 130
o-Terphenyl	85		70 - 130

Lab Sample ID: 890-3781-A-21-D MS
Matrix: Solid
Analysis Batch: 43779

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 43713

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	927.5		mg/Kg		89	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U *1	998	862.9		mg/Kg		86	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	87		70 - 130
o-Terphenyl	82		70 - 130

Lab Sample ID: 890-3781-A-21-E MSD
Matrix: Solid
Analysis Batch: 43779

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 43713

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	997	1064		mg/Kg		103	70 - 130	14	20
Diesel Range Organics (Over C10-C28)	<50.0	U *1	997	993.4		mg/Kg		100	70 - 130	14	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	105		70 - 130
o-Terphenyl	94		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3778-1
SDG: 03C1558155

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-43541/1-A
Matrix: Solid
Analysis Batch: 43614

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			01/10/23 12:53	1

Lab Sample ID: LCS 880-43541/2-A
Matrix: Solid
Analysis Batch: 43614

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	249.6		mg/Kg		100	90 - 110		

Lab Sample ID: LCSD 880-43541/3-A
Matrix: Solid
Analysis Batch: 43614

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	249.7		mg/Kg		100	90 - 110	0	20

Lab Sample ID: 890-3774-A-2-C MS
Matrix: Solid
Analysis Batch: 43614

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	550		250	825.5		mg/Kg		110	90 - 110		

Lab Sample ID: 890-3774-A-2-D MSD
Matrix: Solid
Analysis Batch: 43614

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	550		250	799.5		mg/Kg		100	90 - 110	3	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3778-1
SDG: 03C1558155

GC VOA

Prep Batch: 43675

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3778-1	SS04	Total/NA	Solid	5035	
MB 880-43675/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-43675/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-43675/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3776-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-3776-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 43697

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3778-1	SS04	Total/NA	Solid	8021B	43675
MB 880-43675/5-A	Method Blank	Total/NA	Solid	8021B	43675
LCS 880-43675/1-A	Lab Control Sample	Total/NA	Solid	8021B	43675
LCSD 880-43675/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	43675
890-3776-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	43675
890-3776-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	43675

Analysis Batch: 43813

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3778-1	SS04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 43713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3778-1	SS04	Total/NA	Solid	8015NM Prep	
MB 880-43713/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-43713/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-43713/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3781-A-21-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3781-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 43779

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3778-1	SS04	Total/NA	Solid	8015B NM	43713
MB 880-43713/1-A	Method Blank	Total/NA	Solid	8015B NM	43713
LCS 880-43713/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	43713
LCSD 880-43713/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	43713
890-3781-A-21-D MS	Matrix Spike	Total/NA	Solid	8015B NM	43713
890-3781-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	43713

Analysis Batch: 43894

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3778-1	SS04	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 43541

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3778-1	SS04	Soluble	Solid	DI Leach	
MB 880-43541/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-43541/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-43541/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3778-1
SDG: 03C1558155

HPLC/IC (Continued)

Leach Batch: 43541 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3774-A-2-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3774-A-2-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 43614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3778-1	SS04	Soluble	Solid	300.0	43541
MB 880-43541/1-A	Method Blank	Soluble	Solid	300.0	43541
LCS 880-43541/2-A	Lab Control Sample	Soluble	Solid	300.0	43541
LCSD 880-43541/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	43541
890-3774-A-2-C MS	Matrix Spike	Soluble	Solid	300.0	43541
890-3774-A-2-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	43541

Lab Chronicle

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3778-1
SDG: 03C1558155

Client Sample ID: SS04

Date Collected: 01/06/23 10:05
Date Received: 01/06/23 13:17

Lab Sample ID: 890-3778-1

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	43675	01/10/23 15:19	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43697	01/11/23 19:04	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43813	01/12/23 13:07	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43894	01/13/23 12:46	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	43713	01/11/23 09:47	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43779	01/12/23 23:42	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	43541	01/09/23 12:54	KS	EET MID
Soluble	Analysis	300.0		1			43614	01/10/23 15:11	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 25 Brushy Draw 901H

Job ID: 890-3778-1
SDG: 03C1558155

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3778-1
SDG: 03C1558155

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 25 Brushy Draw 901H

Job ID: 890-3778-1
SDG: 03C1558155

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3778-1	SS04	Solid	01/06/23 10:05	01/06/23 13:17	0.5'

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Chain of Custody

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

Work Order No: _____

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

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 25 Brushy Draw 901H	Turn Around	
Project Number:	03C1558155	☑ Routine ☐ Rush	
Project Location:	32.10185, -103.84166	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:	4.3
Total Containers:		Corrected Temperature:	4.1

ANALYSIS REQUEST

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	BTEX	TPH	Chlorides	Sample Comments
SS04	S	1/6/23	1005	0.5'	G	1	X	X	X	Incident #: nAPP2232537823
										Cost Center: 166662100I

890-3778 Chain of Custody

NR

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

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

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

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3778-1
SDG Number: 03C1558155

Login Number: 3778
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3778-1
SDG Number: 03C1558155

Login Number: 3778
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 01/09/23 08:26 AM

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

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 1/13/2023 12:08:49 PM

JOB DESCRIPTION

PLU 25 Brushy Draw 901H
SDG NUMBER 03C1558155

JOB NUMBER

890-3779-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

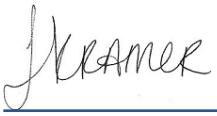
my EOL

Eurofins Carlsbad

Job Notes

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

Authorization



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

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Laboratory Job ID: 890-3779-1
SDG: 03C1558155

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3779-1
SDG: 03C1558155

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
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 25 Brushy Draw 901H

Job ID: 890-3779-1
SDG: 03C1558155

Job ID: 890-3779-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3779-1

Receipt
The sample was received on 1/6/2023 1:17 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.1°C

Receipt Exceptions
The following sample was received and analyzed from an unpreserved bulk soil jar: SS07 (890-3779-1).

GC VOA
Method 8021B: Surrogate recovery for the following sample was outside control limits: SS07 (890-3779-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA
Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-43713 and analytical batch 880-43779 recovered outside control limits for the following analytes: Diesel Range Organics (Over C10-C28).

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (MB 880-43713/1-A). Evidence of matrix interferences is not obvious.

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

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

Client Sample Results

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3779-1
SDG: 03C1558155

Client Sample ID: SS07

Date Collected: 01/06/23 10:20
Date Received: 01/06/23 13:17
Sample Depth: 0.5'

Lab Sample ID: 890-3779-1

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/10/23 10:59	01/13/23 03:25	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/10/23 10:59	01/13/23 03:25	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/10/23 10:59	01/13/23 03:25	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		01/10/23 10:59	01/13/23 03:25	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/10/23 10:59	01/13/23 03:25	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		01/10/23 10:59	01/13/23 03:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*	*01/10/23 10:59*	*01/13/23 03:25*	*1*
1,4-Difluorobenzene (Surr)	*65*	*S1-*	*70 - 130*	*01/10/23 10:59*	*01/13/23 03:25*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			01/13/23 08:07	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**65.4**		50.0		mg/Kg			01/13/23 12:46	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/11/23 09:47	01/13/23 00:04	1
Diesel Range Organics (Over C10-C28)	**65.4**	***1**	50.0		mg/Kg		01/11/23 09:47	01/13/23 00:04	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/11/23 09:47	01/13/23 00:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*01/11/23 09:47*	*01/13/23 00:04*	*1*
o-Terphenyl	*92*		*70 - 130*	*01/11/23 09:47*	*01/13/23 00:04*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**253**		4.98		mg/Kg			01/10/23 15:16	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3779-1
SDG: 03C1558155

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)										
890-3772-A-1-A MS	Matrix Spike	116	89										
890-3772-A-1-B MSD	Matrix Spike Duplicate	123	98										
890-3779-1	SS07	86	65 S1-										
LCS 880-43511/1-A	Lab Control Sample	110	100										
LCSD 880-43511/2-A	Lab Control Sample Dup	93	106										
MB 880-43511/5-A	Method Blank	85	87										
MB 880-43542/5-A	Method Blank	76	84										

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)										
890-3779-1	SS07	96	92										
890-3781-A-21-D MS	Matrix Spike	87	82										
890-3781-A-21-E MSD	Matrix Spike Duplicate	105	94										
LCS 880-43713/2-A	Lab Control Sample	125	108										
LCSD 880-43713/3-A	Lab Control Sample Dup	101	85										
MB 880-43713/1-A	Method Blank	140 S1+	123										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3779-1
SDG: 03C1558155

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-43511/5-A
Matrix: Solid
Analysis Batch: 43785

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43511

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/09/23 10:59	01/12/23 21:55	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/09/23 10:59	01/12/23 21:55	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/09/23 10:59	01/12/23 21:55	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/09/23 10:59	01/12/23 21:55	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/09/23 10:59	01/12/23 21:55	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/09/23 10:59	01/12/23 21:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*	*01/09/23 10:59*	*01/12/23 21:55*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*01/09/23 10:59*	*01/12/23 21:55*	*1*

Lab Sample ID: LCS 880-43511/1-A
Matrix: Solid
Analysis Batch: 43785

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43511

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1002		mg/Kg		100	70 - 130		
Toluene			0.100	0.1035		mg/Kg		103	70 - 130		
Ethylbenzene			0.100	0.09783		mg/Kg		98	70 - 130		
m-Xylene & p-Xylene			0.200	0.2107		mg/Kg		105	70 - 130		
o-Xylene			0.100	0.1169		mg/Kg		117	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 880-43511/2-A
Matrix: Solid
Analysis Batch: 43785

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 43511

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09524		mg/Kg		95	70 - 130	5	35
Toluene			0.100	0.09086		mg/Kg		91	70 - 130	13	35
Ethylbenzene			0.100	0.07835		mg/Kg		78	70 - 130	22	35
m-Xylene & p-Xylene			0.200	0.1642		mg/Kg		82	70 - 130	25	35
o-Xylene			0.100	0.09047		mg/Kg		90	70 - 130	25	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: 890-3772-A-1-A MS
Matrix: Solid
Analysis Batch: 43785

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 43511

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	0.00565		0.0990	0.08747		mg/Kg		83	70 - 130		
Toluene	0.00255		0.0990	0.08936		mg/Kg		88	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3779-1
SDG: 03C1558155

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

Lab Sample ID: 890-3772-A-1-A MS
Matrix: Solid
Analysis Batch: 43785

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 43511

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U	0.0990	0.07712		mg/Kg		76	70 - 130
m-Xylene & p-Xylene	0.00520		0.198	0.1746		mg/Kg		86	70 - 130
o-Xylene	0.00475		0.0990	0.1009		mg/Kg		97	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*

Lab Sample ID: 890-3772-A-1-B MSD
Matrix: Solid
Analysis Batch: 43785

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 43511

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.00565		0.0998	0.09758		mg/Kg		92	70 - 130	11	35
Toluene	0.00255		0.0998	0.09709		mg/Kg		95	70 - 130	8	35
Ethylbenzene	<0.00202	U	0.0998	0.08848		mg/Kg		87	70 - 130	14	35
m-Xylene & p-Xylene	0.00520		0.200	0.1972		mg/Kg		96	70 - 130	12	35
o-Xylene	0.00475		0.0998	0.1134		mg/Kg		109	70 - 130	12	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: MB 880-43542/5-A
Matrix: Solid
Analysis Batch: 43785

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43542

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/09/23 12:55	01/12/23 11:20	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/09/23 12:55	01/12/23 11:20	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/09/23 12:55	01/12/23 11:20	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/09/23 12:55	01/12/23 11:20	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/09/23 12:55	01/12/23 11:20	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/09/23 12:55	01/12/23 11:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*76*		*70 - 130*	*01/09/23 12:55*	*01/12/23 11:20*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*01/09/23 12:55*	*01/12/23 11:20*	*1*

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

Lab Sample ID: MB 880-43713/1-A
Matrix: Solid
Analysis Batch: 43779

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43713

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/11/23 09:47	01/12/23 19:44	1

QC Sample Results

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3779-1
SDG: 03C1558155

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

Lab Sample ID: MB 880-43713/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 43779 — **Prep Batch: 43713**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/11/23 09:47	01/12/23 19:44	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/11/23 09:47	01/12/23 19:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*140*	*S1+*	*70 - 130*	*01/11/23 09:47*	*01/12/23 19:44*	*1*
o-Terphenyl	*123*		*70 - 130*	*01/11/23 09:47*	*01/12/23 19:44*	*1*

Lab Sample ID: LCS 880-43713/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 43779 — **Prep Batch: 43713**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1063		mg/Kg		106	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1036		mg/Kg		104	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*125*		*70 - 130*
o-Terphenyl	*108*		*70 - 130*

Lab Sample ID: LCSD 880-43713/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 43779 — **Prep Batch: 43713**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	978.4		mg/Kg		98	70 - 130	8	20
Diesel Range Organics (Over C10-C28)			1000	766.4	*1	mg/Kg		77	70 - 130	30	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*101*		*70 - 130*
o-Terphenyl	*85*		*70 - 130*

Lab Sample ID: 890-3781-A-21-D MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 43779 — **Prep Batch: 43713**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	927.5		mg/Kg		89	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U *1	998	862.9		mg/Kg		86	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*87*		*70 - 130*
o-Terphenyl	*82*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3779-1
SDG: 03C1558155

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

Lab Sample ID: 890-3781-A-21-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 43779 — **Prep Batch: 43713**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	997	1064		mg/Kg		103	70 - 130	14	20
Diesel Range Organics (Over C10-C28)	<50.0	U *1	997	993.4		mg/Kg		100	70 - 130	14	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*105*		*70 - 130*
o-Terphenyl	*94*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-43541/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 43614

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			01/10/23 12:53	1

Lab Sample ID: LCS 880-43541/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 43614

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	249.6		mg/Kg		100	90 - 110		

Lab Sample ID: LCSD 880-43541/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 43614

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	249.7		mg/Kg		100	90 - 110	0	20

Lab Sample ID: 890-3774-A-2-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 43614

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	550		250	825.5		mg/Kg		110	90 - 110		

Lab Sample ID: 890-3774-A-2-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 43614

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	550		250	799.5		mg/Kg		100	90 - 110	3	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3779-1
SDG: 03C1558155

GC VOA

Prep Batch: 43511

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3779-1	SS07	Total/NA	Solid	5035	
MB 880-43511/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-43511/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-43511/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3772-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
890-3772-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 43542

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-43542/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 43785

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3779-1	SS07	Total/NA	Solid	8021B	43511
MB 880-43511/5-A	Method Blank	Total/NA	Solid	8021B	43511
MB 880-43542/5-A	Method Blank	Total/NA	Solid	8021B	43542
LCS 880-43511/1-A	Lab Control Sample	Total/NA	Solid	8021B	43511
LCSD 880-43511/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	43511
890-3772-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	43511
890-3772-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	43511

Analysis Batch: 43864

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3779-1	SS07	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 43713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3779-1	SS07	Total/NA	Solid	8015NM Prep	
MB 880-43713/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-43713/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-43713/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3781-A-21-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3781-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 43779

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3779-1	SS07	Total/NA	Solid	8015B NM	43713
MB 880-43713/1-A	Method Blank	Total/NA	Solid	8015B NM	43713
LCS 880-43713/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	43713
LCSD 880-43713/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	43713
890-3781-A-21-D MS	Matrix Spike	Total/NA	Solid	8015B NM	43713
890-3781-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	43713

Analysis Batch: 43895

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3779-1	SS07	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3779-1
SDG: 03C1558155

HPLC/IC

Leach Batch: 43541

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3779-1	SS07	Soluble	Solid	DI Leach	
MB 880-43541/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-43541/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-43541/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3774-A-2-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3774-A-2-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 43614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3779-1	SS07	Soluble	Solid	300.0	43541
MB 880-43541/1-A	Method Blank	Soluble	Solid	300.0	43541
LCS 880-43541/2-A	Lab Control Sample	Soluble	Solid	300.0	43541
LCSD 880-43541/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	43541
890-3774-A-2-C MS	Matrix Spike	Soluble	Solid	300.0	43541
890-3774-A-2-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	43541

Lab Chronicle

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3779-1
SDG: 03C1558155

Client Sample ID: SS07

Date Collected: 01/06/23 10:20
Date Received: 01/06/23 13:17

Lab Sample ID: 890-3779-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	43511	01/10/23 10:59	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43785	01/13/23 03:25	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43864	01/13/23 08:07	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43895	01/13/23 12:46	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	43713	01/11/23 09:47	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43779	01/13/23 00:04	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	43541	01/09/23 12:54	KS	EET MID
Soluble	Analysis	300.0		1			43614	01/10/23 15:16	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 25 Brushy Draw 901H

Job ID: 890-3779-1
SDG: 03C1558155

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 25 Brushy Draw 901H

Job ID: 890-3779-1
SDG: 03C1558155

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 25 Brushy Draw 901H

Job ID: 890-3779-1
SDG: 03C1558155

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3779-1	SS07	Solid	01/06/23 10:20	01/06/23 13:17	0.5'

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy
Address:	3122 Nat'l Parks Hwy	Address:	3122 Nat'l Parks Hwy
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	337.257.8307	Email:	tmorrissey@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 25 Brushy Draw 9H	Turn Around	☑ Routine ☐ Rush
Project Number:	03C1558155	Due Date:	
Project Location:	32.10185, -103.84166	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:	Thm 007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	4.3
Total Containers:		Corrected Temperature:	4.1

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	Parameters: BTEX	TPH	Chlorides
SS07	S	1/6/23	1020	0.5'	G	1	X	X	X

MR

890-3779 Chain of Custody

Sample Comments

Incident #:
nAPP2232557823

Cost Center:
1666621001

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	Meredith Roberts	Ramona Stut	1-6-23 13	2		
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3779-1
SDG Number: 03C1558155

Login Number: 3779
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3779-1
SDG Number: 03C1558155

Login Number: 3779
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 01/09/23 08:26 AM

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

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 1/30/2023 9:49:24 AM

JOB DESCRIPTION

PLU 25 BRUSHY DRAW 901H
SDG NUMBER 03C1558155

JOB NUMBER

890-3865-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

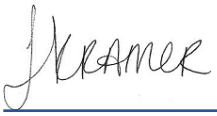
my EOL

Eurofins Carlsbad

Job Notes

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

Authorization



Generated
1/30/2023 9:49:24 AM

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

Client: Ensolum
Project/Site: PLU 25 BRUSHY DRAW 901H

Laboratory Job ID: 890-3865-1
SDG: 03C1558155

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 25 BRUSHY DRAW 901H

Job ID: 890-3865-1
SDG: 03C1558155

Qualifiers

GC VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

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

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 25 BRUSHY DRAW 901H

Job ID: 890-3865-1
SDG: 03C1558155

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Ensolum
Project/Site: PLU 25 BRUSHY DRAW 901H

Job ID: 890-3865-1
SDG: 03C1558155

Job ID: 890-3865-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3865-1

Receipt
The samples were received on 1/16/2023 8:46 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.2°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: FS01 (890-3865-1), FS02 (890-3865-2), FS03 (890-3865-3), FS04 (890-3865-4), FS05 (890-3865-5), FS06 (890-3865-6), FS07 (890-3865-7), SW01 (890-3865-8) and SW02 (890-3865-9).

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: (LCS 880-44333/1-A) and (LCSD 880-44333/2-A). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: SW02 (890-3865-9). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-44333 and analytical batch 880-44315 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike (MS) was within acceptance limits and may be used to evaluate matrix performance.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-44333 and analytical batch 880-44315 was outside control limits. Sample matrix interference and/or non-homogeneity is suspected.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-44342 and analytical batch 880-44418 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-44318 and analytical batch 880-44899 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: FS04 (890-3865-4), FS05 (890-3865-5), (LCS 880-44318/2-A), (MB 880-44318/1-A), (880-23716-A-1-E), (880-23716-A-1-F MS) and (880-23716-A-1-G MSD). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (890-3867-A-1-E MS) and (890-3867-A-1-F MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: FS06 (890-3865-6), FS07 (890-3865-7) and SW01 (890-3865-8). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-44245 and 880-44245 and analytical batch 880-44498 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

Case Narrative

Client: Ensolum
Project/Site: PLU 25 BRUSHY DRAW 901H

Job ID: 890-3865-1
SDG: 03C1558155

Job ID: 890-3865-1 (Continued)

Laboratory: Eurofins Carlsbad (Continued)

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 25 BRUSHY DRAW 901H

Job ID: 890-3865-1
SDG: 03C1558155

Client Sample ID: FS01

Lab Sample ID: 890-3865-1
Matrix: Solid
Date Collected: 01/13/23 13:35
Date Received: 01/16/23 08:46
Sample Depth: 2

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U F2 F1 *-	0.00200		mg/Kg		01/19/23 12:58	01/19/23 22:14	1
Toluene	<0.00200	U F2 F1	0.00200		mg/Kg		01/19/23 12:58	01/19/23 22:14	1
Ethylbenzene	<0.00200	U F2 F1	0.00200		mg/Kg		01/19/23 12:58	01/19/23 22:14	1
m-Xylene & p-Xylene	<0.00401	U *+ F2 F1	0.00401		mg/Kg		01/19/23 12:58	01/19/23 22:14	1
o-Xylene	<0.00200	U *+ F2 F1	0.00200		mg/Kg		01/19/23 12:58	01/19/23 22:14	1
Xylenes, Total	<0.00401	U *+ F2 F1	0.00401		mg/Kg		01/19/23 12:58	01/19/23 22:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*	*01/19/23 12:58*	*01/19/23 22:14*	*1*
1,4-Difluorobenzene (Surr)	*80*		*70 - 130*	*01/19/23 12:58*	*01/19/23 22:14*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			01/20/23 14:02	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**150**		49.9		mg/Kg			01/30/23 09:56	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		01/19/23 10:32	01/28/23 09:59	1
Diesel Range Organics (Over C10-C28)	**150**		49.9		mg/Kg		01/19/23 10:32	01/28/23 09:59	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/19/23 10:32	01/28/23 09:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*01/19/23 10:32*	*01/28/23 09:59*	*1*
o-Terphenyl	*97*		*70 - 130*	*01/19/23 10:32*	*01/28/23 09:59*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2140**	**F1**	25.3		mg/Kg			01/20/23 17:49	5

Client Sample ID: FS02

Lab Sample ID: 890-3865-2
Matrix: Solid
Date Collected: 01/13/23 13:40
Date Received: 01/16/23 08:46
Sample Depth: 2

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		01/19/23 13:17	01/21/23 18:45	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/19/23 13:17	01/21/23 18:45	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/19/23 13:17	01/21/23 18:45	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/19/23 13:17	01/21/23 18:45	1
o-Xylene	**0.00514**		0.00199		mg/Kg		01/19/23 13:17	01/21/23 18:45	1
Xylenes, Total	**0.00514**		0.00398		mg/Kg		01/19/23 13:17	01/21/23 18:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*	*01/19/23 13:17*	*01/21/23 18:45*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: PLU 25 BRUSHY DRAW 901H

Job ID: 890-3865-1
SDG: 03C1558155

Client Sample ID: FS02

Lab Sample ID: 890-3865-2
Matrix: Solid
Date Collected: 01/13/23 13:40
Date Received: 01/16/23 08:46
Sample Depth: 2

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*121*		*70 - 130*	*01/19/23 13:17*	*01/21/23 18:45*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.00514**		0.00398	mg/Kg			01/23/23 12:52	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**266**		50.0	mg/Kg			01/30/23 09:56	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/19/23 10:32	01/28/23 10:20	1
Diesel Range Organics (Over C10-C28)	**214**		50.0	mg/Kg		01/19/23 10:32	01/28/23 10:20	1
Oil Range Organics (Over C28-C36)	**51.6**		50.0	mg/Kg		01/19/23 10:32	01/28/23 10:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*98*		*70 - 130*	*01/19/23 10:32*	*01/28/23 10:20*	*1*
o-Terphenyl	*109*		*70 - 130*	*01/19/23 10:32*	*01/28/23 10:20*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1390**		24.9	mg/Kg			01/20/23 18:06	5

Client Sample ID: FS03

Lab Sample ID: 890-3865-3
Matrix: Solid
Date Collected: 01/13/23 13:45
Date Received: 01/16/23 08:46
Sample Depth: 2

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *-	0.00199	mg/Kg		01/19/23 12:58	01/19/23 22:55	1
Toluene	**0.00256**		0.00199	mg/Kg		01/19/23 12:58	01/19/23 22:55	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/19/23 12:58	01/19/23 22:55	1
m-Xylene & p-Xylene	<0.00398	U *+	0.00398	mg/Kg		01/19/23 12:58	01/19/23 22:55	1
o-Xylene	<0.00199	U *+	0.00199	mg/Kg		01/19/23 12:58	01/19/23 22:55	1
Xylenes, Total	<0.00398	U *+	0.00398	mg/Kg		01/19/23 12:58	01/19/23 22:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*01/19/23 12:58*	*01/19/23 22:55*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*01/19/23 12:58*	*01/19/23 22:55*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			01/20/23 14:02	1

Client Sample Results

Client: Ensolum
Project/Site: PLU 25 BRUSHY DRAW 901H

Job ID: 890-3865-1
SDG: 03C1558155

Client Sample ID: FS03

Lab Sample ID: 890-3865-3
Matrix: Solid
Date Collected: 01/13/23 13:45
Date Received: 01/16/23 08:46
Sample Depth: 2

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**64.1**		49.9		mg/Kg			01/30/23 09:56	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		01/19/23 10:32	01/28/23 10:44	1
Diesel Range Organics (Over C10-C28)	**64.1**		49.9		mg/Kg		01/19/23 10:32	01/28/23 10:44	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/19/23 10:32	01/28/23 10:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*70*		*70 - 130*	*01/19/23 10:32*	*01/28/23 10:44*	*1*
o-Terphenyl	*72*		*70 - 130*	*01/19/23 10:32*	*01/28/23 10:44*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4110**		25.0		mg/Kg			01/20/23 18:12	5

Client Sample ID: FS04

Lab Sample ID: 890-3865-4
Matrix: Solid
Date Collected: 01/13/23 13:50
Date Received: 01/16/23 08:46
Sample Depth: 2

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *-	0.00200		mg/Kg		01/19/23 12:58	01/19/23 23:15	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/19/23 12:58	01/19/23 23:15	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/19/23 12:58	01/19/23 23:15	1
m-Xylene & p-Xylene	<0.00399	U *+	0.00399		mg/Kg		01/19/23 12:58	01/19/23 23:15	1
o-Xylene	<0.00200	U *+	0.00200		mg/Kg		01/19/23 12:58	01/19/23 23:15	1
Xylenes, Total	<0.00399	U *+	0.00399		mg/Kg		01/19/23 12:58	01/19/23 23:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*01/19/23 12:58*	*01/19/23 23:15*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*01/19/23 12:58*	*01/19/23 23:15*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			01/20/23 14:02	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**72.7**		49.9		mg/Kg			01/30/23 09:56	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		01/19/23 10:32	01/28/23 11:08	1
Diesel Range Organics (Over C10-C28)	**72.7**		49.9		mg/Kg		01/19/23 10:32	01/28/23 11:08	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/19/23 10:32	01/28/23 11:08	1

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Client Sample Results

Client: Ensolum
Project/Site: PLU 25 BRUSHY DRAW 901H

Job ID: 890-3865-1
SDG: 03C1558155

Client Sample ID: FS04

Lab Sample ID: 890-3865-4
Matrix: Solid
Date Collected: 01/13/23 13:50
Date Received: 01/16/23 08:46
Sample Depth: 2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*45*	*S1-*	*70 - 130*	*01/19/23 10:32*	*01/28/23 11:08*	*1*
o-Terphenyl	*43*	*S1-*	*70 - 130*	*01/19/23 10:32*	*01/28/23 11:08*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3810**		24.9	mg/Kg			01/20/23 18:18	5

Client Sample ID: FS05

Lab Sample ID: 890-3865-5
Matrix: Solid
Date Collected: 01/13/23 13:55
Date Received: 01/16/23 08:46
Sample Depth: 2

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U *-	0.00201	mg/Kg		01/19/23 12:58	01/19/23 23:36	1
Toluene	<0.00201	U	0.00201	mg/Kg		01/19/23 12:58	01/19/23 23:36	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		01/19/23 12:58	01/19/23 23:36	1
m-Xylene & p-Xylene	<0.00402	U *+	0.00402	mg/Kg		01/19/23 12:58	01/19/23 23:36	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/19/23 16:39	01/20/23 15:37	1
Xylenes, Total	<0.00402	U *+	0.00402	mg/Kg		01/19/23 12:58	01/19/23 23:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*01/19/23 12:58*	*01/19/23 23:36*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*01/19/23 12:58*	*01/19/23 23:36*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			01/20/23 14:02	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**97.2**		50.0	mg/Kg			01/30/23 09:56	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/19/23 10:32	01/28/23 11:32	1
Diesel Range Organics (Over C10-C28)	**97.2**		50.0	mg/Kg		01/19/23 10:32	01/28/23 11:32	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/19/23 10:32	01/28/23 11:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*39*	*S1-*	*70 - 130*	*01/19/23 10:32*	*01/28/23 11:32*	*1*
o-Terphenyl	*36*	*S1-*	*70 - 130*	*01/19/23 10:32*	*01/28/23 11:32*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3810**		24.8	mg/Kg			01/20/23 18:24	5

Client Sample Results

Client: Ensolum
Project/Site: PLU 25 BRUSHY DRAW 901H

Job ID: 890-3865-1
SDG: 03C1558155

Client Sample ID: FS06

Lab Sample ID: 890-3865-6
Matrix: Solid
Date Collected: 01/13/23 14:00
Date Received: 01/16/23 08:46
Sample Depth: 2

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U *-	0.00202		mg/Kg		01/19/23 12:58	01/19/23 23:56	1
Toluene	<0.00202	U	0.00202		mg/Kg		01/19/23 12:58	01/19/23 23:56	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		01/19/23 12:58	01/19/23 23:56	1
m-Xylene & p-Xylene	<0.00404	U *+	0.00404		mg/Kg		01/19/23 12:58	01/19/23 23:56	1
o-Xylene	<0.00202	U *+	0.00202		mg/Kg		01/19/23 12:58	01/19/23 23:56	1
Xylenes, Total	<0.00404	U *+	0.00404		mg/Kg		01/19/23 12:58	01/19/23 23:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*01/19/23 12:58*	*01/19/23 23:56*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*01/19/23 12:58*	*01/19/23 23:56*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			01/20/23 14:02	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**118**		50.0		mg/Kg			01/30/23 10:23	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/19/23 10:36	01/28/23 21:03	1
Diesel Range Organics (Over C10-C28)	**118**		50.0		mg/Kg		01/19/23 10:36	01/28/23 21:03	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/19/23 10:36	01/28/23 21:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*53*	*S1-*	*70 - 130*	*01/19/23 10:36*	*01/28/23 21:03*	*1*
o-Terphenyl	*48*	*S1-*	*70 - 130*	*01/19/23 10:36*	*01/28/23 21:03*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2380**		24.8		mg/Kg			01/20/23 18:41	5

Client Sample ID: FS07

Lab Sample ID: 890-3865-7
Matrix: Solid
Date Collected: 01/13/23 14:05
Date Received: 01/16/23 08:46
Sample Depth: 2

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *-	0.00199		mg/Kg		01/19/23 12:58	01/20/23 00:17	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/19/23 12:58	01/20/23 00:17	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/19/23 12:58	01/20/23 00:17	1
m-Xylene & p-Xylene	<0.00398	U *+	0.00398		mg/Kg		01/19/23 12:58	01/20/23 00:17	1
o-Xylene	<0.00199	U *+	0.00199		mg/Kg		01/19/23 12:58	01/20/23 00:17	1
Xylenes, Total	<0.00398	U *+	0.00398		mg/Kg		01/19/23 12:58	01/20/23 00:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*01/19/23 12:58*	*01/20/23 00:17*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 25 BRUSHY DRAW 901H

Job ID: 890-3865-1
SDG: 03C1558155

Client Sample ID: FS07

Lab Sample ID: 890-3865-7
Matrix: Solid
Date Collected: 01/13/23 14:05
Date Received: 01/16/23 08:46
Sample Depth: 2

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*01/19/23 12:58*	*01/20/23 00:17*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			01/20/23 14:02	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**191**		49.9	mg/Kg			01/30/23 10:23	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		01/19/23 10:36	01/28/23 21:30	1
Diesel Range Organics (Over C10-C28)	**191**		49.9	mg/Kg		01/19/23 10:36	01/28/23 21:30	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/19/23 10:36	01/28/23 21:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*68*	*S1-*	*70 - 130*	*01/19/23 10:36*	*01/28/23 21:30*	*1*
o-Terphenyl	*61*	*S1-*	*70 - 130*	*01/19/23 10:36*	*01/28/23 21:30*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1960**		25.1	mg/Kg			01/20/23 18:47	5

Client Sample ID: SW01

Lab Sample ID: 890-3865-8
Matrix: Solid
Date Collected: 01/13/23 13:25
Date Received: 01/16/23 08:46
Sample Depth: 0 - 2

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *-	0.00199	mg/Kg		01/19/23 12:58	01/20/23 00:37	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/19/23 12:58	01/20/23 00:37	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/19/23 12:58	01/20/23 00:37	1
m-Xylene & p-Xylene	<0.00398	U *+	0.00398	mg/Kg		01/19/23 12:58	01/20/23 00:37	1
o-Xylene	<0.00199	U *+	0.00199	mg/Kg		01/19/23 12:58	01/20/23 00:37	1
Xylenes, Total	<0.00398	U *+	0.00398	mg/Kg		01/19/23 12:58	01/20/23 00:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*01/19/23 12:58*	*01/20/23 00:37*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*01/19/23 12:58*	*01/20/23 00:37*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			01/20/23 14:02	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**119**		49.9	mg/Kg			01/30/23 10:23	1

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Client Sample Results

Client: Ensolum
Project/Site: PLU 25 BRUSHY DRAW 901H

Job ID: 890-3865-1
SDG: 03C1558155

Client Sample ID: SW01

Lab Sample ID: 890-3865-8
Matrix: Solid
Date Collected: 01/13/23 13:25
Date Received: 01/16/23 08:46
Sample Depth: 0 - 2

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		01/19/23 10:36	01/28/23 21:55	1
Diesel Range Organics (Over C10-C28)	**119**		49.9		mg/Kg		01/19/23 10:36	01/28/23 21:55	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/19/23 10:36	01/28/23 21:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*72*		*70 - 130*	*01/19/23 10:36*	*01/28/23 21:55*	*1*
o-Terphenyl	*64*	*S1-*	*70 - 130*	*01/19/23 10:36*	*01/28/23 21:55*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1200**		25.2		mg/Kg			01/20/23 18:53	5

Client Sample ID: SW02

Lab Sample ID: 890-3865-9
Matrix: Solid
Date Collected: 01/13/23 13:30
Date Received: 01/16/23 08:46
Sample Depth: 0 - 2

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *-	0.00200		mg/Kg		01/19/23 12:58	01/20/23 00:57	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/19/23 12:58	01/20/23 00:57	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/19/23 12:58	01/20/23 00:57	1
m-Xylene & p-Xylene	<0.00399	U *+	0.00399		mg/Kg		01/19/23 12:58	01/20/23 00:57	1
o-Xylene	<0.00200	U *+	0.00200		mg/Kg		01/19/23 12:58	01/20/23 00:57	1
Xylenes, Total	<0.00399	U *+	0.00399		mg/Kg		01/19/23 12:58	01/20/23 00:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*01/19/23 12:58*	*01/20/23 00:57*	*1*
1,4-Difluorobenzene (Surr)	*67*	*S1-*	*70 - 130*	*01/19/23 12:58*	*01/20/23 00:57*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			01/20/23 14:02	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**101**		50.0		mg/Kg			01/30/23 10:23	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/19/23 10:36	01/28/23 22:17	1
Diesel Range Organics (Over C10-C28)	**101**		50.0		mg/Kg		01/19/23 10:36	01/28/23 22:17	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/19/23 10:36	01/28/23 22:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*01/19/23 10:36*	*01/28/23 22:17*	*1*
o-Terphenyl	*93*		*70 - 130*	*01/19/23 10:36*	*01/28/23 22:17*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 25 BRUSHY DRAW 901H

Job ID: 890-3865-1
SDG: 03C1558155

Client Sample ID: SW02
Date Collected: 01/13/23 13:30
Date Received: 01/16/23 08:46
Sample Depth: 0 - 2

Lab Sample ID: 890-3865-9
Matrix: Solid

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3580		25.0		mg/Kg			01/20/23 18:59	5

Surrogate Summary

Client: Ensolum
Project/Site: PLU 25 BRUSHY DRAW 901H

Job ID: 890-3865-1
SDG: 03C1558155

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-23720-A-61-G MS	Matrix Spike	98	113
880-23720-A-61-H MSD	Matrix Spike Duplicate	101	112
880-23936-A-1-A MS	Matrix Spike	97	114
880-23936-A-1-B MSD	Matrix Spike Duplicate	95	114
890-3865-1	FS01	120	80
890-3865-1 MS	FS01	120	99
890-3865-1 MSD	FS01	122	90
890-3865-2	FS02	91	121
890-3865-3	FS03	105	91
890-3865-4	FS04	111	102
890-3865-5	FS05	109	96
890-3865-6	FS06	110	101
890-3865-7	FS07	108	98
890-3865-8	SW01	100	90
890-3865-9	SW02	94	67 S1-
LCS 880-44333/1-A	Lab Control Sample	137 S1+	93
LCS 880-44342/1-A	Lab Control Sample	96	114
LCS 880-44393/1-A	Lab Control Sample	97	113
LCSD 880-44333/2-A	Lab Control Sample Dup	165 S1+	110
LCSD 880-44342/2-A	Lab Control Sample Dup	96	115
LCSD 880-44393/2-A	Lab Control Sample Dup	92	111
MB 880-44233/5-A	Method Blank	86	89
MB 880-44333/5-A	Method Blank	87	86
MB 880-44340/5-A	Method Blank	97	112
MB 880-44342/5-A	Method Blank	95	111
MB 880-44393/5-A	Method Blank	95	110

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-23716-A-1-F MS	Matrix Spike	20 S1-	12 S1-
880-23716-A-1-G MSD	Matrix Spike Duplicate	59 S1-	55 S1-
890-3865-1	FS01	92	97
890-3865-2	FS02	98	109
890-3865-3	FS03	70	72
890-3865-4	FS04	45 S1-	43 S1-
890-3865-5	FS05	39 S1-	36 S1-
890-3865-6	FS06	53 S1-	48 S1-
890-3865-7	FS07	68 S1-	61 S1-
890-3865-8	SW01	72	64 S1-
890-3865-9	SW02	96	93
890-3867-A-1-E MS	Matrix Spike	81	69 S1-
890-3867-A-1-F MSD	Matrix Spike Duplicate	79	67 S1-

Surrogate Summary

Client: Ensolum Job ID: 890-3865-1
Project/Site: PLU 25 BRUSHY DRAW 901H SDG: 03C1558155

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

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

		Percent Surrogate Recovery (Acceptance Limits)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
LCS 880-44318/2-A	Lab Control Sample	124	133 S1+										
LCS 880-44319/2-A	Lab Control Sample	108	109										
LCSD 880-44318/3-A	Lab Control Sample Dup	106	114										
LCSD 880-44319/3-A	Lab Control Sample Dup	105	106										
MB 880-44318/1-A	Method Blank	163 S1+	180 S1+										
MB 880-44319/1-A	Method Blank	112	113										

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 25 BRUSHY DRAW 901H

Job ID: 890-3865-1
SDG: 03C1558155

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-44233/5-A
Matrix: Solid
Analysis Batch: 44315

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 44233

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/18/23 10:19	01/19/23 11:18	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/18/23 10:19	01/19/23 11:18	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/18/23 10:19	01/19/23 11:18	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/18/23 10:19	01/19/23 11:18	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/18/23 10:19	01/19/23 11:18	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/18/23 10:19	01/19/23 11:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*	*01/18/23 10:19*	*01/19/23 11:18*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*01/18/23 10:19*	*01/19/23 11:18*	*1*

Lab Sample ID: MB 880-44333/5-A
Matrix: Solid
Analysis Batch: 44315

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 44333

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/19/23 12:58	01/19/23 21:53	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/19/23 12:58	01/19/23 21:53	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/19/23 12:58	01/19/23 21:53	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/19/23 12:58	01/19/23 21:53	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/19/23 12:58	01/19/23 21:53	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/19/23 12:58	01/19/23 21:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*	*01/19/23 12:58*	*01/19/23 21:53*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*01/19/23 12:58*	*01/19/23 21:53*	*1*

Lab Sample ID: LCS 880-44333/1-A
Matrix: Solid
Analysis Batch: 44315

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 44333

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.06882	*-	mg/Kg		69	70 - 130		
Toluene			0.100	0.09131		mg/Kg		91	70 - 130		
Ethylbenzene			0.100	0.09719		mg/Kg		97	70 - 130		
m-Xylene & p-Xylene			0.200	0.2212		mg/Kg		111	70 - 130		
o-Xylene			0.100	0.1242		mg/Kg		124	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*137*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

Lab Sample ID: LCSD 880-44333/2-A
Matrix: Solid
Analysis Batch: 44315

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 44333

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08647		mg/Kg		86	70 - 130	23	35

QC Sample Results

Client: Ensolum
Project/Site: PLU 25 BRUSHY DRAW 901H

Job ID: 890-3865-1
SDG: 03C1558155

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

Lab Sample ID: LCSD 880-44333/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 44315 — **Prep Batch: 44333**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.1174		mg/Kg		117	70 - 130	25	35
Ethylbenzene			0.100	0.1280		mg/Kg		128	70 - 130	27	35
m-Xylene & p-Xylene			0.200	0.2911	*+	mg/Kg		146	70 - 130	27	35
o-Xylene			0.100	0.1638	*+	mg/Kg		164	70 - 130	28	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*165*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

Lab Sample ID: 890-3865-1 MS — **Client Sample ID: FS01**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 44315 — **Prep Batch: 44333**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U F2 F1 *-	0.0998	0.07474		mg/Kg		75	70 - 130
Toluene	<0.00200	U F2 F1	0.0998	0.07789		mg/Kg		78	70 - 130
Ethylbenzene	<0.00200	U F2 F1	0.0998	0.07101		mg/Kg		71	70 - 130
m-Xylene & p-Xylene	<0.00401	U *+ F2 F1	0.200	0.1430		mg/Kg		72	70 - 130
o-Xylene	<0.00200	U *+ F2 F1	0.0998	0.08377		mg/Kg		84	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 890-3865-1 MSD — **Client Sample ID: FS01**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 44315 — **Prep Batch: 44333**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U F2 F1 *-	0.101	0.03198	F2 F1	mg/Kg		32	70 - 130	80	35
Toluene	<0.00200	U F2 F1	0.101	0.04712	F2 F1	mg/Kg		47	70 - 130	49	35
Ethylbenzene	<0.00200	U F2 F1	0.101	0.04000	F2 F1	mg/Kg		40	70 - 130	56	35
m-Xylene & p-Xylene	<0.00401	U *+ F2 F1	0.202	0.07735	F2 F1	mg/Kg		38	70 - 130	60	35
o-Xylene	<0.00200	U *+ F2 F1	0.101	0.05148	F2 F1	mg/Kg		51	70 - 130	48	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*

Lab Sample ID: MB 880-44340/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 44418 — **Prep Batch: 44340**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/19/23 13:13	01/21/23 00:19	1

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QC Sample Results

Client: Ensolum
Project/Site: PLU 25 BRUSHY DRAW 901H

Job ID: 890-3865-1
SDG: 03C1558155

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

Lab Sample ID: MB 880-44340/5-A
Matrix: Solid
Analysis Batch: 44418

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 44340

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<0.00200	U	0.00200		mg/Kg		01/19/23 13:13	01/21/23 00:19	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/19/23 13:13	01/21/23 00:19	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/19/23 13:13	01/21/23 00:19	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/19/23 13:13	01/21/23 00:19	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/19/23 13:13	01/21/23 00:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*01/19/23 13:13*	*01/21/23 00:19*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*01/19/23 13:13*	*01/21/23 00:19*	*1*

Lab Sample ID: MB 880-44342/5-A
Matrix: Solid
Analysis Batch: 44418

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 44342

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/19/23 13:17	01/21/23 11:57	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/19/23 13:17	01/21/23 11:57	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/19/23 13:17	01/21/23 11:57	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/19/23 13:17	01/21/23 11:57	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/19/23 13:17	01/21/23 11:57	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/19/23 13:17	01/21/23 11:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*01/19/23 13:17*	*01/21/23 11:57*	*1*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*01/19/23 13:17*	*01/21/23 11:57*	*1*

Lab Sample ID: LCS 880-44342/1-A
Matrix: Solid
Analysis Batch: 44418

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 44342

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09578		mg/Kg		96	70 - 130		
Toluene			0.100	0.08907		mg/Kg		89	70 - 130		
Ethylbenzene			0.100	0.08538		mg/Kg		85	70 - 130		
m-Xylene & p-Xylene			0.200	0.1726		mg/Kg		86	70 - 130		
o-Xylene			0.100	0.08413		mg/Kg		84	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*

Lab Sample ID: LCSD 880-44342/2-A
Matrix: Solid
Analysis Batch: 44418

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 44342

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09760		mg/Kg		98	70 - 130	2	35
Toluene			0.100	0.09010		mg/Kg		90	70 - 130	1	35

QC Sample Results

Client: Ensolum
Project/Site: PLU 25 BRUSHY DRAW 901H

Job ID: 890-3865-1
SDG: 03C1558155

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

Lab Sample ID: LCSD 880-44342/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 44418 — **Prep Batch: 44342**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ethylbenzene			0.100	0.08582		mg/Kg		86	70 - 130	1	35
m-Xylene & p-Xylene			0.200	0.1730		mg/Kg		86	70 - 130	0	35
o-Xylene			0.100	0.08489		mg/Kg		85	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*

Lab Sample ID: 880-23720-A-61-G MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 44418 — **Prep Batch: 44342**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00202	U F2 F1	0.0996	0.06497	F1	mg/Kg		65	70 - 130
Toluene	<0.00202	U F2 F1	0.0996	0.06294	F1	mg/Kg		63	70 - 130
Ethylbenzene	<0.00202	U F2 F1	0.0996	0.06079	F1	mg/Kg		61	70 - 130
m-Xylene & p-Xylene	<0.00404	U F2 F1	0.199	0.1231	F1	mg/Kg		62	70 - 130
o-Xylene	<0.00202	U F2 F1	0.0996	0.06114	F1	mg/Kg		61	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*

Lab Sample ID: 880-23720-A-61-H MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 44418 — **Prep Batch: 44342**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U F2 F1	0.0990	0.02872	F2 F1	mg/Kg		29	70 - 130	77	35
Toluene	<0.00202	U F2 F1	0.0990	0.02996	F2 F1	mg/Kg		30	70 - 130	71	35
Ethylbenzene	<0.00202	U F2 F1	0.0990	0.03097	F2 F1	mg/Kg		31	70 - 130	65	35
m-Xylene & p-Xylene	<0.00404	U F2 F1	0.198	0.06516	F2 F1	mg/Kg		33	70 - 130	62	35
o-Xylene	<0.00202	U F2 F1	0.0990	0.03524	F2 F1	mg/Kg		36	70 - 130	54	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

Lab Sample ID: MB 880-44393/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 44418 — **Prep Batch: 44393**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:39	01/20/23 12:04	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:39	01/20/23 12:04	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:39	01/20/23 12:04	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/19/23 16:39	01/20/23 12:04	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:39	01/20/23 12:04	1

QC Sample Results

Client: Ensolum
Project/Site: PLU 25 BRUSHY DRAW 901H

Job ID: 890-3865-1
SDG: 03C1558155

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

Lab Sample ID: MB 880-44393/5-A
Matrix: Solid
Analysis Batch: 44418

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 44393

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/19/23 16:39	01/20/23 12:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*01/19/23 16:39*	*01/20/23 12:04*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*01/19/23 16:39*	*01/20/23 12:04*	*1*

Lab Sample ID: LCS 880-44393/1-A
Matrix: Solid
Analysis Batch: 44418

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 44393

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09599		mg/Kg		96	70 - 130		
Toluene			0.100	0.09139		mg/Kg		91	70 - 130		
Ethylbenzene			0.100	0.08837		mg/Kg		88	70 - 130		
m-Xylene & p-Xylene			0.200	0.1809		mg/Kg		90	70 - 130		
o-Xylene			0.100	0.08607		mg/Kg		86	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*

Lab Sample ID: LCSD 880-44393/2-A
Matrix: Solid
Analysis Batch: 44418

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 44393

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09064		mg/Kg		91	70 - 130	6	35
Toluene			0.100	0.08785		mg/Kg		88	70 - 130	4	35
Ethylbenzene			0.100	0.08581		mg/Kg		86	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1748		mg/Kg		87	70 - 130	3	35
o-Xylene			0.100	0.08350		mg/Kg		83	70 - 130	3	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*

Lab Sample ID: 880-23936-A-1-A MS
Matrix: Solid
Analysis Batch: 44418

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 44393

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00198	U	0.0998	0.09771		mg/Kg		98	70 - 130		
Toluene	<0.00198	U	0.0998	0.09186		mg/Kg		92	70 - 130		
Ethylbenzene	<0.00198	U	0.0998	0.09038		mg/Kg		91	70 - 130		
m-Xylene & p-Xylene	<0.00396	U	0.200	0.1866		mg/Kg		93	70 - 130		
o-Xylene	<0.00198	U	0.0998	0.08930		mg/Kg		89	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 25 BRUSHY DRAW 901H

Job ID: 890-3865-1
SDG: 03C1558155

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

Lab Sample ID: 880-23936-A-1-A MS
Matrix: Solid
Analysis Batch: 44418

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 44393

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		70 - 130
1,4-Difluorobenzene (Surr)	114		70 - 130

Lab Sample ID: 880-23936-A-1-B MSD
Matrix: Solid
Analysis Batch: 44418

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 44393

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00198	U	0.100	0.09615		mg/Kg		96	70 - 130	2	35
Toluene	<0.00198	U	0.100	0.08993		mg/Kg		90	70 - 130	2	35
Ethylbenzene	<0.00198	U	0.100	0.08612		mg/Kg		86	70 - 130	5	35
m-Xylene & p-Xylene	<0.00396	U	0.200	0.1753		mg/Kg		87	70 - 130	6	35
o-Xylene	<0.00198	U	0.100	0.08306		mg/Kg		83	70 - 130	7	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	95		70 - 130
1,4-Difluorobenzene (Surr)	114		70 - 130

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

Lab Sample ID: MB 880-44318/1-A
Matrix: Solid
Analysis Batch: 44899

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 44318

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/19/23 10:32	01/28/23 01:58	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/19/23 10:32	01/28/23 01:58	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/19/23 10:32	01/28/23 01:58	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	163	S1+	70 - 130	01/19/23 10:32	01/28/23 01:58	1
o-Terphenyl	180	S1+	70 - 130	01/19/23 10:32	01/28/23 01:58	1

Lab Sample ID: LCS 880-44318/2-A
Matrix: Solid
Analysis Batch: 44899

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 44318

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	888.4		mg/Kg		89	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1297		mg/Kg		130	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	124		70 - 130
o-Terphenyl	133	S1+	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 25 BRUSHY DRAW 901H

Job ID: 890-3865-1
SDG: 03C1558155

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

Lab Sample ID: LCSD 880-44318/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 44899 — **Prep Batch: 44318**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	841.7		mg/Kg		84	70 - 130	5	20
Diesel Range Organics (Over C10-C28)			1000	1220		mg/Kg		122	70 - 130	6	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*106*		*70 - 130*
o-Terphenyl	*114*		*70 - 130*

Lab Sample ID: 880-23716-A-1-F MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 44899 — **Prep Batch: 44318**

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 F2	998	210.5	F1	mg/Kg		21	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U F1 F2	998	141.6	F1	mg/Kg		13	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*20*	*S1-*	*70 - 130*
o-Terphenyl	*12*	*S1-*	*70 - 130*

Lab Sample ID: 880-23716-A-1-G MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 44899 — **Prep Batch: 44318**

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 F2	997	994.6	F2	mg/Kg		100	70 - 130	130	20
Diesel Range Organics (Over C10-C28)	<49.9	U F1 F2	997	616.8	F1 F2	mg/Kg		60	70 - 130	125	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*59*	*S1-*	*70 - 130*
o-Terphenyl	*55*	*S1-*	*70 - 130*

Lab Sample ID: MB 880-44319/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 44950 — **Prep Batch: 44319**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/19/23 10:36	01/28/23 10:29	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/19/23 10:36	01/28/23 10:29	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/19/23 10:36	01/28/23 10:29	1

QC Sample Results

Client: Ensolum
Project/Site: PLU 25 BRUSHY DRAW 901H

Job ID: 890-3865-1
SDG: 03C1558155

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

Lab Sample ID: MB 880-44319/1-A
Matrix: Solid
Analysis Batch: 44950

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 44319

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	112		70 - 130	01/19/23 10:36	01/28/23 10:29	1
o-Terphenyl	113		70 - 130	01/19/23 10:36	01/28/23 10:29	1

Lab Sample ID: LCS 880-44319/2-A
Matrix: Solid
Analysis Batch: 44950

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 44319

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	953.8		mg/Kg		95	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1096		mg/Kg		110	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	108		70 - 130
o-Terphenyl	109		70 - 130

Lab Sample ID: LCSD 880-44319/3-A
Matrix: Solid
Analysis Batch: 44950

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 44319

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	908.1		mg/Kg		91	70 - 130	5	20
Diesel Range Organics (Over C10-C28)			1000	1049		mg/Kg		105	70 - 130	4	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	105		70 - 130
o-Terphenyl	106		70 - 130

Lab Sample ID: 890-3867-A-1-E MS
Matrix: Solid
Analysis Batch: 44950

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 44319

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	998	887.1		mg/Kg		84	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	998	988.9		mg/Kg		97	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	81		70 - 130
o-Terphenyl	69	S1-	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 25 BRUSHY DRAW 901H

Job ID: 890-3865-1
SDG: 03C1558155

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

Lab Sample ID: 890-3867-A-1-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 44950 — **Prep Batch: 44319**

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	997	915.4		mg/Kg		87	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<49.9	U	997	952.0		mg/Kg		93	70 - 130	4	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*79*		*70 - 130*
o-Terphenyl	*67*	*S1-*	*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-44245/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 44498

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			01/20/23 17:31	1

Lab Sample ID: LCS 880-44245/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 44498

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	255.6		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-44245/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 44498

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	254.7		mg/Kg		102	90 - 110	0	20

Lab Sample ID: 890-3865-1 MS — **Client Sample ID: FS01**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 44498

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	2140	F1	1260	3578	F1	mg/Kg		114	90 - 110		

Lab Sample ID: 890-3865-1 MSD — **Client Sample ID: FS01**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 44498

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	2140	F1	1260	3578	F1	mg/Kg		114	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 25 BRUSHY DRAW 901H

Job ID: 890-3865-1
SDG: 03C1558155

GC VOA

Prep Batch: 44233

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-44233/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 44315

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3865-1	FS01	Total/NA	Solid	8021B	44333
890-3865-3	FS03	Total/NA	Solid	8021B	44333
890-3865-4	FS04	Total/NA	Solid	8021B	44333
890-3865-5	FS05	Total/NA	Solid	8021B	44333
890-3865-6	FS06	Total/NA	Solid	8021B	44333
890-3865-7	FS07	Total/NA	Solid	8021B	44333
890-3865-8	SW01	Total/NA	Solid	8021B	44333
890-3865-9	SW02	Total/NA	Solid	8021B	44333
MB 880-44233/5-A	Method Blank	Total/NA	Solid	8021B	44233
MB 880-44333/5-A	Method Blank	Total/NA	Solid	8021B	44333
LCS 880-44333/1-A	Lab Control Sample	Total/NA	Solid	8021B	44333
LCSD 880-44333/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	44333
890-3865-1 MS	FS01	Total/NA	Solid	8021B	44333
890-3865-1 MSD	FS01	Total/NA	Solid	8021B	44333

Prep Batch: 44333

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3865-1	FS01	Total/NA	Solid	5035	
890-3865-3	FS03	Total/NA	Solid	5035	
890-3865-4	FS04	Total/NA	Solid	5035	
890-3865-5	FS05	Total/NA	Solid	5035	
890-3865-6	FS06	Total/NA	Solid	5035	
890-3865-7	FS07	Total/NA	Solid	5035	
890-3865-8	SW01	Total/NA	Solid	5035	
890-3865-9	SW02	Total/NA	Solid	5035	
MB 880-44333/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-44333/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-44333/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3865-1 MS	FS01	Total/NA	Solid	5035	
890-3865-1 MSD	FS01	Total/NA	Solid	5035	

Prep Batch: 44340

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-44340/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 44342

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3865-2	FS02	Total/NA	Solid	5035	
MB 880-44342/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-44342/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-44342/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-23720-A-61-G MS	Matrix Spike	Total/NA	Solid	5035	
880-23720-A-61-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 44393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3865-5	FS05	Total/NA	Solid	5035	

QC Association Summary

Client: Ensolum
Project/Site: PLU 25 BRUSHY DRAW 901H

Job ID: 890-3865-1
SDG: 03C1558155

GC VOA (Continued)

Prep Batch: 44393 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-44393/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-44393/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-44393/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-23936-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-23936-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 44418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3865-2	FS02	Total/NA	Solid	8021B	44342
890-3865-5	FS05	Total/NA	Solid	8021B	44393
MB 880-44340/5-A	Method Blank	Total/NA	Solid	8021B	44340
MB 880-44342/5-A	Method Blank	Total/NA	Solid	8021B	44342
MB 880-44393/5-A	Method Blank	Total/NA	Solid	8021B	44393
LCS 880-44342/1-A	Lab Control Sample	Total/NA	Solid	8021B	44342
LCS 880-44393/1-A	Lab Control Sample	Total/NA	Solid	8021B	44393
LCSD 880-44342/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	44342
LCSD 880-44393/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	44393
880-23720-A-61-G MS	Matrix Spike	Total/NA	Solid	8021B	44342
880-23720-A-61-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	44342
880-23936-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	44393
880-23936-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	44393

Analysis Batch: 44472

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3865-1	FS01	Total/NA	Solid	Total BTEX	
890-3865-2	FS02	Total/NA	Solid	Total BTEX	
890-3865-3	FS03	Total/NA	Solid	Total BTEX	
890-3865-4	FS04	Total/NA	Solid	Total BTEX	
890-3865-5	FS05	Total/NA	Solid	Total BTEX	
890-3865-6	FS06	Total/NA	Solid	Total BTEX	
890-3865-7	FS07	Total/NA	Solid	Total BTEX	
890-3865-8	SW01	Total/NA	Solid	Total BTEX	
890-3865-9	SW02	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 44318

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3865-1	FS01	Total/NA	Solid	8015NM Prep	
890-3865-2	FS02	Total/NA	Solid	8015NM Prep	
890-3865-3	FS03	Total/NA	Solid	8015NM Prep	
890-3865-4	FS04	Total/NA	Solid	8015NM Prep	
890-3865-5	FS05	Total/NA	Solid	8015NM Prep	
MB 880-44318/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-44318/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-44318/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-23716-A-1-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-23716-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: PLU 25 BRUSHY DRAW 901H

Job ID: 890-3865-1
SDG: 03C1558155

GC Semi VOA

Prep Batch: 44319

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3865-6	FS06	Total/NA	Solid	8015NM Prep	
890-3865-7	FS07	Total/NA	Solid	8015NM Prep	
890-3865-8	SW01	Total/NA	Solid	8015NM Prep	
890-3865-9	SW02	Total/NA	Solid	8015NM Prep	
MB 880-44319/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-44319/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-44319/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3867-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3867-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 44899

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3865-1	FS01	Total/NA	Solid	8015B NM	44318
890-3865-2	FS02	Total/NA	Solid	8015B NM	44318
890-3865-3	FS03	Total/NA	Solid	8015B NM	44318
890-3865-4	FS04	Total/NA	Solid	8015B NM	44318
890-3865-5	FS05	Total/NA	Solid	8015B NM	44318
MB 880-44318/1-A	Method Blank	Total/NA	Solid	8015B NM	44318
LCS 880-44318/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	44318
LCSD 880-44318/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	44318
880-23716-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B NM	44318
880-23716-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	44318

Analysis Batch: 44950

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3865-6	FS06	Total/NA	Solid	8015B NM	44319
890-3865-7	FS07	Total/NA	Solid	8015B NM	44319
890-3865-8	SW01	Total/NA	Solid	8015B NM	44319
890-3865-9	SW02	Total/NA	Solid	8015B NM	44319
MB 880-44319/1-A	Method Blank	Total/NA	Solid	8015B NM	44319
LCS 880-44319/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	44319
LCSD 880-44319/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	44319
890-3867-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	44319
890-3867-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	44319

Analysis Batch: 44998

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3865-1	FS01	Total/NA	Solid	8015 NM	
890-3865-2	FS02	Total/NA	Solid	8015 NM	
890-3865-3	FS03	Total/NA	Solid	8015 NM	
890-3865-4	FS04	Total/NA	Solid	8015 NM	
890-3865-5	FS05	Total/NA	Solid	8015 NM	
890-3865-6	FS06	Total/NA	Solid	8015 NM	
890-3865-7	FS07	Total/NA	Solid	8015 NM	
890-3865-8	SW01	Total/NA	Solid	8015 NM	
890-3865-9	SW02	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: PLU 25 BRUSHY DRAW 901H

Job ID: 890-3865-1
SDG: 03C1558155

HPLC/IC

Leach Batch: 44245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3865-1	FS01	Soluble	Solid	DI Leach	
890-3865-2	FS02	Soluble	Solid	DI Leach	
890-3865-3	FS03	Soluble	Solid	DI Leach	
890-3865-4	FS04	Soluble	Solid	DI Leach	
890-3865-5	FS05	Soluble	Solid	DI Leach	
890-3865-6	FS06	Soluble	Solid	DI Leach	
890-3865-7	FS07	Soluble	Solid	DI Leach	
890-3865-8	SW01	Soluble	Solid	DI Leach	
890-3865-9	SW02	Soluble	Solid	DI Leach	
MB 880-44245/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-44245/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-44245/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3865-1 MS	FS01	Soluble	Solid	DI Leach	
890-3865-1 MSD	FS01	Soluble	Solid	DI Leach	

Analysis Batch: 44498

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3865-1	FS01	Soluble	Solid	300.0	44245
890-3865-2	FS02	Soluble	Solid	300.0	44245
890-3865-3	FS03	Soluble	Solid	300.0	44245
890-3865-4	FS04	Soluble	Solid	300.0	44245
890-3865-5	FS05	Soluble	Solid	300.0	44245
890-3865-6	FS06	Soluble	Solid	300.0	44245
890-3865-7	FS07	Soluble	Solid	300.0	44245
890-3865-8	SW01	Soluble	Solid	300.0	44245
890-3865-9	SW02	Soluble	Solid	300.0	44245
MB 880-44245/1-A	Method Blank	Soluble	Solid	300.0	44245
LCS 880-44245/2-A	Lab Control Sample	Soluble	Solid	300.0	44245
LCSD 880-44245/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	44245
890-3865-1 MS	FS01	Soluble	Solid	300.0	44245
890-3865-1 MSD	FS01	Soluble	Solid	300.0	44245

Lab Chronicle

Client: Ensolum
Project/Site: PLU 25 BRUSHY DRAW 901H

Job ID: 890-3865-1
SDG: 03C1558155

Client Sample ID: FS01

Lab Sample ID: 890-3865-1
Matrix: Solid
Date Collected: 01/13/23 13:35
Date Received: 01/16/23 08:46

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	44333	01/19/23 12:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44315	01/19/23 22:14	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44472	01/20/23 14:02	SM	EET MID
Total/NA	Analysis	8015 NM		1			44998	01/30/23 09:56	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	44318	01/19/23 10:32	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44899	01/28/23 09:59	AJ	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	44245	01/18/23 11:49	KS	EET MID
Soluble	Analysis	300.0		5			44498	01/20/23 17:49	CH	EET MID

Client Sample ID: FS02

Lab Sample ID: 890-3865-2
Matrix: Solid
Date Collected: 01/13/23 13:40
Date Received: 01/16/23 08:46

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	44342	01/19/23 13:17	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44418	01/21/23 18:45	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44472	01/23/23 12:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			44998	01/30/23 09:56	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	44318	01/19/23 10:32	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44899	01/28/23 10:20	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	44245	01/18/23 11:49	KS	EET MID
Soluble	Analysis	300.0		5			44498	01/20/23 18:06	CH	EET MID

Client Sample ID: FS03

Lab Sample ID: 890-3865-3
Matrix: Solid
Date Collected: 01/13/23 13:45
Date Received: 01/16/23 08:46

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	44333	01/19/23 12:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44315	01/19/23 22:55	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44472	01/20/23 14:02	SM	EET MID
Total/NA	Analysis	8015 NM		1			44998	01/30/23 09:56	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	44318	01/19/23 10:32	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44899	01/28/23 10:44	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	44245	01/18/23 11:49	KS	EET MID
Soluble	Analysis	300.0		5			44498	01/20/23 18:12	CH	EET MID

Client Sample ID: FS04

Lab Sample ID: 890-3865-4
Matrix: Solid
Date Collected: 01/13/23 13:50
Date Received: 01/16/23 08:46

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	44333	01/19/23 12:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44315	01/19/23 23:15	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44472	01/20/23 14:02	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: PLU 25 BRUSHY DRAW 901H

Job ID: 890-3865-1
SDG: 03C1558155

Client Sample ID: FS04

Lab Sample ID: 890-3865-4
Matrix: Solid
Date Collected: 01/13/23 13:50
Date Received: 01/16/23 08:46

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			44998	01/30/23 09:56	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	44318	01/19/23 10:32	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44899	01/28/23 11:08	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	44245	01/18/23 11:49	KS	EET MID
Soluble	Analysis	300.0		5			44498	01/20/23 18:18	CH	EET MID

Client Sample ID: FS05

Lab Sample ID: 890-3865-5
Matrix: Solid
Date Collected: 01/13/23 13:55
Date Received: 01/16/23 08:46

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	44393	01/19/23 16:39	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44418	01/20/23 15:37	MNR	EET MID
Total/NA	Prep	5035			4.97 g	5 mL	44333	01/19/23 12:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44315	01/19/23 23:36	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44472	01/20/23 14:02	SM	EET MID
Total/NA	Analysis	8015 NM		1			44998	01/30/23 09:56	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	44318	01/19/23 10:32	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44899	01/28/23 11:32	AJ	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	44245	01/18/23 11:49	KS	EET MID
Soluble	Analysis	300.0		5			44498	01/20/23 18:24	CH	EET MID

Client Sample ID: FS06

Lab Sample ID: 890-3865-6
Matrix: Solid
Date Collected: 01/13/23 14:00
Date Received: 01/16/23 08:46

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	44333	01/19/23 12:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44315	01/19/23 23:56	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44472	01/20/23 14:02	SM	EET MID
Total/NA	Analysis	8015 NM		1			44998	01/30/23 10:23	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	44319	01/19/23 10:36	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44950	01/28/23 21:03	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	44245	01/18/23 11:49	KS	EET MID
Soluble	Analysis	300.0		5			44498	01/20/23 18:41	CH	EET MID

Client Sample ID: FS07

Lab Sample ID: 890-3865-7
Matrix: Solid
Date Collected: 01/13/23 14:05
Date Received: 01/16/23 08:46

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	44333	01/19/23 12:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44315	01/20/23 00:17	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44472	01/20/23 14:02	SM	EET MID
Total/NA	Analysis	8015 NM		1			44998	01/30/23 10:23	AJ	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: PLU 25 BRUSHY DRAW 901H

Job ID: 890-3865-1
SDG: 03C1558155

Client Sample ID: FS07

Lab Sample ID: 890-3865-7
Matrix: Solid
Date Collected: 01/13/23 14:05
Date Received: 01/16/23 08:46

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	44319	01/19/23 10:36	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44950	01/28/23 21:30	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	44245	01/18/23 11:49	KS	EET MID
Soluble	Analysis	300.0		5			44498	01/20/23 18:47	CH	EET MID

Client Sample ID: SW01

Lab Sample ID: 890-3865-8
Matrix: Solid
Date Collected: 01/13/23 13:25
Date Received: 01/16/23 08:46

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	44333	01/19/23 12:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44315	01/20/23 00:37	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44472	01/20/23 14:02	SM	EET MID
Total/NA	Analysis	8015 NM		1			44998	01/30/23 10:23	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	44319	01/19/23 10:36	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44950	01/28/23 21:55	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	44245	01/18/23 11:49	KS	EET MID
Soluble	Analysis	300.0		5			44498	01/20/23 18:53	CH	EET MID

Client Sample ID: SW02

Lab Sample ID: 890-3865-9
Matrix: Solid
Date Collected: 01/13/23 13:30
Date Received: 01/16/23 08:46

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	44333	01/19/23 12:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44315	01/20/23 00:57	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44472	01/20/23 14:02	SM	EET MID
Total/NA	Analysis	8015 NM		1			44998	01/30/23 10:23	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	44319	01/19/23 10:36	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44950	01/28/23 22:17	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	44245	01/18/23 11:49	KS	EET MID
Soluble	Analysis	300.0		5			44498	01/20/23 18:59	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 25 BRUSHY DRAW 901H

Job ID: 890-3865-1
SDG: 03C1558155

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 25 BRUSHY DRAW 901H

Job ID: 890-3865-1
SDG: 03C1558155

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 25 BRUSHY DRAW 901H

Job ID: 890-3865-1
SDG: 03C1558155

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3865-1	FS01	Solid	01/13/23 13:35	01/16/23 08:46	2
890-3865-2	FS02	Solid	01/13/23 13:40	01/16/23 08:46	2
890-3865-3	FS03	Solid	01/13/23 13:45	01/16/23 08:46	2
890-3865-4	FS04	Solid	01/13/23 13:50	01/16/23 08:46	2
890-3865-5	FS05	Solid	01/13/23 13:55	01/16/23 08:46	2
890-3865-6	FS06	Solid	01/13/23 14:00	01/16/23 08:46	2
890-3865-7	FS07	Solid	01/13/23 14:05	01/16/23 08:46	2
890-3865-8	SW01	Solid	01/13/23 13:25	01/16/23 08:46	0 - 2
890-3865-9	SW02	Solid	01/13/23 13:30	01/16/23 08:46	0 - 2

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Chain of Custody

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

Work Order No: _____

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

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 25 BrushyDraw 901H	Turn Around	☑ Routine ☐ Rush
Project Number:	03C1558155	Due Date:	
Project Location:	32.10185, -103.84166	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:	Thermo07
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	4.4
Total Containers:		Corrected Temperature:	4.2

Preservative Codes

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

890-3865 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: BTEX	Chlorides	TPH	Sample Comments
FS01	S	1/13/23	1335	2'	C	1		X	X	X	Incident #: nAPP2232537823
FS02			1340								
FS03			1345								
FS04			1350								Cost Center: 1666621001
FS05			1355								
FS06			1400								
FS07			1405								
SW01			1325	0-2'							
SW02			1330	0-2'							

MR

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]	01/16/23 @ 0830	[signature]	1.16.23 846	
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

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

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer, Jessica	Carrier Tracking No(s):	COC No: 890-1102 1
Client Contact: Shipping/Receiving	Phone	E-Mail: Jessica Kramer@et.eurofinsus com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-3865-1
Address: 1211 W Florida Ave ,	Due Date Requested: 1/20/2023			
City: Midland	TAT Requested (days):			
State Zip: TX, 79701	PO #:			
Phone: 432-704-5440(Tel)	WO #:			
Email:	Project #: 89000093			
Project Name: PLU 25 BRUSHY DRAW 901H	SSOW#:			
Site:				

Preservation Codes:
A HCL, B NaOH, C Zn Acetate, D Nitric Acid, E NaHSO4, F MeOH, G Amchlor, H Ascorbic Acid, I Ice, J DI Water, K EDTA, L EDA, M Hexane, N None, O AsNaO2, P Na2O4S, Q Na2SO3, R Na2S2O3, S H2SO4, T TSP Dodecahydrate, U Acetone, V MCAA, W pH 4-5, Y Trizma, Z other (specify)
Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	8015MOD_Calc	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc (MOD) BTEX	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note.
Preservation Code:													
FS01 (890-3865-1)	1/13/23	13 35 Mountain		Solid			X	X	X	X	X	1	
FS02 (890-3865-2)	1/13/23	13 40 Mountain		Solid			X	X	X	X	X	1	
FS03 (890-3865-3)	1/13/23	13 45 Mountain		Solid			X	X	X	X	X	1	
FS04 (890-3865-4)	1/13/23	13 50 Mountain		Solid			X	X	X	X	X	1	
FS05 (890-3865-5)	1/13/23	13 55 Mountain		Solid			X	X	X	X	X	1	
FS06 (890-3865-6)	1/13/23	14 00 Mountain		Solid			X	X	X	X	X	1	
FS07 (890-3865-7)	1/13/23	14 05 Mountain		Solid			X	X	X	X	X	1	
SW01 (890-3865-8)	1/13/23	13 25 Mountain		Solid			X	X	X	X	X	1	
SW02 (890-3865-9)	1/13/23	13 30 Mountain		Solid			X	X	X	X	X	1	

Note Since laboratory accreditations are subject to change Eurofins Environment Testing South Central LLC places the ownership of method analyte & accreditation compliance upon our subcontract laboratories This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Environment Testing South Central LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Central LLC attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central LLC

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested I II, III IV Other (specify) Primary Deliverable Rank 2	Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment.

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time:	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3865-1
SDG Number: 03C1558155

Login Number: 3865
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3865-1
SDG Number: 03C1558155

Login Number: 3865
List Number: 2
Creator: Teel, Brianna

List Source: Eurofins Midland
List Creation: 01/17/23 11:09 AM

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

ENSOLUM

APPENDIX D

NMOCD Notifications

From: Green, Garrett J
To: ocd.enviro@emnrd.nm.gov; Bratcher, Michael, EMNRD; Hamlet, Robert, EMNRD; Harimon, Jocelyn, EMNRD
Cc: DelawareSpills /SM; Tacoma Morrissey
Subject: XTO - Sampling Notification (Week of 1/9/23 - 1/13/23)
Date: Thursday, January 5, 2023 4:44:48 PM

[**EXTERNAL EMAIL**]

All,

XTO plans to complete final sampling activities at the following sites the week of Jan 9, 2023.

- PLU 16 TWR 126H Fire/ nAPP2233339417
- PLU 25 BD 901H / nAPP2232537823

Thank you,

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

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

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

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

CONDITIONS

Action 184113

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 184113
	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 #NAPP2232537823 PLU 25 BRUSHY DRAW 901H, thank you. This closure is approved.	5/30/2023