Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2219648561
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: __10/07/2022_____

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

OCD Only

Received by: ___Jocelyn Harimon_____ Date: __10/07/2022____

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

Closure Approved by: ___Robert Hamlet_____ Date: __12/21/2022__

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	NAPP2219648561
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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 32.24919 Longitude -103.91836

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Poker Lake Unit 184H	Site Type Production Well
Date Release Discovered 07/10/2022	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
G	06	24S	30E	Eddy

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 0.80	Volume Recovered (bbls) 0.45
☒ Produced Water	Volume Released (bbls) 4.51	Volume Recovered (bbls) 2.55
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: Internal corrosion on nipple threads caused fluids to release to pads. All free fluids were recovered. 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: 07/15/2022
email: garrett.green@exxonmobil.com
Telephone: 575-200-0729

OCD Only

Received by: Jocelyn Harimon
Date: 07/15/2022

Location:	Poker Lake Unit 184H	
Spill Date:	7/10/2022	
Area 1		
Approximate Area =	5180.80	sq. ft.
Average Saturation (or depth) of spill =	1.00	inches
Average Porosity Factor =	0.03	
VOLUME OF LEAK		
Total Crude Oil =	0.80	bbls
Total Produced Water =	4.51	bbls
TOTAL VOLUME OF LEAK		
Total Crude Oil =	**0.80**	**bbls**
Total Produced Water =	**4.51**	**bbls**
TOTAL VOLUME RECOVERED		
Total Crude Oil =	**0.45**	**bbls**
Total Produced Water =	**2.55**	**bbls**

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

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

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 125899
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	None	7/15/2022

Incident ID	NAPP2219648561
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Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

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

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

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

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

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

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Page 4

State of New Mexico
Oil Conservation Division

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

Printed Name: _Garrett Green_____ Title: _Environmental Coordinator_____

Signature:__ _____ Date: ____10/07/2022_____

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

OCD Only

Received by: Jocelyn Harimon Date: 10/07/2022

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2219648561
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Closure

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

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

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

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

☒ Description of remediation activities

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Printed Name: _Garrett Green_____ Title: _Environmental Coordinator_____

Signature: __ _____ Date: __10/07/2022_____

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

OCD Only

Received by: ___Jocelyn Harimon_____ Date: __10/07/2022____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

ENSOLUM

October 7, 2022

District II
New Mexico Oil Conservation Division
811 S. First Street
Artesia, New Mexico 88210

Re: Closure Request
Poker Lake Unit 184H
Incident Number nAPP2219648561
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 Poker Lake Unit 184H (Site). Soil was impacted by a release of produced water and crude oil onto the surface of the well pad. Based on the excavation activities and analytical results from the soil sampling events, XTO is submitting this Closure Request, describing remediation that has occurred and requesting closure for Incident Number nAPP2219648561.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit G, Section 6, Township 24 South, Range 30 East, in Eddy County, New Mexico (32.24919° N, 103.91836° W) and is associated with oil and gas exploration and production operations on federal land managed by the Bureau of Land Management (BLM).

On July 10, 2022, internal corrosion caused equipment failure and the release of approximately 0.8 barrels (bbls) of crude oil and 4.51 bbls of produced water treated to the well pad. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; approximately 3 bbls of fluid were recovered. XTO reported the release to the NMOCD and submitted a Form C-141 on July 15, 2022. The release was assigned Incident Number nAPP2219648561.

SITE CHARATERIZATION AND CLOSURE CRITERIA

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

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. The nearest groundwater well is a soil boring (C-4526) permitted under the New Mexico Office of the State Engineer (NMOSE), located approximately 0.2 miles south of the Site. The soil boring was drilled to a depth of 105 feet bgs on May 14, 2021. The boring was left open for at least 72 hours to allow for the potential slow infill of groundwater. Following the 72-hour waiting period, no groundwater was observed confirming depth to groundwater is greater than 105

feet bgs. The borehole was properly abandoned with drill cuttings and hydrated bentonite chips. All wells used for depth to water determination are depicted on Figure 1 and the referenced well records are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is an intermittent stream located approximately 1,520 feet north 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 1 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 August 23, 2022, Ensolum personnel visited the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. Nine preliminary soil samples (SS01 through SS09) were collected within and around the release extent from a depth of 0.5 feet bgs to assess the lateral exent of the release. The preliminary soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride Hach® chloride QuanTab® test strips. The release extent and preliminary 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 preliminary soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of 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.

Laboratory analytical results for preliminary soil samples SS02 through SS05, collected within the release extent indicated that TPH-GRO/TPH-DRO, TPH, and/or chloride concentrations exceeded the Closure Criteria. Laboratory analytical results for soil sample SS01, collected within the release extent indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH and chloride concentrations were compliant with the Closure Criteria; however, staining was visible. Laboratory analytical results for preliminary soil samples SS06 through SS09, collected around the release extent, indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the strictest Table 1 Closure Criteria, and confirmed 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 were warranted.

EXCAVATION SOIL SAMPLING ACTIVITIES AND ANALYTICAL RESULTS

On September 27, 2022, Ensolum personnel returned to the Site to oversee excavation activites. Impacted soil was excavated from the release area as indicated by visible staining and laboratory analytical results for the preliminary soil samples. Excavation activities were performed using track-mounted backhoe and transport vehicle. To direct excavation activities, soil was screened for VOCs and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. The excavation was completed to depths ranging from 0.5 feet bgs to 1 foot bgs. Photographic documentation of the excavation activities is included in Appendix B.

Following removal of the impacted soil, 5-point composite soil samples were collected at least every 200 square feet from the 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 FS09 were collected from the floor of the excavation from depths ranging from 0.5 feet bgs to 1-foot bgs. Because the excavation was shallow, the floor samples included aliquots collected from the nearby sidewalls. 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 1,775 square feet. A total of approximately 65 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 FS09 indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride 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 July 10, 2022 release of crude oil and produced water. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure. Based on the 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. As such, XTO respectfully requests closure for Incident Number nAPP2219648561.

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

Sincerely,
Ensolum, LLC

Tacoma Morrissey
Senior Geologist

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

cc: Garrett Green, XTO
Shelby Pennington, XTO

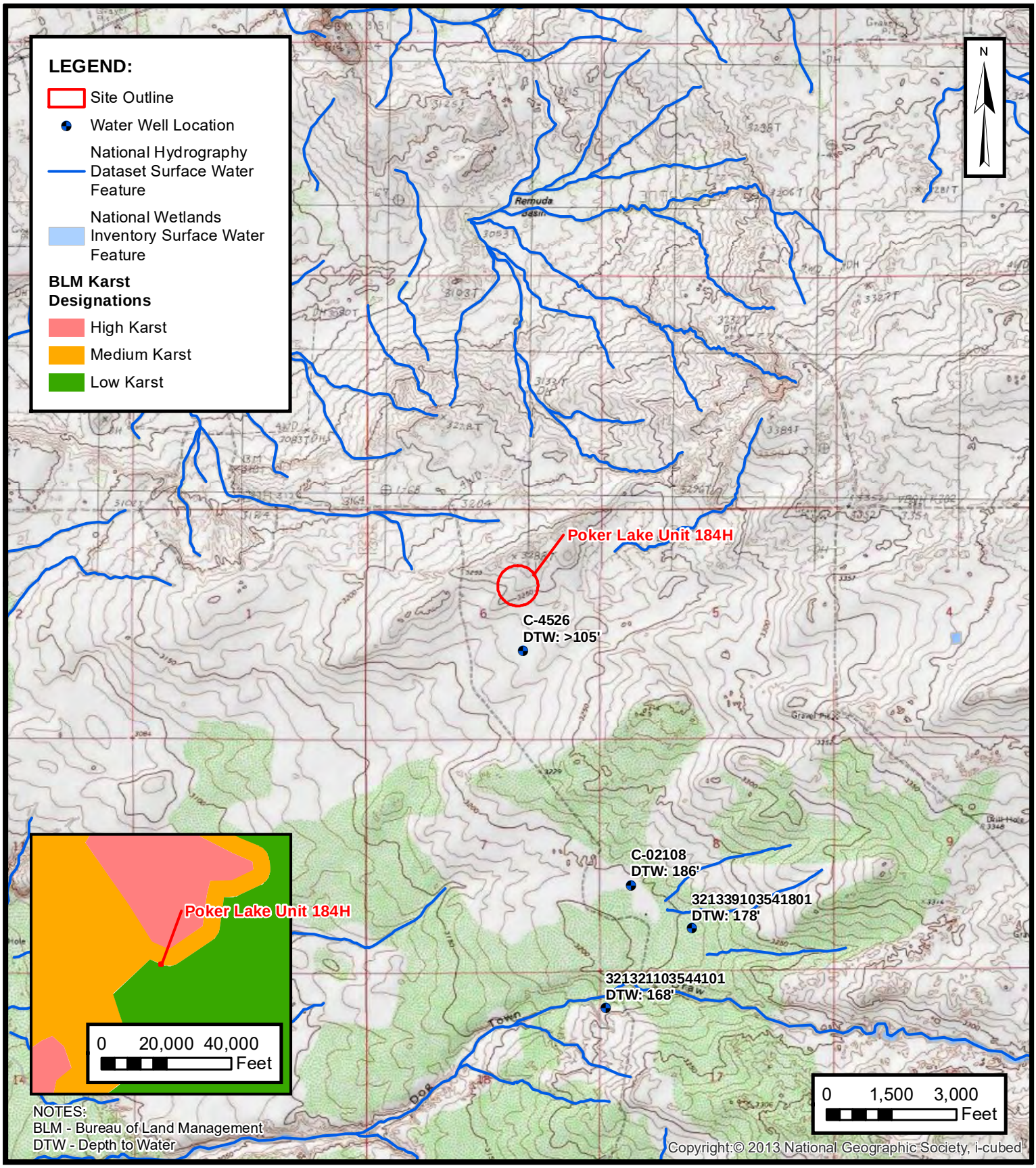
Bureau of Land Management

Appendices:

Figure 1	Site Receptor Map
Figure 2	Preliminary 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



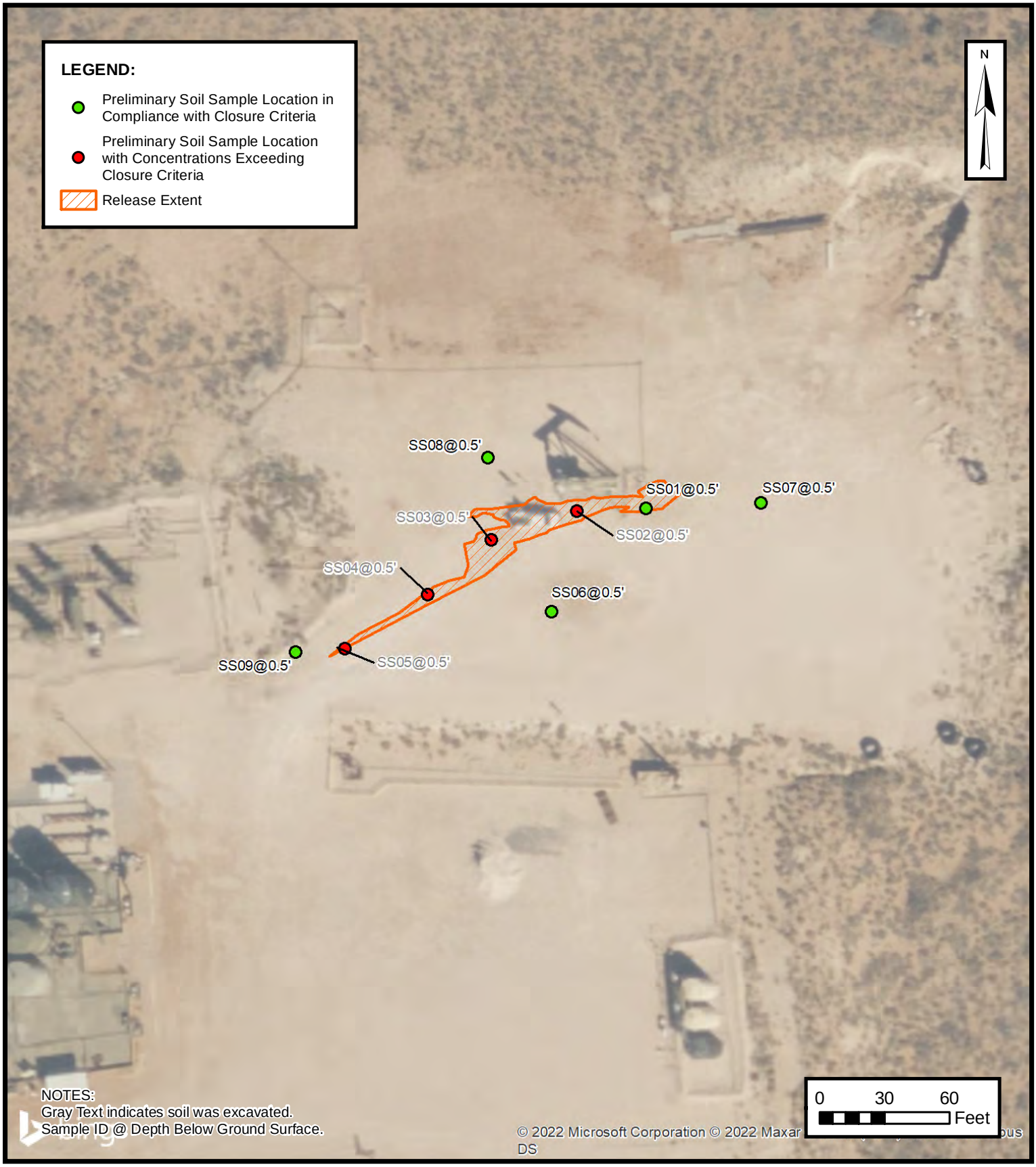
ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

SITE RECEPTOR MAP

XTO ENERGY, INC
POKER LAKE UNIT 184H
NAPP2219648561
Unit G, Sec 6, T24S, R30E
Eddy County, New Mexico

FIGURE

1



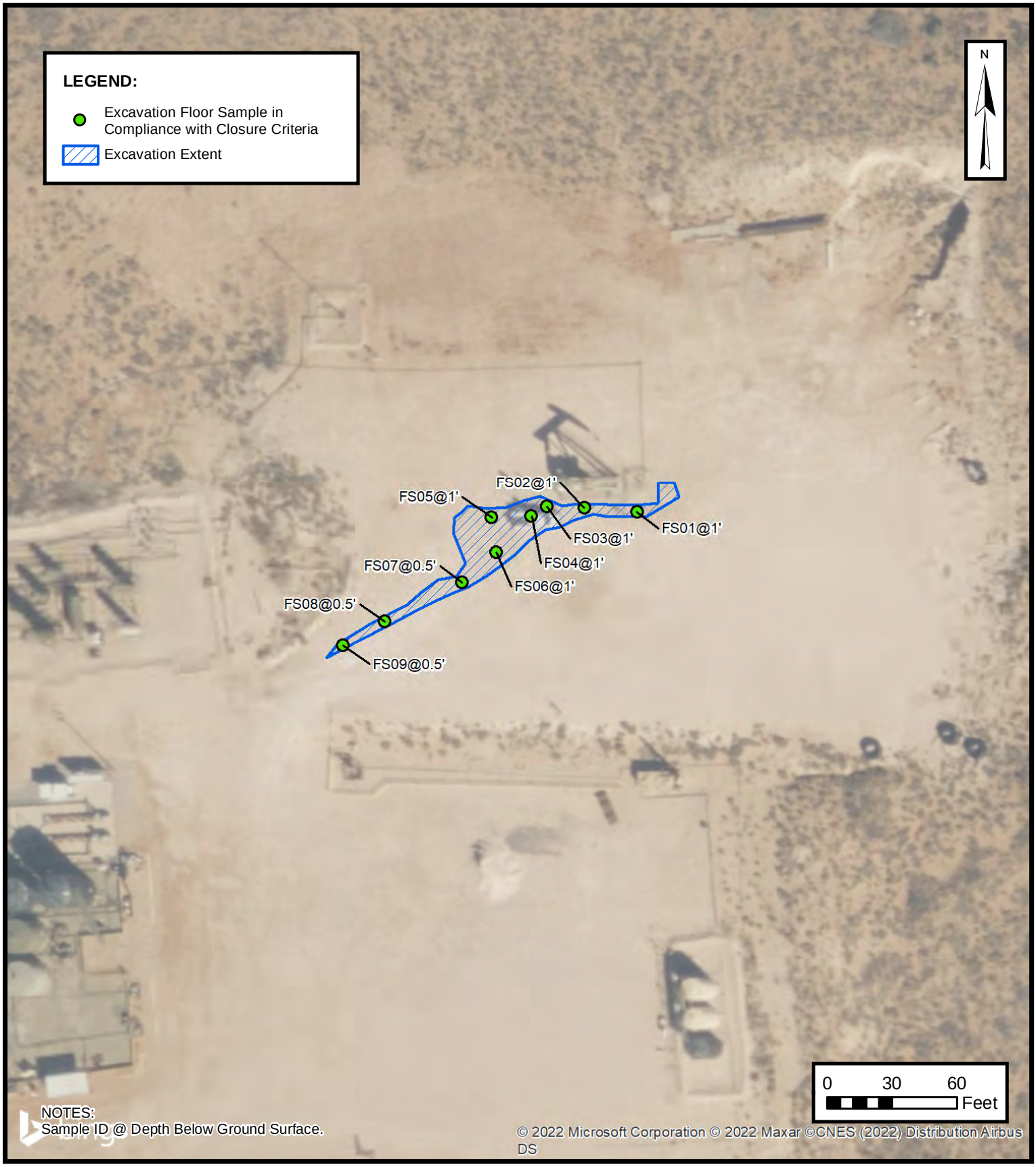
ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

PRELIMINARY SOIL SAMPLE LOCATIONS

XTO ENERGY, INC
POKER LAKE UNIT 184H
NAPP2219648561
Unit G, Sec 6, T24S, R30E
Eddy County, New Mexico

FIGURE

2



ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

EXCAVATION SOIL SAMPLE LOCATIONS

XTO ENERGY, INC
POKER LAKE UNIT 184H
NAPP2219648561
Unit G, Sec 6, T24S, R30E
Eddy County, New Mexico

FIGURE

3

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Poker Lake Unit 184H
XTO Energy, Inc.
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			**10**	**50**	**NE**	**NE**	**NE**	**1,000**	**2,500**	**20,000**
Preliminary Soil Samples										
SS01	08/23/2022	0.5	<0.00199	<0.00398	<49.9	358	307	358	665	19,400
SS02	08/23/2022	0.5	<0.00201	<0.00402	<250	4,590	1,600	**4,590**	**6,190**	**33,900**
SS03	08/23/2022	0.5	<0.00202	<0.00404	<249	6,660	1,670	**6,660**	**8,330**	**35,500**
SS04	08/23/2022	0.5	<0.00200	<0.00399	<250	10,400	2,780	**10,400**	**13,200**	4,410
SS05	08/23/2022	0.5	<0.00199	<0.00398	<49.8	4,880	1,330	**4,880**	**6,210**	500
SS06	08/23/2022	0.5	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	156
SS07	08/23/2022	0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	47.9
SS08	08/23/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	201
SS09	08/23/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	217
Confirmation Soil Samples										
FS01	09/27/2022	1	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	435
FS02	09/27/2022	1	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	2,660
FS03	09/27/2022	1	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	2,920
FS04	09/28/2022	1	<0.00202	<0.00403	<50.0	78.3	<50.0	78.3	78.3	2,370
FS05	09/28/2022	1	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	119
FS06	09/28/2022	1	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	212
FS07	09/28/2022	0.5	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	79.2
FS08	09/28/2022	0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	41.7
FS09	09/28/2022	0.5	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	53.3

Notes:

bgs: below ground surface
mg/kg: milligrams per kilogram
NMOCD: New Mexico Oil Conservation Division
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
Concentrations in bold exceed the NMOCD Table 1 Closure Criteria or reclamation standard where applicable.
GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
TPH: Total Petroleum Hydrocarbon
Gray Text indicates soil was excavated.

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 (MW-1)	n/a	C-4526

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°	14'	42.15"	N
	LONGITUDE	103°	55'	6.20"	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 NE Sec. 06 T24S R30E

2. DRILLING & CASING INFORMATION

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

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
05/14/2021	05/14/2021	temporary well material	105	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	105	±6.5	Boring- HSA	--	--	--	--

3. ANNULAR MATERIAL

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

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

FILE NO.	C-4526	POD NO.	1	TRN NO.	692109
LOCATION	Exp1	24S.30E.6.414		WELL TAG ID NO.	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	4	4	SAND, poorly graded, fine-very grained, Reddish-brown, dry	Y ✓ N	
4	12	8	CALICHE, poorly-mod. consolidated, tan-off white, dry	Y ✓ N	
12	19	7	SAND, poorly graded, fine-very grained, some caliche gravel, Tan ,dry	Y ✓ N	
19	24	5	SAND, poorly graded, fine-very grained, some caliche gravel, Light- Brown, dry	Y ✓ N	
24	72	48	SAND, poorly graded, fine-very grained, Reddish Brown, moist	Y ✓ N	
72	92	20	SAND, poorly graded, fine-very grained, some silt, Reddish Brown, moist	Y ✓ N	
92	102	10	SILTY SAND, poorly graded, fine-very grained, Reddish Brown, moist	Y ✓ N	
102	105	3	SILTY SAND, poorly graded, fine-very grained, Reddish Brown, dry	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.

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

Shane Eldridge, Carmelo Trevino, Cameron Pruitt

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 — 06/09/2021

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

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

FILE NO. C-4526	POD NO. 1	TRN NO. 692109
LOCATION	WELL TAG ID NO.	PAGE 2 OF 2

OSE DIT JUN 10 2021 PM2:47

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater | Geographic Area: United States | GO

Click to hideNews Bulletins

- Explore the *NEW* USGS National Water Dashboard interactive map to access real-time water data from over 13,500 stations nationwide.
- Full News

Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

site_no list =

- 321339103541801

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

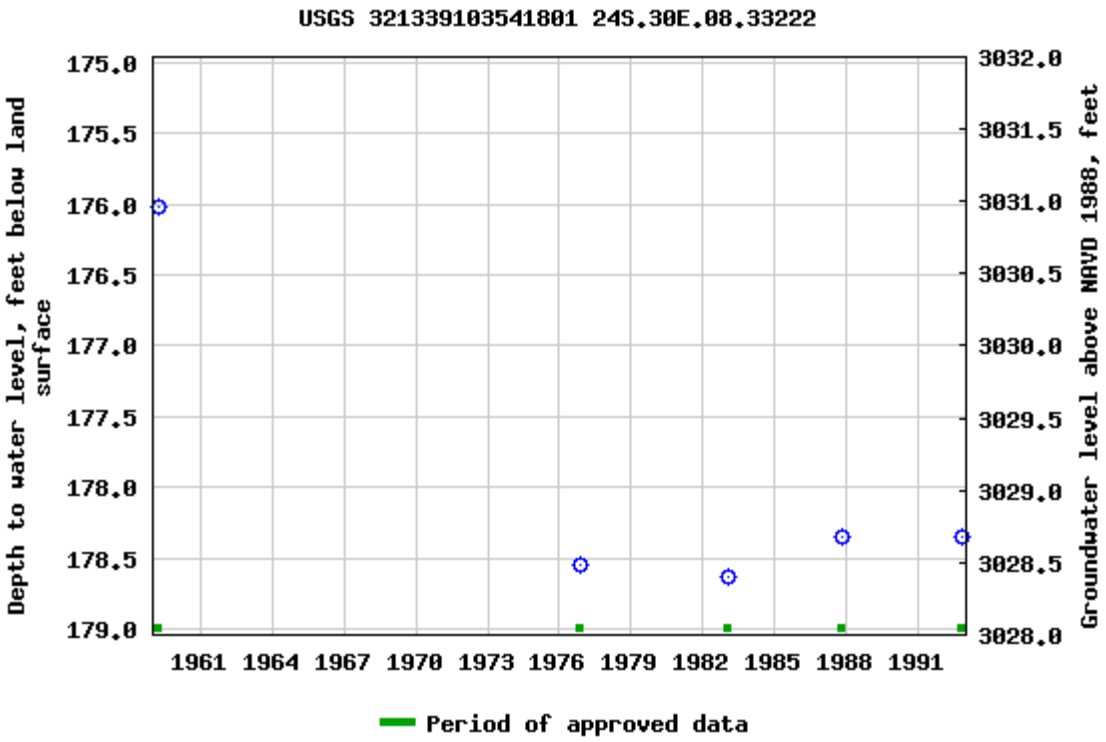
USGS 321339103541801 24S.30E.08.33222

Available data for this site | Groundwater: Field measurements | GO

Eddy County, New Mexico
Hydrologic Unit Code 13060011
Latitude 32°13'39", Longitude 103°54'18" NAD27
Land-surface elevation 3,207 feet above NAVD88
The depth of the well is 192 feet below land surface.
This well is completed in the Pecos River Basin alluvial aquifer (N100PCSRVR) national aquifer.
This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

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



Breaks in the plot represent a gap of at least one year between field measurements.
Download a presentation-quality graph

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

Title: Groundwater for USA: Water Levels
URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2022-10-05 10:01:37 EDT
0.59 0.53 nadww01

ENSOLUM

APPENDIX B

Photographic Log

ENSOLUM

Photographic Log
XTO Energy, Inc.
Poker Lake Unit 184H
Incident Number nAPP2219648561

Photograph 1 Date: July 10, 2022

Description: View of release extent during initial assessment facing west.

Photograph 2 Date: Sept. 14, 2022

Description: View of release extent prior to excavation facing northeast.

Photograph 3 Date: Sept. 14, 2022

Description: View of release extent prior to excavation facing northeast.

Photograph 4 Date: Sept. 28. 2022

Description: View of final excavation extent facing northwest.

ENSOLUM

APPENDIX C

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-2811-1
Laboratory Sample Delivery Group: 03E1558097
Client Project/Site: PLU 184H
Revision: 1

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

Attn: Tacoma Morrissey

JKramer

Authorized for release by:
9/7/2022 12:37:20 PM

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

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

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

Client: Ensolum
Project/Site: PLU 184H

Laboratory Job ID: 890-2811-1
SDG: 03E1558097

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2811-1
SDG: 03E1558097

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery 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
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 184H

Job ID: 890-2811-1
SDG: 03E1558097

Job ID: 890-2811-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2811-1

REVISION

The report being provided is a revision of the original report sent on 9/5/2022. The report (revision 1) is being revised due to Per client email requesting sample ID name change.

Report revision history

Receipt
The sample was received on 8/23/2022 4:32 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 5.2°C

GC VOA
Method 8021B: Surrogate recovery for the following sample was outside control limits: SS09 (890-2811-1). 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.

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

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

Client Sample Results

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2811-1
SDG: 03E1558097

Client Sample ID: SS09
Date Collected: 08/23/22 10:25
Date Received: 08/23/22 16:32
Sample Depth: 0.5

Lab Sample ID: 890-2811-1
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/02/22 15:18	09/05/22 19:46	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/02/22 15:18	09/05/22 19:46	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/02/22 15:18	09/05/22 19:46	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/02/22 15:18	09/05/22 19:46	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/02/22 15:18	09/05/22 19:46	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/02/22 15:18	09/05/22 19:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*143*	*S1+*	*70 - 130*	*09/02/22 15:18*	*09/05/22 19:46*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*09/02/22 15:18*	*09/05/22 19:46*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/05/22 21:17	1

Method: 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			08/29/22 16:45	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		08/25/22 16:27	08/27/22 02:07	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		08/25/22 16:27	08/27/22 02:07	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		08/25/22 16:27	08/27/22 02:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*08/25/22 16:27*	*08/27/22 02:07*	*1*
o-Terphenyl	*94*		*70 - 130*	*08/25/22 16:27*	*08/27/22 02:07*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**217**		4.96		mg/Kg			08/30/22 20:08	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2811-1
SDG: 03E1558097

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)
880-18455-A-1-B MS	Matrix Spike	143 S1+	90
880-18455-A-1-C MSD	Matrix Spike Duplicate	141 S1+	96
890-2811-1	SS09	143 S1+	101
LCS 880-33658/1-A	Lab Control Sample	141 S1+	95
LCSD 880-33658/2-A	Lab Control Sample Dup	137 S1+	90
MB 880-33371/5-A	Method Blank	103	69 S1-
MB 880-33658/5-A	Method Blank	105	71

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)
890-2811-1	SS09	93	94

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2811-1
SDG: 03E1558097

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-33371/5-A
Matrix: Solid
Analysis Batch: 33696

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 33371

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/30/22 14:16	09/04/22 20:08	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/30/22 14:16	09/04/22 20:08	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/30/22 14:16	09/04/22 20:08	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/30/22 14:16	09/04/22 20:08	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/30/22 14:16	09/04/22 20:08	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/30/22 14:16	09/04/22 20:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*08/30/22 14:16*	*09/04/22 20:08*	*1*
1,4-Difluorobenzene (Surr)	*69*	*S1-*	*70 - 130*	*08/30/22 14:16*	*09/04/22 20:08*	*1*

Lab Sample ID: MB 880-33658/5-A
Matrix: Solid
Analysis Batch: 33696

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 33658

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/02/22 15:18	09/05/22 09:38	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/02/22 15:18	09/05/22 09:38	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/02/22 15:18	09/05/22 09:38	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/02/22 15:18	09/05/22 09:38	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/02/22 15:18	09/05/22 09:38	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/02/22 15:18	09/05/22 09:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*09/02/22 15:18*	*09/05/22 09:38*	*1*
1,4-Difluorobenzene (Surr)	*71*		*70 - 130*	*09/02/22 15:18*	*09/05/22 09:38*	*1*

Lab Sample ID: LCS 880-33658/1-A
Matrix: Solid
Analysis Batch: 33696

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 33658

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1064		mg/Kg		106	70 - 130		
Toluene			0.100	0.1061		mg/Kg		106	70 - 130		
Ethylbenzene			0.100	0.09992		mg/Kg		100	70 - 130		
m-Xylene & p-Xylene			0.200	0.2000		mg/Kg		100	70 - 130		
o-Xylene			0.100	0.1148		mg/Kg		115	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*141*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: LCSD 880-33658/2-A
Matrix: Solid
Analysis Batch: 33696

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 33658

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1115		mg/Kg		111	70 - 130	5	35

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2811-1
SDG: 03E1558097

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

Lab Sample ID: LCSD 880-33658/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 33696 — **Prep Batch: 33658**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.1107		mg/Kg		111	70 - 130	4	35
Ethylbenzene			0.100	0.1018		mg/Kg		102	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.2028		mg/Kg		101	70 - 130	1	35
o-Xylene			0.100	0.1164		mg/Kg		116	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*137*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*

Lab Sample ID: 880-18455-A-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 33696 — **Prep Batch: 33658**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U	0.0998	0.09194		mg/Kg		92	70 - 130
Toluene	<0.00199	U	0.0998	0.07491		mg/Kg		75	70 - 130
Ethylbenzene	<0.00199	U F1	0.0998	0.05497	F1	mg/Kg		55	70 - 130
m-Xylene & p-Xylene	<0.00398	U F1	0.200	0.1039	F1	mg/Kg		52	70 - 130
o-Xylene	<0.00199	U F1	0.0998	0.06000	F1	mg/Kg		60	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*143*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*

Lab Sample ID: 880-18455-A-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 33696 — **Prep Batch: 33658**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.0996	0.09655		mg/Kg		97	70 - 130	5	35
Toluene	<0.00199	U	0.0996	0.07924		mg/Kg		80	70 - 130	6	35
Ethylbenzene	<0.00199	U F1	0.0996	0.05768	F1	mg/Kg		58	70 - 130	5	35
m-Xylene & p-Xylene	<0.00398	U F1	0.199	0.1102	F1	mg/Kg		55	70 - 130	6	35
o-Xylene	<0.00199	U F1	0.0996	0.06536	F1	mg/Kg		66	70 - 130	9	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*141*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-33072/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 33348

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			08/30/22 19:48	1

QC Sample Results

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2811-1
SDG: 03E1558097

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-33072/2-A
Matrix: Solid
Analysis Batch: 33348

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	236.6		mg/Kg		95	90 - 110		

Lab Sample ID: LCSD 880-33072/3-A
Matrix: Solid
Analysis Batch: 33348

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	228.6		mg/Kg		91	90 - 110	3	20

Lab Sample ID: 890-2811-1 MS
Matrix: Solid
Analysis Batch: 33348

Client Sample ID: SS09
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	217		248	478.1		mg/Kg		105	90 - 110		

Lab Sample ID: 890-2811-1 MSD
Matrix: Solid
Analysis Batch: 33348

Client Sample ID: SS09
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	217		248	465.2		mg/Kg		100	90 - 110	3	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2811-1
SDG: 03E1558097

GC VOA

Prep Batch: 33371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-33371/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 33658

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2811-1	SS09	Total/NA	Solid	5035	
MB 880-33658/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-33658/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-33658/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-18455-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
880-18455-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 33696

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2811-1	SS09	Total/NA	Solid	8021B	33658
MB 880-33371/5-A	Method Blank	Total/NA	Solid	8021B	33371
MB 880-33658/5-A	Method Blank	Total/NA	Solid	8021B	33658
LCS 880-33658/1-A	Lab Control Sample	Total/NA	Solid	8021B	33658
LCSD 880-33658/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	33658
880-18455-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	33658
880-18455-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	33658

Analysis Batch: 33777

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2811-1	SS09	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 33000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2811-1	SS09	Total/NA	Solid	8015NM Prep	

Analysis Batch: 33012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2811-1	SS09	Total/NA	Solid	8015B NM	33000

Analysis Batch: 33277

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2811-1	SS09	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 33072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2811-1	SS09	Soluble	Solid	DI Leach	
MB 880-33072/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-33072/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-33072/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2811-1 MS	SS09	Soluble	Solid	DI Leach	
890-2811-1 MSD	SS09	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2811-1
SDG: 03E1558097

HPLC/IC

Analysis Batch: 33348

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2811-1	SS09	Soluble	Solid	300.0	33072
MB 880-33072/1-A	Method Blank	Soluble	Solid	300.0	33072
LCS 880-33072/2-A	Lab Control Sample	Soluble	Solid	300.0	33072
LCSD 880-33072/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	33072
890-2811-1 MS	SS09	Soluble	Solid	300.0	33072
890-2811-1 MSD	SS09	Soluble	Solid	300.0	33072

Lab Chronicle

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2811-1
SDG: 03E1558097

Client Sample ID: SS09
Date Collected: 08/23/22 10:25
Date Received: 08/23/22 16:32

Lab Sample ID: 890-2811-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	33658	09/02/22 15:18	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	33696	09/05/22 19:46	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			33777	09/05/22 21:17	AJ	EET MID
Total/NA	Analysis	8015 NM		1			33277	08/29/22 16:45	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	33000	08/25/22 16:27	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33012	08/27/22 02:07	AJ	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	33072	08/26/22 14:46	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	33348	08/30/22 20:08	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 184H

Job ID: 890-2811-1
SDG: 03E1558097

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2811-1
SDG: 03E1558097

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 184H

Job ID: 890-2811-1
SDG: 03E1558097

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2811-1	SS09	Solid	08/23/22 10:25	08/23/22 16:32	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)	Garret Green
Company Name:	Ensolum	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Green St.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	303-887-2946	Email:	Garret.Green@ExxonMobil.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	PLU 184H	Turn Around	☑ Routine ☐ Rush
Project Number:	03E1558097	Due Date:	
Project Location:	32.24919, -103.91836	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Kase Parker		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	NM007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	35.4
Total Containers:		Corrected Temperature:	35.2

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
SS08	S	8/23/2022	10:25	0.5				x	x	x

890-2811 Chain of Custody

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2S0_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Comments

Incident ID:
nAPP2219648561
Cost Center:
1137651001
AFE:

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			8.23.22 1632			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2811-1
SDG Number: 03E1558097

Login Number: 2811
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2811-1
SDG Number: 03E1558097

Login Number: 2811
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 08/25/22 10:42 AM

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-2812-1
Laboratory Sample Delivery Group: 03E1558097
Client Project/Site: PLU 184H

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

Attn: Tacoma Morrissey

JKramer

Authorized for release by:
9/5/2022 8:28:52 PM

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

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

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

Client: Ensolum
Project/Site: PLU 184H

Laboratory Job ID: 890-2812-1
SDG: 03E1558097

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2812-1
SDG: 03E1558097

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery 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
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 184H

Job ID: 890-2812-1
SDG: 03E1558097

Job ID: 890-2812-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2812-1

Receipt
The sample was received on 8/23/2022 4:32 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 5.2°C

GC VOA
Method 8021B: Surrogate recovery for the following sample was outside control limits: SS08 (890-2812-1). 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.

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

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

Client Sample Results

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2812-1
SDG: 03E1558097

Client Sample ID: SS08

Date Collected: 08/23/22 10:20
Date Received: 08/23/22 16:32
Sample Depth: 0.5

Lab Sample ID: 890-2812-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/02/22 15:18	09/05/22 20:13	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/02/22 15:18	09/05/22 20:13	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/02/22 15:18	09/05/22 20:13	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/02/22 15:18	09/05/22 20:13	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/02/22 15:18	09/05/22 20:13	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/02/22 15:18	09/05/22 20:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*138*	*S1+*	*70 - 130*	*09/02/22 15:18*	*09/05/22 20:13*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*09/02/22 15:18*	*09/05/22 20:13*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/05/22 21:18	1

Method: 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			08/29/22 10:16	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		08/26/22 15:42	08/28/22 18:35	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		08/26/22 15:42	08/28/22 18:35	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		08/26/22 15:42	08/28/22 18:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*08/26/22 15:42*	*08/28/22 18:35*	*1*
o-Terphenyl	*91*		*70 - 130*	*08/26/22 15:42*	*08/28/22 18:35*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**201**		5.04		mg/Kg			08/30/22 20:28	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2812-1
SDG: 03E1558097

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)										
880-18455-A-1-B MS	Matrix Spike	143 S1+	90										
880-18455-A-1-C MSD	Matrix Spike Duplicate	141 S1+	96										
890-2812-1	SS08	138 S1+	98										
LCS 880-33658/1-A	Lab Control Sample	141 S1+	95										
LCSD 880-33658/2-A	Lab Control Sample Dup	137 S1+	90										
MB 880-33371/5-A	Method Blank	103	69 S1-										
MB 880-33658/5-A	Method Blank	105	71										

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)										
890-2812-1	SS08	88	91										
890-2812-1 MS	SS08	90	84										
890-2812-1 MSD	SS08	93	85										
LCS 880-33084/2-A	Lab Control Sample	105	114										
LCSD 880-33084/3-A	Lab Control Sample Dup	108	119										
MB 880-33084/1-A	Method Blank	73	79										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2812-1
SDG: 03E1558097

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-33371/5-A
Matrix: Solid
Analysis Batch: 33696

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 33371

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/30/22 14:16	09/04/22 20:08	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/30/22 14:16	09/04/22 20:08	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/30/22 14:16	09/04/22 20:08	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/30/22 14:16	09/04/22 20:08	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/30/22 14:16	09/04/22 20:08	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/30/22 14:16	09/04/22 20:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*08/30/22 14:16*	*09/04/22 20:08*	*1*
1,4-Difluorobenzene (Surr)	*69*	*S1-*	*70 - 130*	*08/30/22 14:16*	*09/04/22 20:08*	*1*

Lab Sample ID: MB 880-33658/5-A
Matrix: Solid
Analysis Batch: 33696

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 33658

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/02/22 15:18	09/05/22 09:38	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/02/22 15:18	09/05/22 09:38	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/02/22 15:18	09/05/22 09:38	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/02/22 15:18	09/05/22 09:38	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/02/22 15:18	09/05/22 09:38	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/02/22 15:18	09/05/22 09:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*09/02/22 15:18*	*09/05/22 09:38*	*1*
1,4-Difluorobenzene (Surr)	*71*		*70 - 130*	*09/02/22 15:18*	*09/05/22 09:38*	*1*

Lab Sample ID: LCS 880-33658/1-A
Matrix: Solid
Analysis Batch: 33696

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 33658

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1064		mg/Kg		106	70 - 130		
Toluene			0.100	0.1061		mg/Kg		106	70 - 130		
Ethylbenzene			0.100	0.09992		mg/Kg		100	70 - 130		
m-Xylene & p-Xylene			0.200	0.2000		mg/Kg		100	70 - 130		
o-Xylene			0.100	0.1148		mg/Kg		115	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*141*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: LCSD 880-33658/2-A
Matrix: Solid
Analysis Batch: 33696

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 33658

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1115		mg/Kg		111	70 - 130	5	35

QC Sample Results

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2812-1
SDG: 03E1558097

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

Lab Sample ID: LCSD 880-33658/2-A
Matrix: Solid
Analysis Batch: 33696

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 33658

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.1107		mg/Kg		111	70 - 130	4	35
Ethylbenzene			0.100	0.1018		mg/Kg		102	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.2028		mg/Kg		101	70 - 130	1	35
o-Xylene			0.100	0.1164		mg/Kg		116	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*137*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*

Lab Sample ID: 880-18455-A-1-B MS
Matrix: Solid
Analysis Batch: 33696

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 33658

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U	0.0998	0.09194		mg/Kg		92	70 - 130
Toluene	<0.00199	U	0.0998	0.07491		mg/Kg		75	70 - 130
Ethylbenzene	<0.00199	U F1	0.0998	0.05497	F1	mg/Kg		55	70 - 130
m-Xylene & p-Xylene	<0.00398	U F1	0.200	0.1039	F1	mg/Kg		52	70 - 130
o-Xylene	<0.00199	U F1	0.0998	0.06000	F1	mg/Kg		60	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*143*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*

Lab Sample ID: 880-18455-A-1-C MSD
Matrix: Solid
Analysis Batch: 33696

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 33658

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.0996	0.09655		mg/Kg		97	70 - 130	5	35
Toluene	<0.00199	U	0.0996	0.07924		mg/Kg		80	70 - 130	6	35
Ethylbenzene	<0.00199	U F1	0.0996	0.05768	F1	mg/Kg		58	70 - 130	5	35
m-Xylene & p-Xylene	<0.00398	U F1	0.199	0.1102	F1	mg/Kg		55	70 - 130	6	35
o-Xylene	<0.00199	U F1	0.0996	0.06536	F1	mg/Kg		66	70 - 130	9	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*141*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

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

Lab Sample ID: MB 880-33084/1-A
Matrix: Solid
Analysis Batch: 33127

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 33084

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		08/26/22 15:42	08/28/22 17:32	1

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2812-1
SDG: 03E1558097

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

Lab Sample ID: MB 880-33084/1-A
Matrix: Solid
Analysis Batch: 33127

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 33084

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		08/26/22 15:42	08/28/22 17:32	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/26/22 15:42	08/28/22 17:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*73*		*70 - 130*	*08/26/22 15:42*	*08/28/22 17:32*	*1*
o-Terphenyl	*79*		*70 - 130*	*08/26/22 15:42*	*08/28/22 17:32*	*1*

Lab Sample ID: LCS 880-33084/2-A
Matrix: Solid
Analysis Batch: 33127

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 33084

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	882.1		mg/Kg		88	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	963.8		mg/Kg		96	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*105*		*70 - 130*
o-Terphenyl	*114*		*70 - 130*

Lab Sample ID: LCSD 880-33084/3-A
Matrix: Solid
Analysis Batch: 33127

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 33084

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	914.9		mg/Kg		91	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			1000	1028		mg/Kg		103	70 - 130	6	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*108*		*70 - 130*
o-Terphenyl	*119*		*70 - 130*

Lab Sample ID: 890-2812-1 MS
Matrix: Solid
Analysis Batch: 33127

Client Sample ID: SS08
Prep Type: Total/NA
Prep Batch: 33084

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	906.5		mg/Kg		88	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	999	728.3		mg/Kg		73	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*90*		*70 - 130*
o-Terphenyl	*84*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2812-1
SDG: 03E1558097

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

Lab Sample ID: 890-2812-1 MSD
Matrix: Solid
Analysis Batch: 33127

Client Sample ID: SS08
Prep Type: Total/NA
Prep Batch: 33084

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	955.4		mg/Kg		93	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<49.9	U	998	749.7		mg/Kg		75	70 - 130	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*93*		*70 - 130*
o-Terphenyl	*85*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-33072/1-A
Matrix: Solid
Analysis Batch: 33348

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			08/30/22 19:48	1

Lab Sample ID: LCS 880-33072/2-A
Matrix: Solid
Analysis Batch: 33348

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	236.6		mg/Kg		95	90 - 110		

Lab Sample ID: LCSD 880-33072/3-A
Matrix: Solid
Analysis Batch: 33348

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	228.6		mg/Kg		91	90 - 110	3	20

Lab Sample ID: 890-2811-A-1-C MS
Matrix: Solid
Analysis Batch: 33348

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	217		248	478.1		mg/Kg		105	90 - 110		

Lab Sample ID: 890-2811-A-1-D MSD
Matrix: Solid
Analysis Batch: 33348

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	217		248	465.2		mg/Kg		100	90 - 110	3	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2812-1
SDG: 03E1558097

GC VOA

Prep Batch: 33371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-33371/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 33658

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2812-1	SS08	Total/NA	Solid	5035	
MB 880-33658/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-33658/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-33658/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-18455-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
880-18455-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 33696

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2812-1	SS08	Total/NA	Solid	8021B	33658
MB 880-33371/5-A	Method Blank	Total/NA	Solid	8021B	33371
MB 880-33658/5-A	Method Blank	Total/NA	Solid	8021B	33658
LCS 880-33658/1-A	Lab Control Sample	Total/NA	Solid	8021B	33658
LCSD 880-33658/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	33658
880-18455-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	33658
880-18455-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	33658

Analysis Batch: 33778

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2812-1	SS08	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 33084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2812-1	SS08	Total/NA	Solid	8015NM Prep	
MB 880-33084/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-33084/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-33084/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2812-1 MS	SS08	Total/NA	Solid	8015NM Prep	
890-2812-1 MSD	SS08	Total/NA	Solid	8015NM Prep	

Analysis Batch: 33127

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2812-1	SS08	Total/NA	Solid	8015B NM	33084
MB 880-33084/1-A	Method Blank	Total/NA	Solid	8015B NM	33084
LCS 880-33084/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	33084
LCSD 880-33084/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	33084
890-2812-1 MS	SS08	Total/NA	Solid	8015B NM	33084
890-2812-1 MSD	SS08	Total/NA	Solid	8015B NM	33084

Analysis Batch: 33183

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2812-1	SS08	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2812-1
SDG: 03E1558097

HPLC/IC

Leach Batch: 33072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2812-1	SS08	Soluble	Solid	DI Leach	
MB 880-33072/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-33072/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-33072/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2811-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2811-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 33348

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2812-1	SS08	Soluble	Solid	300.0	33072
MB 880-33072/1-A	Method Blank	Soluble	Solid	300.0	33072
LCS 880-33072/2-A	Lab Control Sample	Soluble	Solid	300.0	33072
LCSD 880-33072/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	33072
890-2811-A-1-C MS	Matrix Spike	Soluble	Solid	300.0	33072
890-2811-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	33072

Lab Chronicle

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2812-1
SDG: 03E1558097

Client Sample ID: SS08
Date Collected: 08/23/22 10:20
Date Received: 08/23/22 16:32

Lab Sample ID: 890-2812-1
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	33658	09/02/22 15:18	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	33696	09/05/22 20:13	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			33778	09/05/22 21:18	AJ	EET MID
Total/NA	Analysis	8015 NM		1			33183	08/29/22 10:16	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	33084	08/26/22 15:42	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33127	08/28/22 18:35	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	33072	08/26/22 14:46	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	33348	08/30/22 20:28	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 184H

Job ID: 890-2812-1
SDG: 03E1558097

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2812-1
SDG: 03E1558097

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 184H

Job ID: 890-2812-1
SDG: 03E1558097

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2812-1	SS08	Solid	08/23/22 10:20	08/23/22 16:32	0.5

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Chain of Custody

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

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Work Order No: _____

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

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	PLU 184H	Turn Around	☑ Routine ☐ Rush
Project Number:	03E1558097	Due Date:	
Project Location:	32.24919, -103.91836	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Kase Parker		
PO #:			

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:	NM-007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	5.4	
Total Containers:		Corrected Temperature:	5.2	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
SS08	S	8/23/2022	10:20	0.5				x	x	x

890-2812 Chain of Custody

Preservative Codes

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

Sample Comments

Incident ID:
nAPP2219648561
Cost Center:
1137651001
AFE:

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			8/23/22 1632			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2812-1
SDG Number: 03E1558097

Login Number: 2812
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2812-1
SDG Number: 03E1558097

Login Number: 2812
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 08/25/22 10:42 AM

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-2813-1
Laboratory Sample Delivery Group: 03E1558097
Client Project/Site: PLU 184H

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

Attn: Tacoma Morrissey

JKramer

Authorized for release by:
9/6/2022 7:38:10 AM

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

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

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

Client: Ensolum
Project/Site: PLU 184H

Laboratory Job ID: 890-2813-1
SDG: 03E1558097

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2813-1
SDG: 03E1558097

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2813-1
SDG: 03E1558097

Job ID: 890-2813-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2813-1

Receipt
The sample was received on 8/23/2022 4:32 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 5.2°C

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

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

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

Client Sample Results

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2813-1
SDG: 03E1558097

Client Sample ID: SS07

Date Collected: 08/23/22 10:15
Date Received: 08/23/22 16:32
Sample Depth: 0.5

Lab Sample ID: 890-2813-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/02/22 15:33	09/06/22 00:57	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/02/22 15:33	09/06/22 00:57	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/02/22 15:33	09/06/22 00:57	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/02/22 15:33	09/06/22 00:57	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/02/22 15:33	09/06/22 00:57	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/02/22 15:33	09/06/22 00:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*126*		*70 - 130*	*09/02/22 15:33*	*09/06/22 00:57*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*09/02/22 15:33*	*09/06/22 00:57*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			09/06/22 08:13	1

Method: 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			08/29/22 10:16	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		08/26/22 15:42	08/28/22 19:38	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		08/26/22 15:42	08/28/22 19:38	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		08/26/22 15:42	08/28/22 19:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*08/26/22 15:42*	*08/28/22 19:38*	*1*
o-Terphenyl	*88*		*70 - 130*	*08/26/22 15:42*	*08/28/22 19:38*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**47.9**		5.04		mg/Kg			08/30/22 20:35	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2813-1
SDG: 03E1558097

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)
890-2809-A-1-E MS	Matrix Spike	141 S1+	103
890-2809-A-1-F MSD	Matrix Spike Duplicate	110	110
890-2813-1	SS07	126	91
LCS 880-33660/1-A	Lab Control Sample	128	101
LCSD 880-33660/2-A	Lab Control Sample Dup	128	102
MB 880-33660/5-A	Method Blank	108	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)
890-2812-A-1-C MS	Matrix Spike	90	84
890-2812-A-1-D MSD	Matrix Spike Duplicate	93	85
890-2813-1	SS07	88	88
LCS 880-33084/2-A	Lab Control Sample	105	114
LCSD 880-33084/3-A	Lab Control Sample Dup	108	119
MB 880-33084/1-A	Method Blank	73	79

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2813-1
SDG: 03E1558097

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-33660/5-A
Matrix: Solid
Analysis Batch: 33741

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 33660

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/02/22 15:33	09/05/22 17:03	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/02/22 15:33	09/05/22 17:03	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/02/22 15:33	09/05/22 17:03	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/02/22 15:33	09/05/22 17:03	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/02/22 15:33	09/05/22 17:03	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/02/22 15:33	09/05/22 17:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*09/02/22 15:33*	*09/05/22 17:03*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*09/02/22 15:33*	*09/05/22 17:03*	*1*

Lab Sample ID: LCS 880-33660/1-A
Matrix: Solid
Analysis Batch: 33741

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 33660

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09189		mg/Kg		92	70 - 130		
Toluene			0.100	0.08925		mg/Kg		89	70 - 130		
Ethylbenzene			0.100	0.09337		mg/Kg		93	70 - 130		
m-Xylene & p-Xylene			0.200	0.2014		mg/Kg		101	70 - 130		
o-Xylene			0.100	0.1157		mg/Kg		116	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 880-33660/2-A
Matrix: Solid
Analysis Batch: 33741

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 33660

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09911		mg/Kg		99	70 - 130	8	35
Toluene			0.100	0.09836		mg/Kg		98	70 - 130	10	35
Ethylbenzene			0.100	0.1033		mg/Kg		103	70 - 130	10	35
m-Xylene & p-Xylene			0.200	0.2226		mg/Kg		111	70 - 130	10	35
o-Xylene			0.100	0.1281		mg/Kg		128	70 - 130	10	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: 890-2809-A-1-E MS
Matrix: Solid
Analysis Batch: 33741

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 33660

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U F1	0.0998	0.05599	F1	mg/Kg		56	70 - 130		
Toluene	<0.00199	U F1	0.0998	0.05008	F1	mg/Kg		50	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2813-1
SDG: 03E1558097

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

Lab Sample ID: 890-2809-A-1-E MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 33741 — **Prep Batch: 33660**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U F1	0.0998	0.04944	F1	mg/Kg		50	70 - 130
m-Xylene & p-Xylene	<0.00398	U F1	0.200	0.1012	F1	mg/Kg		51	70 - 130
o-Xylene	<0.00199	U F1	0.0998	0.05800	F1	mg/Kg		58	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*141*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: 890-2809-A-1-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 33741 — **Prep Batch: 33660**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U F1	0.100	0.07600		mg/Kg		76	70 - 130	30	35
Toluene	<0.00199	U F1	0.100	0.06048	F1	mg/Kg		60	70 - 130	19	35
Ethylbenzene	<0.00199	U F1	0.100	0.04987	F1	mg/Kg		50	70 - 130	1	35
m-Xylene & p-Xylene	<0.00398	U F1	0.201	0.09832	F1	mg/Kg		49	70 - 130	3	35
o-Xylene	<0.00199	U F1	0.100	0.05860	F1	mg/Kg		58	70 - 130	1	35

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

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

Lab Sample ID: MB 880-33084/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 33127 — **Prep Batch: 33084**

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		08/26/22 15:42	08/28/22 17:32	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/26/22 15:42	08/28/22 17:32	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/26/22 15:42	08/28/22 17:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*73*		*70 - 130*	*08/26/22 15:42*	*08/28/22 17:32*	*1*
o-Terphenyl	*79*		*70 - 130*	*08/26/22 15:42*	*08/28/22 17:32*	*1*

Lab Sample ID: LCS 880-33084/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 33127 — **Prep Batch: 33084**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	882.1		mg/Kg		88	70 - 130
Diesel Range Organics (Over C10-C28)	1000	963.8		mg/Kg		96	70 - 130

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2813-1
SDG: 03E1558097

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

Lab Sample ID: LCS 880-33084/2-A
Matrix: Solid
Analysis Batch: 33127

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 33084

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	105		70 - 130
o-Terphenyl	114		70 - 130

Lab Sample ID: LCSD 880-33084/3-A
Matrix: Solid
Analysis Batch: 33127

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 33084

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	914.9		mg/Kg		91	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			1000	1028		mg/Kg		103	70 - 130	6	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	108		70 - 130
o-Terphenyl	119		70 - 130

Lab Sample ID: 890-2812-A-1-C MS
Matrix: Solid
Analysis Batch: 33127

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 33084

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	906.5		mg/Kg		88	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	999	728.3		mg/Kg		73	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	90		70 - 130
o-Terphenyl	84		70 - 130

Lab Sample ID: 890-2812-A-1-D MSD
Matrix: Solid
Analysis Batch: 33127

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 33084

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	955.4		mg/Kg		93	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<49.9	U	998	749.7		mg/Kg		75	70 - 130	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	93		70 - 130
o-Terphenyl	85		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2813-1
SDG: 03E1558097

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-33072/1-A
Matrix: Solid
Analysis Batch: 33348

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			08/30/22 19:48	1

Lab Sample ID: LCS 880-33072/2-A
Matrix: Solid
Analysis Batch: 33348

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	236.6		mg/Kg		95	90 - 110		

Lab Sample ID: LCSD 880-33072/3-A
Matrix: Solid
Analysis Batch: 33348

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	228.6		mg/Kg		91	90 - 110	3	20

Lab Sample ID: 890-2811-A-1-C MS
Matrix: Solid
Analysis Batch: 33348

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	217		248	478.1		mg/Kg		105	90 - 110		

Lab Sample ID: 890-2811-A-1-D MSD
Matrix: Solid
Analysis Batch: 33348

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	217		248	465.2		mg/Kg		100	90 - 110	3	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2813-1
SDG: 03E1558097

GC VOA

Prep Batch: 33660

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2813-1	SS07	Total/NA	Solid	5035	
MB 880-33660/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-33660/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-33660/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2809-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
890-2809-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 33741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2813-1	SS07	Total/NA	Solid	8021B	33660
MB 880-33660/5-A	Method Blank	Total/NA	Solid	8021B	33660
LCS 880-33660/1-A	Lab Control Sample	Total/NA	Solid	8021B	33660
LCSD 880-33660/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	33660
890-2809-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	33660
890-2809-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	33660

Analysis Batch: 33792

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2813-1	SS07	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 33084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2813-1	SS07	Total/NA	Solid	8015NM Prep	
MB 880-33084/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-33084/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-33084/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2812-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2812-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 33127

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2813-1	SS07	Total/NA	Solid	8015B NM	33084
MB 880-33084/1-A	Method Blank	Total/NA	Solid	8015B NM	33084
LCS 880-33084/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	33084
LCSD 880-33084/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	33084
890-2812-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	33084
890-2812-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	33084

Analysis Batch: 33184

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2813-1	SS07	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 33072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2813-1	SS07	Soluble	Solid	DI Leach	
MB 880-33072/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-33072/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-33072/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2813-1
SDG: 03E1558097

HPLC/IC (Continued)

Leach Batch: 33072 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2811-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2811-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 33348

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2813-1	SS07	Soluble	Solid	300.0	33072
MB 880-33072/1-A	Method Blank	Soluble	Solid	300.0	33072
LCS 880-33072/2-A	Lab Control Sample	Soluble	Solid	300.0	33072
LCSD 880-33072/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	33072
890-2811-A-1-C MS	Matrix Spike	Soluble	Solid	300.0	33072
890-2811-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	33072

Lab Chronicle

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2813-1
SDG: 03E1558097

Client Sample ID: SS07
Date Collected: 08/23/22 10:15
Date Received: 08/23/22 16:32

Lab Sample ID: 890-2813-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	33660	09/02/22 15:33	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	33741	09/06/22 00:57	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			33792	09/06/22 08:13	AJ	EET MID
Total/NA	Analysis	8015 NM		1			33184	08/29/22 10:16	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	33084	08/26/22 15:42	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33127	08/28/22 19:38	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	33072	08/26/22 14:46	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	33348	08/30/22 20:35	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2813-1
SDG: 03E1558097

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2813-1
SDG: 03E1558097

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 184H

Job ID: 890-2813-1
SDG: 03E1558097

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2813-1	SS07	Solid	08/23/22 10:15	08/23/22 16:32	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)	Garret Green
Company Name:	Ensolum	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Green St.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	303-887-2946	Email:	Garret.Green@ExxonMobil.com

Work Order Comments

Program: UST/PST ☐ **PRP** ☐ **Brownfields** ☐ **RRC** ☐ **Superfund** ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	PLU 184H	Turn Around	
Project Number:	03E1558097	☑ Routine ☐ Rush	
Project Location:	32.24919, -103.91836	Due Date:	
Sampler's Name:	Kase Parker	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:	TMM-007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	5.4	
Total Containers:		Corrected Temperature:	5.2	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
SS07	S	8/23/2022	10:15	0.5				x	x	x

Parameters

890-2813 Chain of Custody

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2S0_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Comments

Incident ID:
nAPP2219648561
Cost Center:
1137651001
AFE:

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			8.23.22 1602			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2813-1
SDG Number: 03E1558097

Login Number: 2813
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2813-1
SDG Number: 03E1558097

Login Number: 2813
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 08/25/22 10:42 AM

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-2814-1
Laboratory Sample Delivery Group: 03E1558097
Client Project/Site: PLU 184

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

Attn: Tacoma Morrissey

JKramer

Authorized for release by:
9/5/2022 9:12:42 AM

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

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

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

Client: Ensolum
Project/Site: PLU 184

Laboratory Job ID: 890-2814-1
SDG: 03E1558097

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 184

Job ID: 890-2814-1
SDG: 03E1558097

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high 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
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 184

Job ID: 890-2814-1
SDG: 03E1558097

Job ID: 890-2814-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2814-1

Receipt
The sample was received on 8/23/2022 4:32 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 5.2°C

GC VOA
Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-33662 and analytical batch 880-33695 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

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

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

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

Client Sample Results

Client: Ensolum
Project/Site: PLU 184

Job ID: 890-2814-1
SDG: 03E1558097

Client Sample ID: SS06

Date Collected: 08/23/22 10:10
Date Received: 08/23/22 16:32
Sample Depth: 0.5

Lab Sample ID: 890-2814-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/02/22 15:57	09/05/22 09:37	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/02/22 15:57	09/05/22 09:37	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/02/22 15:57	09/05/22 09:37	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/02/22 15:57	09/05/22 09:37	1
o-Xylene	<0.00200	U *+	0.00200		mg/Kg		09/02/22 15:57	09/05/22 09:37	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/02/22 15:57	09/05/22 09:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*137*	*S1+*	*70 - 130*	*09/02/22 15:57*	*09/05/22 09:37*	*1*
1,4-Difluorobenzene (Surr)	*85*		*70 - 130*	*09/02/22 15:57*	*09/05/22 09:37*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			09/05/22 10:06	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			08/29/22 10:16	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/26/22 15:42	08/28/22 20:00	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/26/22 15:42	08/28/22 20:00	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/26/22 15:42	08/28/22 20:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*80*		*70 - 130*	*08/26/22 15:42*	*08/28/22 20:00*	*1*
o-Terphenyl	*83*		*70 - 130*	*08/26/22 15:42*	*08/28/22 20:00*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**156**		4.98		mg/Kg			08/30/22 20:42	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 184

Job ID: 890-2814-1
SDG: 03E1558097

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)
880-18525-A-1-F MS	Matrix Spike	146 S1+	97
880-18525-A-1-G MSD	Matrix Spike Duplicate	149 S1+	97
890-2814-1	SS06	137 S1+	85
LCS 880-33662/1-A	Lab Control Sample	128	100
LCSD 880-33662/2-A	Lab Control Sample Dup	149 S1+	100
MB 880-33662/5-A	Method Blank	107	87

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)
890-2812-A-1-C MS	Matrix Spike	90	84
890-2812-A-1-D MSD	Matrix Spike Duplicate	93	85
890-2814-1	SS06	80	83
LCS 880-33084/2-A	Lab Control Sample	105	114
LCSD 880-33084/3-A	Lab Control Sample Dup	108	119
MB 880-33084/1-A	Method Blank	73	79

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 184

Job ID: 890-2814-1
SDG: 03E1558097

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-33662/5-A
Matrix: Solid
Analysis Batch: 33695

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 33662

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/02/22 15:57	09/05/22 06:11	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/02/22 15:57	09/05/22 06:11	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/02/22 15:57	09/05/22 06:11	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/02/22 15:57	09/05/22 06:11	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/02/22 15:57	09/05/22 06:11	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/02/22 15:57	09/05/22 06:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*09/02/22 15:57*	*09/05/22 06:11*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*09/02/22 15:57*	*09/05/22 06:11*	*1*

Lab Sample ID: LCS 880-33662/1-A
Matrix: Solid
Analysis Batch: 33695

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 33662

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09830		mg/Kg		98	70 - 130		
Toluene			0.100	0.09610		mg/Kg		96	70 - 130		
Ethylbenzene			0.100	0.1041		mg/Kg		104	70 - 130		
m-Xylene & p-Xylene			0.200	0.2226		mg/Kg		111	70 - 130		
o-Xylene			0.100	0.1297		mg/Kg		130	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 880-33662/2-A
Matrix: Solid
Analysis Batch: 33695

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 33662

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09155		mg/Kg		92	70 - 130	7	35
Toluene			0.100	0.09623		mg/Kg		96	70 - 130	0	35
Ethylbenzene			0.100	0.1110		mg/Kg		111	70 - 130	6	35
m-Xylene & p-Xylene			0.200	0.2433		mg/Kg		122	70 - 130	9	35
o-Xylene			0.100	0.1417	*+	mg/Kg		142	70 - 130	9	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*149*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 880-18525-A-1-F MS
Matrix: Solid
Analysis Batch: 33695

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 33662

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U	0.0998	0.08364		mg/Kg		84	70 - 130		
Toluene	<0.00200	U	0.0998	0.08690		mg/Kg		87	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 184

Job ID: 890-2814-1
SDG: 03E1558097

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

Lab Sample ID: 880-18525-A-1-F MS | **Client Sample ID: Matrix Spike**
Matrix: Solid | **Prep Type: Total/NA**
Analysis Batch: 33695 | **Prep Batch: 33662**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.0998	0.09796		mg/Kg		98	70 - 130
m-Xylene & p-Xylene	<0.00401	U	0.200	0.2107		mg/Kg		106	70 - 130
o-Xylene	<0.00200	U *+	0.0998	0.1214		mg/Kg		122	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*146*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: 880-18525-A-1-G MSD | **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid | **Prep Type: Total/NA**
Analysis Batch: 33695 | **Prep Batch: 33662**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0996	0.08093		mg/Kg		81	70 - 130	3	35
Toluene	<0.00200	U	0.0996	0.08426		mg/Kg		85	70 - 130	3	35
Ethylbenzene	<0.00200	U	0.0996	0.09783		mg/Kg		98	70 - 130	0	35
m-Xylene & p-Xylene	<0.00401	U	0.199	0.2107		mg/Kg		106	70 - 130	0	35
o-Xylene	<0.00200	U *+	0.0996	0.1208		mg/Kg		121	70 - 130	0	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*149*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

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

Lab Sample ID: MB 880-33084/1-A | **Client Sample ID: Method Blank**
Matrix: Solid | **Prep Type: Total/NA**
Analysis Batch: 33127 | **Prep Batch: 33084**

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		08/26/22 15:42	08/28/22 17:32	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/26/22 15:42	08/28/22 17:32	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/26/22 15:42	08/28/22 17:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*73*		*70 - 130*	*08/26/22 15:42*	*08/28/22 17:32*	*1*
o-Terphenyl	*79*		*70 - 130*	*08/26/22 15:42*	*08/28/22 17:32*	*1*

Lab Sample ID: LCS 880-33084/2-A | **Client Sample ID: Lab Control Sample**
Matrix: Solid | **Prep Type: Total/NA**
Analysis Batch: 33127 | **Prep Batch: 33084**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	882.1		mg/Kg		88	70 - 130
Diesel Range Organics (Over C10-C28)	1000	963.8		mg/Kg		96	70 - 130

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: PLU 184

Job ID: 890-2814-1
SDG: 03E1558097

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

Lab Sample ID: LCS 880-33084/2-A
Matrix: Solid
Analysis Batch: 33127

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 33084

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	105		70 - 130
o-Terphenyl	114		70 - 130

Lab Sample ID: LCSD 880-33084/3-A
Matrix: Solid
Analysis Batch: 33127

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 33084

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	914.9		mg/Kg		91	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			1000	1028		mg/Kg		103	70 - 130	6	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	108		70 - 130
o-Terphenyl	119		70 - 130

Lab Sample ID: 890-2812-A-1-C MS
Matrix: Solid
Analysis Batch: 33127

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 33084

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	906.5		mg/Kg		88	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	999	728.3		mg/Kg		73	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	90		70 - 130
o-Terphenyl	84		70 - 130

Lab Sample ID: 890-2812-A-1-D MSD
Matrix: Solid
Analysis Batch: 33127

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 33084

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	955.4		mg/Kg		93	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<49.9	U	998	749.7		mg/Kg		75	70 - 130	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	93		70 - 130
o-Terphenyl	85		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 184

Job ID: 890-2814-1
SDG: 03E1558097

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-33072/1-A
Matrix: Solid
Analysis Batch: 33348

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			08/30/22 19:48	1

Lab Sample ID: LCS 880-33072/2-A
Matrix: Solid
Analysis Batch: 33348

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	236.6		mg/Kg		95	90 - 110		

Lab Sample ID: LCSD 880-33072/3-A
Matrix: Solid
Analysis Batch: 33348

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	228.6		mg/Kg		91	90 - 110	3	20

Lab Sample ID: 890-2811-A-1-C MS
Matrix: Solid
Analysis Batch: 33348

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	217		248	478.1		mg/Kg		105	90 - 110		

Lab Sample ID: 890-2811-A-1-D MSD
Matrix: Solid
Analysis Batch: 33348

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	217		248	465.2		mg/Kg		100	90 - 110	3	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 184

Job ID: 890-2814-1
SDG: 03E1558097

GC VOA

Prep Batch: 33662

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2814-1	SS06	Total/NA	Solid	5035	
MB 880-33662/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-33662/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-33662/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-18525-A-1-F MS	Matrix Spike	Total/NA	Solid	5035	
880-18525-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 33695

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2814-1	SS06	Total/NA	Solid	8021B	33662
MB 880-33662/5-A	Method Blank	Total/NA	Solid	8021B	33662
LCS 880-33662/1-A	Lab Control Sample	Total/NA	Solid	8021B	33662
LCSD 880-33662/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	33662
880-18525-A-1-F MS	Matrix Spike	Total/NA	Solid	8021B	33662
880-18525-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	33662

Analysis Batch: 33739

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2814-1	SS06	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 33084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2814-1	SS06	Total/NA	Solid	8015NM Prep	
MB 880-33084/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-33084/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-33084/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2812-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2812-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 33127

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2814-1	SS06	Total/NA	Solid	8015B NM	33084
MB 880-33084/1-A	Method Blank	Total/NA	Solid	8015B NM	33084
LCS 880-33084/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	33084
LCSD 880-33084/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	33084
890-2812-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	33084
890-2812-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	33084

Analysis Batch: 33185

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2814-1	SS06	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 33072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2814-1	SS06	Soluble	Solid	DI Leach	
MB 880-33072/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-33072/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-33072/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: PLU 184

Job ID: 890-2814-1
SDG: 03E1558097

HPLC/IC (Continued)

Leach Batch: 33072 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2811-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2811-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 33348

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2814-1	SS06	Soluble	Solid	300.0	33072
MB 880-33072/1-A	Method Blank	Soluble	Solid	300.0	33072
LCS 880-33072/2-A	Lab Control Sample	Soluble	Solid	300.0	33072
LCSD 880-33072/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	33072
890-2811-A-1-C MS	Matrix Spike	Soluble	Solid	300.0	33072
890-2811-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	33072

Lab Chronicle

Client: Ensolum
Project/Site: PLU 184

Job ID: 890-2814-1
SDG: 03E1558097

Client Sample ID: SS06
Date Collected: 08/23/22 10:10
Date Received: 08/23/22 16:32

Lab Sample ID: 890-2814-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	33662	09/02/22 15:57	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	33695	09/05/22 09:37	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			33739	09/05/22 10:06	AJ	EET MID
Total/NA	Analysis	8015 NM		1			33185	08/29/22 10:16	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	33084	08/26/22 15:42	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33127	08/28/22 20:00	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	33072	08/26/22 14:46	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	33348	08/30/22 20:42	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 184

Job ID: 890-2814-1
SDG: 03E1558097

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 184

Job ID: 890-2814-1
SDG: 03E1558097

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 184

Job ID: 890-2814-1
SDG: 03E1558097

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2814-1	SS06	Solid	08/23/22 10:10	08/23/22 16:32	0.5

Chain of Custody

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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)	Garret Green
Company Name:	Ensolum	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Green St.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	303-887-2946	Email:	Garret.Green@ExxonMobil.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	PLU 184H	Turn Around	☑ Routine ☐ Rush
Project Number:	03E1558097	Due Date:	
Project Location:	32.24919, -103.91836	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Kase Parker		
PO #:			

SAMPLE RECEIPT					
Temp Blank:	Yes	No	Wet Ice:	Yes	No
Samples Received Intact:	Yes	No	Thermometer ID:	TNM007	
Cooler Custody Seals:	Yes	No	N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes	No	N/A	Temperature Reading:	5.4
Total Containers:				Corrected Temperature:	5.2

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
SS06	S	8/23/2022	10:10	0.5				x	x	x

890-2814 Chain of Custody

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2S0_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Comments

Incident ID:
nAPP2219648561
Cost Center:
1137651001
AFE:

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time		Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			8.23.22 16:32	2			
3				4			
5				6			

Revised Date: 08/25/2020 Rev: 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2814-1
SDG Number: 03E1558097

Login Number: 2814
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2814-1
SDG Number: 03E1558097

Login Number: 2814
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 08/25/22 10:42 AM

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-2815-1
Laboratory Sample Delivery Group: 03E1558097
Client Project/Site: PLU 184H

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

Attn: Tacoma Morrissey

JKramer

Authorized for release by:
9/5/2022 8:28:53 PM

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

LINKS

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Have a Question? Ask The Expert

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

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

Client: Ensolum
Project/Site: PLU 184H

Laboratory Job ID: 890-2815-1
SDG: 03E1558097

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2815-1
SDG: 03E1558097

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
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 184H

Job ID: 890-2815-1
SDG: 03E1558097

Job ID: 890-2815-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2815-1

Receipt
The samples were received on 8/23/2022 4:32 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 5.2°C

Receipt Exceptions
The container label for the following samples did not match the information listed on the Chain-of-Custody (COC): SS01 (890-2815-1), SS02 (890-2815-2), SS03 (890-2815-3), SS04 (890-2815-4) and SS05 (890-2815-5). The container labels list <SAMPLE_ID>, while the COC lists <SAMPLEID>. The client was contacted, and the lab was instructed to <EXPLANATION_REQUIRED>.
890-2815
COCs
SS01 8-23-22
SS02 8-24-22
SS03 8-25-22
SS04 8-26-22
SS05 8-27-22

Samples cannot be taken in the future- this has to be a printing error on the COCs

Jars
All samples have the date of 8-23-22

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-33663 and analytical batch 880-33742 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
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 184H

Job ID: 890-2815-1
SDG: 03E1558097

Client Sample ID: SS01

Lab Sample ID: 890-2815-1
Matrix: Solid
Date Collected: 08/23/22 09:45
Date Received: 08/23/22 16:32
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/02/22 16:00	09/05/22 16:37	1
Toluene	<0.00199	U F1	0.00199		mg/Kg		09/02/22 16:00	09/05/22 16:37	1
Ethylbenzene	<0.00199	U F1	0.00199		mg/Kg		09/02/22 16:00	09/05/22 16:37	1
m-Xylene & p-Xylene	<0.00398	U F1	0.00398		mg/Kg		09/02/22 16:00	09/05/22 16:37	1
o-Xylene	<0.00199	U F1	0.00199		mg/Kg		09/02/22 16:00	09/05/22 16:37	1
Xylenes, Total	<0.00398	U F1	0.00398		mg/Kg		09/02/22 16:00	09/05/22 16:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*	*09/02/22 16:00*	*09/05/22 16:37*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*09/02/22 16:00*	*09/05/22 16:37*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/05/22 21:14	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**665**		49.9		mg/Kg			08/29/22 10:16	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		08/26/22 15:42	08/29/22 02:11	1
Diesel Range Organics (Over C10-C28)	**358**		49.9		mg/Kg		08/26/22 15:42	08/29/22 02:11	1
Oil Range Organics (Over C28-C36)	**307**		49.9		mg/Kg		08/26/22 15:42	08/29/22 02:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*85*		*70 - 130*	*08/26/22 15:42*	*08/29/22 02:11*	*1*
o-Terphenyl	*87*		*70 - 130*	*08/26/22 15:42*	*08/29/22 02:11*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**19400**		251		mg/Kg			08/30/22 20:48	50

Client Sample ID: SS02

Lab Sample ID: 890-2815-2
Matrix: Solid
Date Collected: 08/23/22 09:50
Date Received: 08/23/22 16:32
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/02/22 16:00	09/05/22 16:57	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/02/22 16:00	09/05/22 16:57	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/02/22 16:00	09/05/22 16:57	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/02/22 16:00	09/05/22 16:57	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/02/22 16:00	09/05/22 16:57	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/02/22 16:00	09/05/22 16:57	1

Client Sample Results

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2815-1
SDG: 03E1558097

Client Sample ID: SS02

Lab Sample ID: 890-2815-2
Matrix: Solid
Date Collected: 08/23/22 09:50
Date Received: 08/23/22 16:32
Sample Depth: 0.5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*79*		*70 - 130*	*09/02/22 16:00*	*09/05/22 16:57*	*1*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*09/02/22 16:00*	*09/05/22 16:57*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			09/05/22 21:14	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**6190**		250	mg/Kg			08/29/22 10:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<250	U	250	mg/Kg		08/26/22 15:42	08/29/22 01:12	5
Diesel Range Organics (Over C10-C28)	**4590**		250	mg/Kg		08/26/22 15:42	08/29/22 01:12	5
Oil Range Organics (Over C28-C36)	**1600**		250	mg/Kg		08/26/22 15:42	08/29/22 01:12	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*78*		*70 - 130*	*08/26/22 15:42*	*08/29/22 01:12*	*5*
o-Terphenyl	*119*		*70 - 130*	*08/26/22 15:42*	*08/29/22 01:12*	*5*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**33900**		253	mg/Kg			08/30/22 21:09	50

Client Sample ID: SS03

Lab Sample ID: 890-2815-3
Matrix: Solid
Date Collected: 08/23/22 09:55
Date Received: 08/23/22 16:32
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		09/02/22 16:00	09/05/22 17:18	1
Toluene	<0.00202	U	0.00202	mg/Kg		09/02/22 16:00	09/05/22 17:18	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		09/02/22 16:00	09/05/22 17:18	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		09/02/22 16:00	09/05/22 17:18	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		09/02/22 16:00	09/05/22 17:18	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		09/02/22 16:00	09/05/22 17:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*79*		*70 - 130*	*09/02/22 16:00*	*09/05/22 17:18*	*1*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*09/02/22 16:00*	*09/05/22 17:18*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			09/05/22 21:14	1

Client Sample Results

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2815-1
SDG: 03E1558097

Client Sample ID: SS03

Lab Sample ID: 890-2815-3
Matrix: Solid
Date Collected: 08/23/22 09:55
Date Received: 08/23/22 16:32
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**8330**		249		mg/Kg			08/29/22 10:16	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<249	U	249		mg/Kg		08/26/22 15:42	08/29/22 01:31	5
Diesel Range Organics (Over C10-C28)	**6660**		249		mg/Kg		08/26/22 15:42	08/29/22 01:31	5
Oil Range Organics (Over C28-C36)	**1670**		249		mg/Kg		08/26/22 15:42	08/29/22 01:31	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*86*		*70 - 130*	*08/26/22 15:42*	*08/29/22 01:31*	*5*
o-Terphenyl	*96*		*70 - 130*	*08/26/22 15:42*	*08/29/22 01:31*	*5*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**35500**		249		mg/Kg			08/30/22 21:16	50

Client Sample ID: SS04

Lab Sample ID: 890-2815-4
Matrix: Solid
Date Collected: 08/23/22 10:00
Date Received: 08/23/22 16:32
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/02/22 16:00	09/05/22 17:38	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/02/22 16:00	09/05/22 17:38	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/02/22 16:00	09/05/22 17:38	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/02/22 16:00	09/05/22 17:38	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/02/22 16:00	09/05/22 17:38	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/02/22 16:00	09/05/22 17:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*39*	*S1-*	*70 - 130*	*09/02/22 16:00*	*09/05/22 17:38*	*1*
1,4-Difluorobenzene (Surr)	*119*		*70 - 130*	*09/02/22 16:00*	*09/05/22 17:38*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			09/05/22 21:14	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**13200**		250		mg/Kg			08/29/22 10:16	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<250	U	250		mg/Kg		08/26/22 15:42	08/29/22 01:51	5
Diesel Range Organics (Over C10-C28)	**10400**		250		mg/Kg		08/26/22 15:42	08/29/22 01:51	5

Client Sample Results

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2815-1
SDG: 03E1558097

Client Sample ID: SS04

Lab Sample ID: 890-2815-4
Matrix: Solid
Date Collected: 08/23/22 10:00
Date Received: 08/23/22 16:32
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Oll Range Organics (Over C28-C36)	**2780**		250		mg/Kg		08/26/22 15:42	08/29/22 01:51	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*82*		*70 - 130*	*08/26/22 15:42*	*08/29/22 01:51*	*5*
o-Terphenyl	*100*		*70 - 130*	*08/26/22 15:42*	*08/29/22 01:51*	*5*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4410**		49.6		mg/Kg			08/30/22 21:23	10

Client Sample ID: SS05

Lab Sample ID: 890-2815-5
Matrix: Solid
Date Collected: 08/23/22 10:05
Date Received: 08/23/22 16:32
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/02/22 16:00	09/05/22 17:59	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/02/22 16:00	09/05/22 17:59	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/02/22 16:00	09/05/22 17:59	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/02/22 16:00	09/05/22 17:59	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/02/22 16:00	09/05/22 17:59	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/02/22 16:00	09/05/22 17:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*79*		*70 - 130*	*09/02/22 16:00*	*09/05/22 17:59*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*09/02/22 16:00*	*09/05/22 17:59*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/05/22 21:14	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**6210**		49.8		mg/Kg			08/29/22 10:16	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		08/26/22 15:42	08/29/22 00:52	1
Diesel Range Organics (Over C10-C28)	**4880**		49.8		mg/Kg		08/26/22 15:42	08/29/22 00:52	1
Oll Range Organics (Over C28-C36)	**1330**		49.8		mg/Kg		08/26/22 15:42	08/29/22 00:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*90*		*70 - 130*	*08/26/22 15:42*	*08/29/22 00:52*	*1*
o-Terphenyl	*95*		*70 - 130*	*08/26/22 15:42*	*08/29/22 00:52*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2815-1
SDG: 03E1558097

Client Sample ID: SS05
Date Collected: 08/23/22 10:05
Date Received: 08/23/22 16:32
Sample Depth: 0.5

Lab Sample ID: 890-2815-5
Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	500		50.2		mg/Kg			08/30/22 21:30	10

Surrogate Summary

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2815-1
SDG: 03E1558097

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)										
890-2815-1	SS01	85	107										
890-2815-1 MS	SS01	82	111										
890-2815-1 MSD	SS01	85	111										
890-2815-2	SS02	79	113										
890-2815-3	SS03	79	111										
890-2815-4	SS04	39 S1-	119										
890-2815-5	SS05	79	112										
LCS 880-33663/1-A	Lab Control Sample	83	109										
LCSD 880-33663/2-A	Lab Control Sample Dup	86	102										
MB 880-33663/5-A	Method Blank	78	123										

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)										
890-2812-A-1-C MS	Matrix Spike	90	84										
890-2812-A-1-D MSD	Matrix Spike Duplicate	93	85										
890-2815-1	SS01	85	87										
890-2815-2	SS02	78	119										
890-2815-3	SS03	86	96										
890-2815-4	SS04	82	100										
890-2815-5	SS05	90	95										
LCS 880-33084/2-A	Lab Control Sample	105	114										
LCSD 880-33084/3-A	Lab Control Sample Dup	108	119										
MB 880-33084/1-A	Method Blank	73	79										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2815-1
SDG: 03E1558097

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-33663/5-A
Matrix: Solid
Analysis Batch: 33742

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 33663

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/02/22 16:00	09/05/22 16:08	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/02/22 16:00	09/05/22 16:08	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/02/22 16:00	09/05/22 16:08	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/02/22 16:00	09/05/22 16:08	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/02/22 16:00	09/05/22 16:08	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/02/22 16:00	09/05/22 16:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*78*		*70 - 130*	*09/02/22 16:00*	*09/05/22 16:08*	*1*
1,4-Difluorobenzene (Surr)	*123*		*70 - 130*	*09/02/22 16:00*	*09/05/22 16:08*	*1*

Lab Sample ID: LCS 880-33663/1-A
Matrix: Solid
Analysis Batch: 33742

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 33663

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1199		mg/Kg		120	70 - 130		
Toluene			0.100	0.1036		mg/Kg		104	70 - 130		
Ethylbenzene			0.100	0.09765		mg/Kg		98	70 - 130		
m-Xylene & p-Xylene			0.200	0.1754		mg/Kg		88	70 - 130		
o-Xylene			0.100	0.09026		mg/Kg		90	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: LCSD 880-33663/2-A
Matrix: Solid
Analysis Batch: 33742

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 33663

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1127		mg/Kg		113	70 - 130	6	35
Toluene			0.100	0.1093		mg/Kg		109	70 - 130	5	35
Ethylbenzene			0.100	0.1041		mg/Kg		104	70 - 130	6	35
m-Xylene & p-Xylene			0.200	0.1890		mg/Kg		95	70 - 130	7	35
o-Xylene			0.100	0.09734		mg/Kg		97	70 - 130	8	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: 890-2815-1 MS
Matrix: Solid
Analysis Batch: 33742

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 33663

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U	0.0998	0.09208		mg/Kg		92	70 - 130		
Toluene	<0.00199	U F1	0.0998	0.06842	F1	mg/Kg		69	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2815-1
SDG: 03E1558097

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

Lab Sample ID: 890-2815-1 MS
Matrix: Solid
Analysis Batch: 33742

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 33663

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U F1	0.0998	0.05156	F1	mg/Kg		52	70 - 130
m-Xylene & p-Xylene	<0.00398	U F1	0.200	0.09022	F1	mg/Kg		45	70 - 130
o-Xylene	<0.00199	U F1	0.0998	0.04710	F1	mg/Kg		47	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*82*		*70 - 130*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*

Lab Sample ID: 890-2815-1 MSD
Matrix: Solid
Analysis Batch: 33742

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 33663

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.100	0.09004		mg/Kg		90	70 - 130	2	35
Toluene	<0.00199	U F1	0.100	0.06341	F1	mg/Kg		63	70 - 130	8	35
Ethylbenzene	<0.00199	U F1	0.100	0.04691	F1	mg/Kg		47	70 - 130	9	35
m-Xylene & p-Xylene	<0.00398	U F1	0.201	0.08178	F1	mg/Kg		41	70 - 130	10	35
o-Xylene	<0.00199	U F1	0.100	0.04246	F1	mg/Kg		42	70 - 130	10	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*

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

Lab Sample ID: MB 880-33084/1-A
Matrix: Solid
Analysis Batch: 33127

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 33084

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		08/26/22 15:42	08/28/22 17:32	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/26/22 15:42	08/28/22 17:32	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/26/22 15:42	08/28/22 17:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*73*		*70 - 130*	*08/26/22 15:42*	*08/28/22 17:32*	*1*
o-Terphenyl	*79*		*70 - 130*	*08/26/22 15:42*	*08/28/22 17:32*	*1*

Lab Sample ID: LCS 880-33084/2-A
Matrix: Solid
Analysis Batch: 33127

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 33084

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	882.1		mg/Kg		88	70 - 130
Diesel Range Organics (Over C10-C28)			1000	963.8		mg/Kg		96	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2815-1
SDG: 03E1558097

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

Lab Sample ID: LCS 880-33084/2-A
Matrix: Solid
Analysis Batch: 33127

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 33084

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	105		70 - 130
o-Terphenyl	114		70 - 130

Lab Sample ID: LCSD 880-33084/3-A
Matrix: Solid
Analysis Batch: 33127

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 33084

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	914.9		mg/Kg		91	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			1000	1028		mg/Kg		103	70 - 130	6	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	108		70 - 130
o-Terphenyl	119		70 - 130

Lab Sample ID: 890-2812-A-1-C MS
Matrix: Solid
Analysis Batch: 33127

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 33084

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	906.5		mg/Kg		88	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	999	728.3		mg/Kg		73	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	90		70 - 130
o-Terphenyl	84		70 - 130

Lab Sample ID: 890-2812-A-1-D MSD
Matrix: Solid
Analysis Batch: 33127

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 33084

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	955.4		mg/Kg		93	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<49.9	U	998	749.7		mg/Kg		75	70 - 130	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	93		70 - 130
o-Terphenyl	85		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2815-1
SDG: 03E1558097

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-33072/1-A
Matrix: Solid
Analysis Batch: 33348

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			08/30/22 19:48	1

Lab Sample ID: LCS 880-33072/2-A
Matrix: Solid
Analysis Batch: 33348

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	236.6		mg/Kg		95	90 - 110		

Lab Sample ID: LCSD 880-33072/3-A
Matrix: Solid
Analysis Batch: 33348

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	228.6		mg/Kg		91	90 - 110	3	20

Lab Sample ID: 890-2811-A-1-C MS
Matrix: Solid
Analysis Batch: 33348

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	217		248	478.1		mg/Kg		105	90 - 110		

Lab Sample ID: 890-2811-A-1-D MSD
Matrix: Solid
Analysis Batch: 33348

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	217		248	465.2		mg/Kg		100	90 - 110	3	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2815-1
SDG: 03E1558097

GC VOA

Prep Batch: 33663

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2815-1	SS01	Total/NA	Solid	5035	
890-2815-2	SS02	Total/NA	Solid	5035	
890-2815-3	SS03	Total/NA	Solid	5035	
890-2815-4	SS04	Total/NA	Solid	5035	
890-2815-5	SS05	Total/NA	Solid	5035	
MB 880-33663/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-33663/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-33663/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2815-1 MS	SS01	Total/NA	Solid	5035	
890-2815-1 MSD	SS01	Total/NA	Solid	5035	

Analysis Batch: 33742

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2815-1	SS01	Total/NA	Solid	8021B	33663
890-2815-2	SS02	Total/NA	Solid	8021B	33663
890-2815-3	SS03	Total/NA	Solid	8021B	33663
890-2815-4	SS04	Total/NA	Solid	8021B	33663
890-2815-5	SS05	Total/NA	Solid	8021B	33663
MB 880-33663/5-A	Method Blank	Total/NA	Solid	8021B	33663
LCS 880-33663/1-A	Lab Control Sample	Total/NA	Solid	8021B	33663
LCSD 880-33663/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	33663
890-2815-1 MS	SS01	Total/NA	Solid	8021B	33663
890-2815-1 MSD	SS01	Total/NA	Solid	8021B	33663

Analysis Batch: 33774

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2815-1	SS01	Total/NA	Solid	Total BTEX	
890-2815-2	SS02	Total/NA	Solid	Total BTEX	
890-2815-3	SS03	Total/NA	Solid	Total BTEX	
890-2815-4	SS04	Total/NA	Solid	Total BTEX	
890-2815-5	SS05	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 33084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2815-1	SS01	Total/NA	Solid	8015NM Prep	
890-2815-2	SS02	Total/NA	Solid	8015NM Prep	
890-2815-3	SS03	Total/NA	Solid	8015NM Prep	
890-2815-4	SS04	Total/NA	Solid	8015NM Prep	
890-2815-5	SS05	Total/NA	Solid	8015NM Prep	
MB 880-33084/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-33084/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-33084/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2812-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2812-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 33127

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2815-1	SS01	Total/NA	Solid	8015B NM	33084
890-2815-2	SS02	Total/NA	Solid	8015B NM	33084

QC Association Summary

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2815-1
SDG: 03E1558097

GC Semi VOA (Continued)

Analysis Batch: 33127 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2815-3	SS03	Total/NA	Solid	8015B NM	33084
890-2815-4	SS04	Total/NA	Solid	8015B NM	33084
890-2815-5	SS05	Total/NA	Solid	8015B NM	33084
MB 880-33084/1-A	Method Blank	Total/NA	Solid	8015B NM	33084
LCS 880-33084/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	33084
LCSD 880-33084/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	33084
890-2812-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	33084
890-2812-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	33084

Analysis Batch: 33189

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2815-1	SS01	Total/NA	Solid	8015 NM	
890-2815-2	SS02	Total/NA	Solid	8015 NM	
890-2815-3	SS03	Total/NA	Solid	8015 NM	
890-2815-4	SS04	Total/NA	Solid	8015 NM	
890-2815-5	SS05	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 33072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2815-1	SS01	Soluble	Solid	DI Leach	
890-2815-2	SS02	Soluble	Solid	DI Leach	
890-2815-3	SS03	Soluble	Solid	DI Leach	
890-2815-4	SS04	Soluble	Solid	DI Leach	
890-2815-5	SS05	Soluble	Solid	DI Leach	
MB 880-33072/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-33072/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-33072/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2811-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2811-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 33348

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2815-1	SS01	Soluble	Solid	300.0	33072
890-2815-2	SS02	Soluble	Solid	300.0	33072
890-2815-3	SS03	Soluble	Solid	300.0	33072
890-2815-4	SS04	Soluble	Solid	300.0	33072
890-2815-5	SS05	Soluble	Solid	300.0	33072
MB 880-33072/1-A	Method Blank	Soluble	Solid	300.0	33072
LCS 880-33072/2-A	Lab Control Sample	Soluble	Solid	300.0	33072
LCSD 880-33072/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	33072
890-2811-A-1-C MS	Matrix Spike	Soluble	Solid	300.0	33072
890-2811-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	33072

Lab Chronicle

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2815-1
SDG: 03E1558097

Client Sample ID: SS01
Date Collected: 08/23/22 09:45
Date Received: 08/23/22 16:32

Lab Sample ID: 890-2815-1
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	33663	09/02/22 16:00	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	33742	09/05/22 16:37	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			33774	09/05/22 21:14	AJ	EET MID
Total/NA	Analysis	8015 NM		1			33189	08/29/22 10:16	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	33084	08/26/22 15:42	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33127	08/29/22 02:11	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	33072	08/26/22 14:46	KS	EET MID
Soluble	Analysis	300.0		50	50 mL	50 mL	33348	08/30/22 20:48	CH	EET MID

Client Sample ID: SS02
Date Collected: 08/23/22 09:50
Date Received: 08/23/22 16:32

Lab Sample ID: 890-2815-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	33663	09/02/22 16:00	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	33742	09/05/22 16:57	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			33774	09/05/22 21:14	AJ	EET MID
Total/NA	Analysis	8015 NM		1			33189	08/29/22 10:16	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	33084	08/26/22 15:42	DM	EET MID
Total/NA	Analysis	8015B NM		5	1 uL	1 uL	33127	08/29/22 01:12	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	33072	08/26/22 14:46	KS	EET MID
Soluble	Analysis	300.0		50	50 mL	50 mL	33348	08/30/22 21:09	CH	EET MID

Client Sample ID: SS03
Date Collected: 08/23/22 09:55
Date Received: 08/23/22 16:32

Lab Sample ID: 890-2815-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	33663	09/02/22 16:00	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	33742	09/05/22 17:18	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			33774	09/05/22 21:14	AJ	EET MID
Total/NA	Analysis	8015 NM		1			33189	08/29/22 10:16	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	33084	08/26/22 15:42	DM	EET MID
Total/NA	Analysis	8015B NM		5	1 uL	1 uL	33127	08/29/22 01:31	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	33072	08/26/22 14:46	KS	EET MID
Soluble	Analysis	300.0		50	50 mL	50 mL	33348	08/30/22 21:16	CH	EET MID

Client Sample ID: SS04
Date Collected: 08/23/22 10:00
Date Received: 08/23/22 16:32

Lab Sample ID: 890-2815-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	33663	09/02/22 16:00	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	33742	09/05/22 17:38	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			33774	09/05/22 21:14	AJ	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2815-1
SDG: 03E1558097

Client Sample ID: SS04

Date Collected: 08/23/22 10:00
Date Received: 08/23/22 16:32

Lab Sample ID: 890-2815-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			33189	08/29/22 10:16	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	33084	08/26/22 15:42	DM	EET MID
Total/NA	Analysis	8015B NM		5	1 uL	1 uL	33127	08/29/22 01:51	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	33072	08/26/22 14:46	KS	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	33348	08/30/22 21:23	CH	EET MID

Client Sample ID: SS05

Date Collected: 08/23/22 10:05
Date Received: 08/23/22 16:32

Lab Sample ID: 890-2815-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	33663	09/02/22 16:00	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	33742	09/05/22 17:59	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			33774	09/05/22 21:14	AJ	EET MID
Total/NA	Analysis	8015 NM		1			33189	08/29/22 10:16	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	33084	08/26/22 15:42	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33127	08/29/22 00:52	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	33072	08/26/22 14:46	KS	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	33348	08/30/22 21:30	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 184H

Job ID: 890-2815-1
SDG: 03E1558097

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-2815-1
SDG: 03E1558097

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 184H

Job ID: 890-2815-1
SDG: 03E1558097

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2815-1	SS01	Solid	08/23/22 09:45	08/23/22 16:32	0.5
890-2815-2	SS02	Solid	08/23/22 09:50	08/23/22 16:32	0.5
890-2815-3	SS03	Solid	08/23/22 09:55	08/23/22 16:32	0.5
890-2815-4	SS04	Solid	08/23/22 10:00	08/23/22 16:32	0.5
890-2815-5	SS05	Solid	08/23/22 10:05	08/23/22 16:32	0.5

Chain of Custody

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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)	Garret Green
Company Name:	Ensolum	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Green St.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	303-887-2946	Email:	Garret.Green@ExxonMobil.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	PLU 184H	Turn Around	☑ Routine ☐ Rush
Project Number:	03E1558097	Due Date:	
Project Location:	32.24919, -103.91836	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Kase Parker		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	TNM-007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	5.4
Total Containers:		Corrected Temperature:	5.2

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
SS01	S	8/23/2022	9:45	0.5				x	x	x
SS02	S	8/24/2022	9:50	0.5				x	x	x
SS03	S	8/25/2022	9:55	0.5				x	x	x
SS04	S	8/26/2022	10:00	0.5				x	x	x
SS05	S	8/27/2022	10:05	0.5				x	x	x

ANALYSIS REQUEST

Preservative Codes

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

Sample Comments

Incident ID:
nAPP2219648561
Cost Center:
1137651001
AFE:

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			8.23.22 1032			
3				4		
5				6		

Revised Date: 08/25/2020 Rev: 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2815-1
SDG Number: 03E1558097

Login Number: 2815
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2815-1
SDG Number: 03E1558097

Login Number: 2815
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 08/25/22 10:42 AM

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-3107-1
Laboratory Sample Delivery Group: 03E1558097
Client Project/Site: PLU 184H

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

Attn: Tacoma Morrissey

JKramer

Authorized for release by:
10/3/2022 4:53:04 PM

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

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

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

Client: Ensolum
Project/Site: PLU 184H

Laboratory Job ID: 890-3107-1
SDG: 03E1558097

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-3107-1
SDG: 03E1558097

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
S1-	Surrogate recovery exceeds control limits, low 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 184H

Job ID: 890-3107-1
SDG: 03E1558097

Job ID: 890-3107-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3107-1

Receipt
The samples were received on 9/29/2022 8:35 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice.

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-35720 and analytical batch 880-35814 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (880-19829-A-1-B) and (880-19829-A-1-C MS). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: FS02 (890-3107-2). 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: FS05 (890-3107-5), FS06 (890-3107-6), FS07 (890-3107-7), FS08 (890-3107-8) and FS09 (890-3107-9). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

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

Client Sample Results

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-3107-1
SDG: 03E1558097

Client Sample ID: FS01

Lab Sample ID: 890-3107-1
Matrix: Solid

Date Collected: 09/27/22 13:40
Date Received: 09/29/22 08:35
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/29/22 15:53	09/30/22 21:16	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/29/22 15:53	09/30/22 21:16	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/29/22 15:53	09/30/22 21:16	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/29/22 15:53	09/30/22 21:16	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/29/22 15:53	09/30/22 21:16	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/29/22 15:53	09/30/22 21:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*09/29/22 15:53*	*09/30/22 21:16*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*09/29/22 15:53*	*09/30/22 21:16*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			10/01/22 08:06	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			10/03/22 11:45	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		09/30/22 08:55	09/30/22 11:37	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/30/22 08:55	09/30/22 11:37	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/30/22 08:55	09/30/22 11:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*09/30/22 08:55*	*09/30/22 11:37*	*1*
o-Terphenyl	*91*		*70 - 130*	*09/30/22 08:55*	*09/30/22 11:37*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**435**		4.95		mg/Kg			09/30/22 14:03	1

Client Sample ID: FS02

Lab Sample ID: 890-3107-2
Matrix: Solid

Date Collected: 09/27/22 13:45
Date Received: 09/29/22 08:35
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/29/22 15:53	09/30/22 23:01	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/29/22 15:53	09/30/22 23:01	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/29/22 15:53	09/30/22 23:01	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		09/29/22 15:53	09/30/22 23:01	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/29/22 15:53	09/30/22 23:01	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		09/29/22 15:53	09/30/22 23:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*09/29/22 15:53*	*09/30/22 23:01*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-3107-1
SDG: 03E1558097

Client Sample ID: FS02

Lab Sample ID: 890-3107-2
Matrix: Solid
Date Collected: 09/27/22 13:45
Date Received: 09/29/22 08:35
Sample Depth: 1

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*09/29/22 15:53*	*09/30/22 23:01*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			10/01/22 08:06	1

Method: 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			10/03/22 11:45	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		09/30/22 08:55	09/30/22 11:59	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		09/30/22 08:55	09/30/22 11:59	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		09/30/22 08:55	09/30/22 11:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*67*	*S1-*	*70 - 130*	*09/30/22 08:55*	*09/30/22 11:59*	*1*
o-Terphenyl	*62*	*S1-*	*70 - 130*	*09/30/22 08:55*	*09/30/22 11:59*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2660**		24.8	mg/Kg			09/30/22 14:07	5

Client Sample ID: FS03

Lab Sample ID: 890-3107-3
Matrix: Solid
Date Collected: 09/27/22 13:50
Date Received: 09/29/22 08:35
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/29/22 15:53	09/30/22 23:27	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/29/22 15:53	09/30/22 23:27	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/29/22 15:53	09/30/22 23:27	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		09/29/22 15:53	09/30/22 23:27	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/29/22 15:53	09/30/22 23:27	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		09/29/22 15:53	09/30/22 23:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*09/29/22 15:53*	*09/30/22 23:27*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*09/29/22 15:53*	*09/30/22 23:27*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			10/01/22 08:06	1

Method: 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			10/03/22 11:45	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-3107-1
SDG: 03E1558097

Client Sample ID: FS03

Lab Sample ID: 890-3107-3
Matrix: Solid
Date Collected: 09/27/22 13:50
Date Received: 09/29/22 08:35
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/30/22 08:55	09/30/22 12:20	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/30/22 08:55	09/30/22 12:20	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/30/22 08:55	09/30/22 12:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*85*		*70 - 130*	*09/30/22 08:55*	*09/30/22 12:20*	*1*
o-Terphenyl	*82*		*70 - 130*	*09/30/22 08:55*	*09/30/22 12:20*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2920**		25.1		mg/Kg			09/30/22 14:12	5

Client Sample ID: FS04

Lab Sample ID: 890-3107-4
Matrix: Solid
Date Collected: 09/28/22 11:25
Date Received: 09/29/22 08:35
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		09/29/22 15:53	09/30/22 23:53	1
Toluene	<0.00202	U	0.00202		mg/Kg		09/29/22 15:53	09/30/22 23:53	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		09/29/22 15:53	09/30/22 23:53	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		09/29/22 15:53	09/30/22 23:53	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		09/29/22 15:53	09/30/22 23:53	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		09/29/22 15:53	09/30/22 23:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*09/29/22 15:53*	*09/30/22 23:53*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*09/29/22 15:53*	*09/30/22 23:53*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			10/01/22 08:06	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**78.3**		50.0		mg/Kg			10/03/22 11:45	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/30/22 08:55	09/30/22 12:42	1
Diesel Range Organics (Over C10-C28)	**78.3**		50.0		mg/Kg		09/30/22 08:55	09/30/22 12:42	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/30/22 08:55	09/30/22 12:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*76*		*70 - 130*	*09/30/22 08:55*	*09/30/22 12:42*	*1*
o-Terphenyl	*71*		*70 - 130*	*09/30/22 08:55*	*09/30/22 12:42*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-3107-1
SDG: 03E1558097

Client Sample ID: FS04

Lab Sample ID: 890-3107-4
Matrix: Solid
Date Collected: 09/28/22 11:25
Date Received: 09/29/22 08:35
Sample Depth: 1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2370		25.2		mg/Kg			09/30/22 14:27	5

Client Sample ID: FS05

Lab Sample ID: 890-3107-5
Matrix: Solid
Date Collected: 09/28/22 11:30
Date Received: 09/29/22 08:35
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/29/22 15:53	10/01/22 00:19	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/29/22 15:53	10/01/22 00:19	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/29/22 15:53	10/01/22 00:19	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/29/22 15:53	10/01/22 00:19	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/29/22 15:53	10/01/22 00:19	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/29/22 15:53	10/01/22 00:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*09/29/22 15:53*	*10/01/22 00:19*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*09/29/22 15:53*	*10/01/22 00:19*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			10/01/22 08:06	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			10/03/22 11:45	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/30/22 08:55	09/30/22 13:04	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/30/22 08:55	09/30/22 13:04	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/30/22 08:55	09/30/22 13:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*55*	*S1-*	*70 - 130*	*09/30/22 08:55*	*09/30/22 13:04*	*1*
o-Terphenyl	*51*	*S1-*	*70 - 130*	*09/30/22 08:55*	*09/30/22 13:04*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	119		4.97		mg/Kg			09/30/22 14:32	1

Client Sample Results

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-3107-1
SDG: 03E1558097

Client Sample ID: FS06

Lab Sample ID: 890-3107-6
Matrix: Solid
Date Collected: 09/28/22 11:35
Date Received: 09/29/22 08:35
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/29/22 15:53	10/01/22 00:45	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/29/22 15:53	10/01/22 00:45	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/29/22 15:53	10/01/22 00:45	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/29/22 15:53	10/01/22 00:45	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/29/22 15:53	10/01/22 00:45	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/29/22 15:53	10/01/22 00:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*09/29/22 15:53*	*10/01/22 00:45*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*09/29/22 15:53*	*10/01/22 00:45*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			10/01/22 08:06	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			10/03/22 11:45	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/30/22 08:55	09/30/22 13:26	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/30/22 08:55	09/30/22 13:26	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/30/22 08:55	09/30/22 13:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*57*	*S1-*	*70 - 130*	*09/30/22 08:55*	*09/30/22 13:26*	*1*
o-Terphenyl	*52*	*S1-*	*70 - 130*	*09/30/22 08:55*	*09/30/22 13:26*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**212**		5.02		mg/Kg			09/30/22 14:36	1

Client Sample ID: FS07

Lab Sample ID: 890-3107-7
Matrix: Solid
Date Collected: 09/28/22 11:40
Date Received: 09/29/22 08:35
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/29/22 15:53	10/01/22 01:11	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/29/22 15:53	10/01/22 01:11	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/29/22 15:53	10/01/22 01:11	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		09/29/22 15:53	10/01/22 01:11	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/29/22 15:53	10/01/22 01:11	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		09/29/22 15:53	10/01/22 01:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*09/29/22 15:53*	*10/01/22 01:11*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-3107-1
SDG: 03E1558097

Client Sample ID: FS07

Lab Sample ID: 890-3107-7
Matrix: Solid
Date Collected: 09/28/22 11:40
Date Received: 09/29/22 08:35
Sample Depth: 0.5

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*09/29/22 15:53*	*10/01/22 01:11*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			10/01/22 08:06	1

Method: 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			10/03/22 11:45	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		09/30/22 08:55	09/30/22 13:48	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		09/30/22 08:55	09/30/22 13:48	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		09/30/22 08:55	09/30/22 13:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*54*	*S1-*	*70 - 130*	*09/30/22 08:55*	*09/30/22 13:48*	*1*
o-Terphenyl	*48*	*S1-*	*70 - 130*	*09/30/22 08:55*	*09/30/22 13:48*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**79.2**		5.05	mg/Kg			09/30/22 14:41	1

Client Sample ID: FS08

Lab Sample ID: 890-3107-8
Matrix: Solid
Date Collected: 09/28/22 12:00
Date Received: 09/29/22 08:35
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/29/22 15:53	10/01/22 01:37	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/29/22 15:53	10/01/22 01:37	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/29/22 15:53	10/01/22 01:37	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		09/29/22 15:53	10/01/22 01:37	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/29/22 15:53	10/01/22 01:37	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		09/29/22 15:53	10/01/22 01:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*09/29/22 15:53*	*10/01/22 01:37*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*09/29/22 15:53*	*10/01/22 01:37*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			10/01/22 08:06	1

Method: 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			10/03/22 11:45	1

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Client Sample Results

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-3107-1
SDG: 03E1558097

Client Sample ID: FS08

Lab Sample ID: 890-3107-8

Date Collected: 09/28/22 12:00
Matrix: Solid
Date Received: 09/29/22 08:35
Sample Depth: 0.5

Method: 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		09/30/22 08:55	09/30/22 14:10	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/30/22 08:55	09/30/22 14:10	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/30/22 08:55	09/30/22 14:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*74*		*70 - 130*	*09/30/22 08:55*	*09/30/22 14:10*	*1*
o-Terphenyl	*66*	*S1-*	*70 - 130*	*09/30/22 08:55*	*09/30/22 14:10*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**41.7**		5.00		mg/Kg			09/30/22 14:46	1

Client Sample ID: FS09

Lab Sample ID: 890-3107-9

Date Collected: 09/28/22 12:05
Matrix: Solid
Date Received: 09/29/22 08:35
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		09/29/22 15:53	10/01/22 02:03	1
Toluene	<0.00202	U	0.00202		mg/Kg		09/29/22 15:53	10/01/22 02:03	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		09/29/22 15:53	10/01/22 02:03	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		09/29/22 15:53	10/01/22 02:03	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		09/29/22 15:53	10/01/22 02:03	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		09/29/22 15:53	10/01/22 02:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*09/29/22 15:53*	*10/01/22 02:03*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*09/29/22 15:53*	*10/01/22 02:03*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			10/01/22 08:06	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			10/03/22 11:45	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/30/22 08:55	09/30/22 14:31	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/30/22 08:55	09/30/22 14:31	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/30/22 08:55	09/30/22 14:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*49*	*S1-*	*70 - 130*	*09/30/22 08:55*	*09/30/22 14:31*	*1*
o-Terphenyl	*48*	*S1-*	*70 - 130*	*09/30/22 08:55*	*09/30/22 14:31*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-3107-1
SDG: 03E1558097

Client Sample ID: FS09
Date Collected: 09/28/22 12:05
Date Received: 09/29/22 08:35
Sample Depth: 0.5

Lab Sample ID: 890-3107-9
Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	53.3		5.00		mg/Kg			09/30/22 14:51	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-3107-1
SDG: 03E1558097

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)										
890-3103-A-1-A MS	Matrix Spike	100	92										
890-3103-A-1-B MSD	Matrix Spike Duplicate	110	114										
890-3107-1	FS01	107	94										
890-3107-2	FS02	106	94										
890-3107-3	FS03	107	98										
890-3107-4	FS04	105	93										
890-3107-5	FS05	113	97										
890-3107-6	FS06	106	91										
890-3107-7	FS07	109	93										
890-3107-8	FS08	109	94										
890-3107-9	FS09	115	98										
LCS 880-35720/1-A	Lab Control Sample	103	103										
LCSD 880-35720/2-A	Lab Control Sample Dup	108	108										
MB 880-35720/5-A	Method Blank	70	92										

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)											
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)										
880-19829-A-1-C MS	Matrix Spike	74	67 S1-										
880-19829-A-1-D MSD	Matrix Spike Duplicate	78	73										
890-3107-1	FS01	93	91										
890-3107-2	FS02	67 S1-	62 S1-										
890-3107-3	FS03	85	82										
890-3107-4	FS04	76	71										
890-3107-5	FS05	55 S1-	51 S1-										
890-3107-6	FS06	57 S1-	52 S1-										
890-3107-7	FS07	54 S1-	48 S1-										
890-3107-8	FS08	74	66 S1-										
890-3107-9	FS09	49 S1-	48 S1-										
LCS 880-35755/2-A	Lab Control Sample	107	113										
LCSD 880-35755/3-A	Lab Control Sample Dup	101	101										
MB 880-35755/1-A	Method Blank	104	113										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-3107-1
SDG: 03E1558097

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-35720/5-A
Matrix: Solid
Analysis Batch: 35814

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 35720

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/29/22 15:53	09/30/22 16:57	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/29/22 15:53	09/30/22 16:57	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/29/22 15:53	09/30/22 16:57	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/29/22 15:53	09/30/22 16:57	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/29/22 15:53	09/30/22 16:57	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/29/22 15:53	09/30/22 16:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*70*		*70 - 130*	*09/29/22 15:53*	*09/30/22 16:57*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*09/29/22 15:53*	*09/30/22 16:57*	*1*

Lab Sample ID: LCS 880-35720/1-A
Matrix: Solid
Analysis Batch: 35814

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 35720

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1096		mg/Kg		110	70 - 130		
Toluene			0.100	0.09873		mg/Kg		99	70 - 130		
Ethylbenzene			0.100	0.1077		mg/Kg		108	70 - 130		
m-Xylene & p-Xylene			0.200	0.2162		mg/Kg		108	70 - 130		
o-Xylene			0.100	0.1083		mg/Kg		108	70 - 130		

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

Lab Sample ID: LCSD 880-35720/2-A
Matrix: Solid
Analysis Batch: 35814

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 35720

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1096		mg/Kg		110	70 - 130	0	35
Toluene			0.100	0.1001		mg/Kg		100	70 - 130	1	35
Ethylbenzene			0.100	0.09889		mg/Kg		99	70 - 130	9	35
m-Xylene & p-Xylene			0.200	0.2044		mg/Kg		102	70 - 130	6	35
o-Xylene			0.100	0.1077		mg/Kg		108	70 - 130	1	35

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

Lab Sample ID: 890-3103-A-1-A MS
Matrix: Solid
Analysis Batch: 35814

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 35720

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U	0.100	0.07929		mg/Kg		79	70 - 130		
Toluene	<0.00201	U	0.100	0.07010		mg/Kg		70	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-3107-1
SDG: 03E1558097

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

Lab Sample ID: 890-3103-A-1-A MS
Matrix: Solid
Analysis Batch: 35814

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 35720

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U F1	0.100	0.05866	F1	mg/Kg		58	70 - 130
m-Xylene & p-Xylene	<0.00402	U F1	0.201	0.1149	F1	mg/Kg		57	70 - 130
o-Xylene	<0.00201	U F1	0.100	0.05781	F1	mg/Kg		58	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*

Lab Sample ID: 890-3103-A-1-B MSD
Matrix: Solid
Analysis Batch: 35814

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 35720

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0990	0.08129		mg/Kg		82	70 - 130	2	35
Toluene	<0.00201	U	0.0990	0.07007		mg/Kg		71	70 - 130	0	35
Ethylbenzene	<0.00201	U F1	0.0990	0.05609	F1	mg/Kg		57	70 - 130	4	35
m-Xylene & p-Xylene	<0.00402	U F1	0.198	0.1078	F1	mg/Kg		54	70 - 130	6	35
o-Xylene	<0.00201	U F1	0.0990	0.05517	F1	mg/Kg		56	70 - 130	5	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*

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

Lab Sample ID: MB 880-35755/1-A
Matrix: Solid
Analysis Batch: 35738

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 35755

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/30/22 08:55	09/30/22 09:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/30/22 08:55	09/30/22 09:28	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/30/22 08:55	09/30/22 09:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*09/30/22 08:55*	*09/30/22 09:28*	*1*
o-Terphenyl	*113*		*70 - 130*	*09/30/22 08:55*	*09/30/22 09:28*	*1*

Lab Sample ID: LCS 880-35755/2-A
Matrix: Solid
Analysis Batch: 35738

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 35755

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1023		mg/Kg		102	70 - 130
Diesel Range Organics (Over C10-C28)			1000	995.8		mg/Kg		100	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-3107-1
SDG: 03E1558097

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

Lab Sample ID: LCS 880-35755/2-A
Matrix: Solid
Analysis Batch: 35738

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 35755

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	107		70 - 130
o-Terphenyl	113		70 - 130

Lab Sample ID: LCSD 880-35755/3-A
Matrix: Solid
Analysis Batch: 35738

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 35755

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	939.2		mg/Kg		94	70 - 130	9	20
Diesel Range Organics (Over C10-C28)			1000	896.6		mg/Kg		90	70 - 130	10	20

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

Lab Sample ID: 880-19829-A-1-C MS
Matrix: Solid
Analysis Batch: 35738

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 35755

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	727.0		mg/Kg		71	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	998	758.3		mg/Kg		74	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	74		70 - 130
o-Terphenyl	67	S1-	70 - 130

Lab Sample ID: 880-19829-A-1-D MSD
Matrix: Solid
Analysis Batch: 35738

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 35755

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	999	731.1		mg/Kg		72	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<50.0	U	999	827.6		mg/Kg		81	70 - 130	9	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	78		70 - 130
o-Terphenyl	73		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-3107-1
SDG: 03E1558097

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-35792/1-A
Matrix: Solid
Analysis Batch: 35813

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			09/30/22 13:29	1

Lab Sample ID: LCS 880-35792/2-A
Matrix: Solid
Analysis Batch: 35813

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	243.5		mg/Kg		97	90 - 110		

Lab Sample ID: LCSD 880-35792/3-A
Matrix: Solid
Analysis Batch: 35813

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	245.0		mg/Kg		98	90 - 110	1	20

Lab Sample ID: 890-3107-9 MS
Matrix: Solid
Analysis Batch: 35813

Client Sample ID: FS09
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	53.3		250	297.7		mg/Kg		98	90 - 110		

Lab Sample ID: 890-3107-9 MSD
Matrix: Solid
Analysis Batch: 35813

Client Sample ID: FS09
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	53.3		250	298.7		mg/Kg		98	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-3107-1
SDG: 03E1558097

GC VOA

Prep Batch: 35720

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3107-1	FS01	Total/NA	Solid	5035	
890-3107-2	FS02	Total/NA	Solid	5035	
890-3107-3	FS03	Total/NA	Solid	5035	
890-3107-4	FS04	Total/NA	Solid	5035	
890-3107-5	FS05	Total/NA	Solid	5035	
890-3107-6	FS06	Total/NA	Solid	5035	
890-3107-7	FS07	Total/NA	Solid	5035	
890-3107-8	FS08	Total/NA	Solid	5035	
890-3107-9	FS09	Total/NA	Solid	5035	
MB 880-35720/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-35720/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-35720/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3103-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
890-3103-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 35814

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3107-1	FS01	Total/NA	Solid	8021B	35720
890-3107-2	FS02	Total/NA	Solid	8021B	35720
890-3107-3	FS03	Total/NA	Solid	8021B	35720
890-3107-4	FS04	Total/NA	Solid	8021B	35720
890-3107-5	FS05	Total/NA	Solid	8021B	35720
890-3107-6	FS06	Total/NA	Solid	8021B	35720
890-3107-7	FS07	Total/NA	Solid	8021B	35720
890-3107-8	FS08	Total/NA	Solid	8021B	35720
890-3107-9	FS09	Total/NA	Solid	8021B	35720
MB 880-35720/5-A	Method Blank	Total/NA	Solid	8021B	35720
LCS 880-35720/1-A	Lab Control Sample	Total/NA	Solid	8021B	35720
LCSD 880-35720/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	35720
890-3103-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	35720
890-3103-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	35720

Analysis Batch: 35870

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3107-1	FS01	Total/NA	Solid	Total BTEX	
890-3107-2	FS02	Total/NA	Solid	Total BTEX	
890-3107-3	FS03	Total/NA	Solid	Total BTEX	
890-3107-4	FS04	Total/NA	Solid	Total BTEX	
890-3107-5	FS05	Total/NA	Solid	Total BTEX	
890-3107-6	FS06	Total/NA	Solid	Total BTEX	
890-3107-7	FS07	Total/NA	Solid	Total BTEX	
890-3107-8	FS08	Total/NA	Solid	Total BTEX	
890-3107-9	FS09	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 35738

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3107-1	FS01	Total/NA	Solid	8015B NM	35755
890-3107-2	FS02	Total/NA	Solid	8015B NM	35755
890-3107-3	FS03	Total/NA	Solid	8015B NM	35755

QC Association Summary

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-3107-1
SDG: 03E1558097

GC Semi VOA (Continued)

Analysis Batch: 35738 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3107-4	FS04	Total/NA	Solid	8015B NM	35755
890-3107-5	FS05	Total/NA	Solid	8015B NM	35755
890-3107-6	FS06	Total/NA	Solid	8015B NM	35755
890-3107-7	FS07	Total/NA	Solid	8015B NM	35755
890-3107-8	FS08	Total/NA	Solid	8015B NM	35755
890-3107-9	FS09	Total/NA	Solid	8015B NM	35755
MB 880-35755/1-A	Method Blank	Total/NA	Solid	8015B NM	35755
LCS 880-35755/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	35755
LCSD 880-35755/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	35755
880-19829-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	35755
880-19829-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	35755

Prep Batch: 35755

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3107-1	FS01	Total/NA	Solid	8015NM Prep	
890-3107-2	FS02	Total/NA	Solid	8015NM Prep	
890-3107-3	FS03	Total/NA	Solid	8015NM Prep	
890-3107-4	FS04	Total/NA	Solid	8015NM Prep	
890-3107-5	FS05	Total/NA	Solid	8015NM Prep	
890-3107-6	FS06	Total/NA	Solid	8015NM Prep	
890-3107-7	FS07	Total/NA	Solid	8015NM Prep	
890-3107-8	FS08	Total/NA	Solid	8015NM Prep	
890-3107-9	FS09	Total/NA	Solid	8015NM Prep	
MB 880-35755/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-35755/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-35755/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-19829-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-19829-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 35975

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3107-1	FS01	Total/NA	Solid	8015 NM	
890-3107-2	FS02	Total/NA	Solid	8015 NM	
890-3107-3	FS03	Total/NA	Solid	8015 NM	
890-3107-4	FS04	Total/NA	Solid	8015 NM	
890-3107-5	FS05	Total/NA	Solid	8015 NM	
890-3107-6	FS06	Total/NA	Solid	8015 NM	
890-3107-7	FS07	Total/NA	Solid	8015 NM	
890-3107-8	FS08	Total/NA	Solid	8015 NM	
890-3107-9	FS09	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 35792

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3107-1	FS01	Soluble	Solid	DI Leach	
890-3107-2	FS02	Soluble	Solid	DI Leach	
890-3107-3	FS03	Soluble	Solid	DI Leach	
890-3107-4	FS04	Soluble	Solid	DI Leach	
890-3107-5	FS05	Soluble	Solid	DI Leach	
890-3107-6	FS06	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-3107-1
SDG: 03E1558097

HPLC/IC (Continued)

Leach Batch: 35792 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3107-7	FS07	Soluble	Solid	DI Leach	
890-3107-8	FS08	Soluble	Solid	DI Leach	
890-3107-9	FS09	Soluble	Solid	DI Leach	
MB 880-35792/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-35792/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-35792/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3107-9 MS	FS09	Soluble	Solid	DI Leach	
890-3107-9 MSD	FS09	Soluble	Solid	DI Leach	

Analysis Batch: 35813

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3107-1	FS01	Soluble	Solid	300.0	35792
890-3107-2	FS02	Soluble	Solid	300.0	35792
890-3107-3	FS03	Soluble	Solid	300.0	35792
890-3107-4	FS04	Soluble	Solid	300.0	35792
890-3107-5	FS05	Soluble	Solid	300.0	35792
890-3107-6	FS06	Soluble	Solid	300.0	35792
890-3107-7	FS07	Soluble	Solid	300.0	35792
890-3107-8	FS08	Soluble	Solid	300.0	35792
890-3107-9	FS09	Soluble	Solid	300.0	35792
MB 880-35792/1-A	Method Blank	Soluble	Solid	300.0	35792
LCS 880-35792/2-A	Lab Control Sample	Soluble	Solid	300.0	35792
LCSD 880-35792/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	35792
890-3107-9 MS	FS09	Soluble	Solid	300.0	35792
890-3107-9 MSD	FS09	Soluble	Solid	300.0	35792

Lab Chronicle

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-3107-1
SDG: 03E1558097

Client Sample ID: FS01

Date Collected: 09/27/22 13:40
Date Received: 09/29/22 08:35

Lab Sample ID: 890-3107-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	35720	09/29/22 15:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35814	09/30/22 21:16	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			35870	10/01/22 08:06	AJ	EET MID
Total/NA	Analysis	8015 NM		1			35975	10/03/22 11:45	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	35755	09/30/22 08:55	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35738	09/30/22 11:37	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	35792	09/30/22 10:35	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	35813	09/30/22 14:03	CH	EET MID

Client Sample ID: FS02

Date Collected: 09/27/22 13:45
Date Received: 09/29/22 08:35

Lab Sample ID: 890-3107-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	35720	09/29/22 15:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35814	09/30/22 23:01	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			35870	10/01/22 08:06	AJ	EET MID
Total/NA	Analysis	8015 NM		1			35975	10/03/22 11:45	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	35755	09/30/22 08:55	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35738	09/30/22 11:59	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	35792	09/30/22 10:35	SMC	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	35813	09/30/22 14:07	CH	EET MID

Client Sample ID: FS03

Date Collected: 09/27/22 13:50
Date Received: 09/29/22 08:35

Lab Sample ID: 890-3107-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	35720	09/29/22 15:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35814	09/30/22 23:27	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			35870	10/01/22 08:06	AJ	EET MID
Total/NA	Analysis	8015 NM		1			35975	10/03/22 11:45	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	35755	09/30/22 08:55	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35738	09/30/22 12:20	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	35792	09/30/22 10:35	SMC	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	35813	09/30/22 14:12	CH	EET MID

Client Sample ID: FS04

Date Collected: 09/28/22 11:25
Date Received: 09/29/22 08:35

Lab Sample ID: 890-3107-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	35720	09/29/22 15:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35814	09/30/22 23:53	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			35870	10/01/22 08:06	AJ	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-3107-1
SDG: 03E1558097

Client Sample ID: FS04

Date Collected: 09/28/22 11:25
Date Received: 09/29/22 08:35

Lab Sample ID: 890-3107-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			35975	10/03/22 11:45	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	35755	09/30/22 08:55	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35738	09/30/22 12:42	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	35792	09/30/22 10:35	SMC	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	35813	09/30/22 14:27	CH	EET MID

Client Sample ID: FS05

Date Collected: 09/28/22 11:30
Date Received: 09/29/22 08:35

Lab Sample ID: 890-3107-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	35720	09/29/22 15:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35814	10/01/22 00:19	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			35870	10/01/22 08:06	AJ	EET MID
Total/NA	Analysis	8015 NM		1			35975	10/03/22 11:45	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	35755	09/30/22 08:55	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35738	09/30/22 13:04	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	35792	09/30/22 10:35	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	35813	09/30/22 14:32	CH	EET MID

Client Sample ID: FS06

Date Collected: 09/28/22 11:35
Date Received: 09/29/22 08:35

Lab Sample ID: 890-3107-6

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	35720	09/29/22 15:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35814	10/01/22 00:45	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			35870	10/01/22 08:06	AJ	EET MID
Total/NA	Analysis	8015 NM		1			35975	10/03/22 11:45	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	35755	09/30/22 08:55	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35738	09/30/22 13:26	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	35792	09/30/22 10:35	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	35813	09/30/22 14:36	CH	EET MID

Client Sample ID: FS07

Date Collected: 09/28/22 11:40
Date Received: 09/29/22 08:35

Lab Sample ID: 890-3107-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	35720	09/29/22 15:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35814	10/01/22 01:11	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			35870	10/01/22 08:06	AJ	EET MID
Total/NA	Analysis	8015 NM		1			35975	10/03/22 11:45	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	35755	09/30/22 08:55	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35738	09/30/22 13:48	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-3107-1
SDG: 03E1558097

Client Sample ID: FS07
Date Collected: 09/28/22 11:40
Date Received: 09/29/22 08:35

Lab Sample ID: 890-3107-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.95 g	50 mL	35792	09/30/22 10:35	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	35813	09/30/22 14:41	CH	EET MID

Client Sample ID: FS08
Date Collected: 09/28/22 12:00
Date Received: 09/29/22 08:35

Lab Sample ID: 890-3107-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	35720	09/29/22 15:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35814	10/01/22 01:37	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			35870	10/01/22 08:06	AJ	EET MID
Total/NA	Analysis	8015 NM		1			35975	10/03/22 11:45	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	35755	09/30/22 08:55	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35738	09/30/22 14:10	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	35792	09/30/22 10:35	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	35813	09/30/22 14:46	CH	EET MID

Client Sample ID: FS09
Date Collected: 09/28/22 12:05
Date Received: 09/29/22 08:35

Lab Sample ID: 890-3107-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	35720	09/29/22 15:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35814	10/01/22 02:03	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			35870	10/01/22 08:06	AJ	EET MID
Total/NA	Analysis	8015 NM		1			35975	10/03/22 11:45	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	35755	09/30/22 08:55	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35738	09/30/22 14:31	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	35792	09/30/22 10:35	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	35813	09/30/22 14:51	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 184H

Job ID: 890-3107-1
SDG: 03E1558097

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 184H

Job ID: 890-3107-1
SDG: 03E1558097

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 184H

Job ID: 890-3107-1
SDG: 03E1558097

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3107-1	FS01	Solid	09/27/22 13:40	09/29/22 08:35	1
890-3107-2	FS02	Solid	09/27/22 13:45	09/29/22 08:35	1
890-3107-3	FS03	Solid	09/27/22 13:50	09/29/22 08:35	1
890-3107-4	FS04	Solid	09/28/22 11:25	09/29/22 08:35	1
890-3107-5	FS05	Solid	09/28/22 11:30	09/29/22 08:35	1
890-3107-6	FS06	Solid	09/28/22 11:35	09/29/22 08:35	1
890-3107-7	FS07	Solid	09/28/22 11:40	09/29/22 08:35	0.5
890-3107-8	FS08	Solid	09/28/22 12:00	09/29/22 08:35	0.5
890-3107-9	FS09	Solid	09/28/22 12:05	09/29/22 08:35	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	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Green St.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	303-887-2946	Email:	Garrett.Green@ExxonMobil.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	PLU 184H	Turn Around	
Project Number:	03E1558097	☐ Routine ☑ Rush	
Project Location:		Due Date: 1 Day	
Sampler's Name:	Connor Whitman	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Samples Received Intact:	(Yes) No	Thermometer ID:	T-NM007	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	1.6	
Total Containers:		Corrected Temperature:	1.4	

Preservative Codes

None: NO | DI Water: H_2O
Cool: Cool | MeOH: Me
HCL: HC | HNO_3: HN
H_2S0_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	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
FS01	S	9/27/2022	13:40	1'	Comp	1		x	x	x
FS02	S	9/27/2022	13:45	1'	Comp	1		x	x	x
FS03	S	9/27/2022	13:50	1'	Comp	1		x	x	x
FS04	S	9/28/2022	11:25	1'	Comp	1		x	x	x
FS05	S	9/28/2022	11:30	1'	Comp	1		x	x	x
FS06	S	9/28/2022	11:35	1'	Comp	1		x	x	x
FS07	S	9/28/2022	11:40	1' 0.5'	Comp	1		x	x	x
FS08	S	9/28/2022	12:00	1' 0.5'	Comp	1		x	x	x
FS09	S	9/28/2022	12:05	1' 0.5'	Comp	1		x	x	x

Sample Comments

Incident ID:
nAPP2219648561
Cost Center:
1137651001
AFE:

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		9.29.22 835			
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3107-1
SDG Number: 03E1558097

Login Number: 3107
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3107-1
SDG Number: 03E1558097

Login Number: 3107
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 09/30/22 10:28 AM

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

ENSOLUM

APPENDIX D

NMOCD Notifications

From: Kalei Jennings
To: Ben Belill; Tacoma Morrissey
Subject: FW: XTO - Sampling Notification (Week of 9/26/22 - 9/30/22)
Date: Friday, September 23, 2022 4:07:03 PM
Attachments: image001.png
image002.png
image003.png
image004.png

FYI

Kalei Jennings
Senior Scientist
817-683-2503
Ensolum, LLC

From: Green, Garrett J <garrett.green@exxonmobil.com>
Sent: Friday, September 23, 2022 3:52 PM
To: ocd.enviro@state.nm.us; mike.bratcher@state.nm.us; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>
Cc: DelawareSpills /SM <DelawareSpills@exxonmobil.com>; Kalei Jennings <kjennings@ensolum.com>
Subject: XTO - Sampling Notification (Week of 9/26/22 - 9/30/22)

[**EXTERNAL EMAIL**]

All,

XTO plans to complete final sampling activities at the following sites the week of September 26, 2022.

Monday
- PLU 184H / nAPP2219648561

Tuesday
- PLU 184H / nAPP2219648561

Wednesday
- PLU PC 17 / NAPP2223832773

Thursday
- BEU 29W Vader 100H / nAPP2102831345
- PLU 411/ nAPP2219646774

Friday

- BEU 29W Vader 100H / nAPP2102831345
- PLU 411/ nAPP2219646774

Thank you!

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

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

From: Green, Garrett J
To: ocd.enviro@state.nm.us; mike.bratcher@state.nm.us; Hamlet, Robert, EMNRD
Cc: DelawareSpills /SM; Tacoma Morrissey
Subject: XTO - Sampling Notification (Week of 9/19/22 - 9/23/22)
Date: Friday, September 16, 2022 4:34:08 PM

[**EXTERNAL EMAIL**]

All,

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

Monday
- PLU 147 / Spill Date 09/10/2022
- ADU 624 / NAPP2123634554
- ADU 641/ NAPP2215449179
- PLU 411/ nAPP2219646774
- ADU 816 / NAB1435334641

Tuesday
- BEU 29W Vader 100H / nAPP2102831345
- PLU 411/ nAPP2219646774
- ADU 816 / NAB1435334641
- Stan 32 State 71H / NRM2004938133

Wednesday
- BEU 29W Vader 100H / nAPP2102831345
- PLU 27 BD 167/ nAPP2222741514
- Stan 32 State 71H / NRM2004938133

Thursday
- BEU 29W Vader 100H / nAPP2102831345
- Stan 32 State 71H / NRM2004938133

Friday
- BEU 29W Vader 100H / nAPP2102831345
- PLU 184H / nAPP2219648561

Thank you!

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

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 149545

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 149545
	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 #NAPP2219648561 POKER LAKE UNIT 184H, thank you. This closure is approved.	12/21/2022