Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2210942764
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: 9/21/2022

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

OCD Only

Received by: Jocelyn Harimon Date: 09/22/2022

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: 12/13/2022

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	NAPP2210942764
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Release Notification

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Adrian Baker	Contact Telephone 432-236-3808
Contact email adrian.baker@exxonmobil.com	Incident # *(assigned by OCD)*
Contact mailing address 6401 Holiday Hill Rd Bldg 5, Midland, Texas, 79707	

Location of Release Source

Latitude 32.10990 Longitude -103.88862
(NAD 83 in decimal degrees to 5 decimal places)

Site Name PLU 21 Brushy Draw 104H	Site Type Production Well
Date Release Discovered 04/05/2022	API# *(if applicable)*

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

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☒ Other (describe) Produced water w/ FR	Volume/Weight Released (provide units) 41.15 BBLS	Volume/Weight Recovered (provide units) 35.00 BBLS

Cause of Release: Communication and power loss caused the spill-over tank to overflow, releasing fluids both to containment and to pad. Free fluids were recovered. A third-party contractor has been retained for remediation purposes.

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2210942764
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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? A release equal to or greater than 25 barrels.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Yes, by Adrian Baker to Mike Bratcher, Robert Hamlet, ocdonline, EMNRD on Wednesday, April 6, 2022 at 1:43 PM via email.

Initial Response

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

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

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

NA

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

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

Printed Name: Shelby Pennington Title: Environmental Manager

Signature: Shelby Pennington Date: 4/19/22

email: shelby.g.pennington@exxonmobil.com Telephone: 281-723-9353

OCD Only

Received by: Jocelyn Harimon Date: 04/19/2022

Location:	PLU 21 Brushy Draw 104H	
Spill Date:	4/5/2022	

Area 1		
Approximate Area =	1000.00	sq. ft.
Average Saturation (or depth) of spill =	3.00	inches
Average Porosity Factor =	0.03	
VOLUME OF LEAK		
Total Crude Oil =	0.00	bbls
Total Produced Water =	21.34	bbls

Area 2		
Approximate Area =	3600.00	sq. ft.
Average Saturation (or depth) of spill =	3.00	inches
Average Porosity Factor =	0.03	
VOLUME OF LEAK		
Total Crude Oil =	0.00	bbls
Total Produced Water =	4.81	bbls

Area 3 - containment		
Approximate Area =	84.22	cu.ft.
VOLUME OF LEAK		
Total Crude Oil =	0.00	bbls
Total Produced Water =	15.00	bbls

TOTAL VOLUME OF LEAK		
Total Crude Oil =	**0.00**	**bbls**
Total Produced Water =	**41.15**	**bbls**
TOTAL VOLUME RECOVERED		
Total Crude Oil =	**0.00**	**bbls**
Total Produced Water =	**35.00**	**bbls**

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

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

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 99756
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	None	4/19/2022

Incident ID	NAPP2210942764
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2210942764
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Printed Name: _Garrett Green_____ Title: _Environmental Coordinator_____

Signature:_____ Date: 9/21/2022

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

OCD Only

Received by: ____Jocelyn Harimon_____ Date: 09/22/2022

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2210942764
District RP	
Facility ID	
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Closure

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

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

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

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

☒ Description of remediation activities

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Printed Name: _Garrett Green_____ Title: _Environmental Coordinator_____

Signature: _____ Date: 9/21/2022

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

OCD Only

Received by: Jocelyn Harimon Date: 09/22/2022

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

September 21, 2022

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

Re: Closure Request
PLU 21 Brushy Draw 104H
Incident Number NAPP2210942764
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared this Closure Request to document site assessment, excavation, and soil sampling activities at the PLU 21 Brushy Draw 104H (Site). The purpose of the site assessment and soil sampling activities was to assess for the presence or absence of impacts to soil following a release of produced water with friction reducer. Based on field observations, field screening activities, and soil sample laboratory analytical results, XTO is submitting this Closure Request, describing site assessment, excavation, and delineation activities that have occurred and requesting no further action for Incident Number NAPP2210942764.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit N, Section 21, Township 25 South, Range 30 East, in Eddy County, New Mexico (32.10990° N, 103.88862° W) and is associated with oil and gas exploration and production operations on private surface land owned by Ms. Janey Paschal.

On April 5, 2022, a communication and power loss during operations resulted in the release of approximately 41.15 barrels (bbls) of produced water with friction reducer (FR) from the spill-over tank into secondary containment and onto the Site pad. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; approximately 35.0 bbls were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) via email on April 6, 2022 and submitted a Release Notification Form C-141 (Form C-141) on April 19, 2022.The release was assigned Incident Number NAPP2210942764.

The temporary liner was removed prior to beginning site assessment activities. As such, a liner inspection could not be completed. The release extent was identified based on information provided on the Form C-141 and visual observations.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized according to Site Assessment/Characterization, 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.

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is United States Geological Survey (USGS) well 320628103533001, located approximately 0.21 miles southwest of the Site. The groundwater well has a reported depth to groundwater of 264 feet bgs and a total depth of 288 feet bgs. Ground surface elevation at the groundwater well location is 3,207 feet above mean sea level (amsl), which is approximately 28 feet lower in elevation than the Site.

The closest continuously flowing or significant watercourse to the Site is an intermittent dry wash, located approximately 315 feet south of the Site. The Site is greater than 200 feet from any 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). Potential Site receptors are identified on Figure 1 and the referenced well records are included in Appendix A.

Based on the results of the Site Characterization, the following NMOCD Table 1, Closure Criteria for Soils Impacted by a Release (19.15.29.12 NMAC; Closure Criteria) will 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 (TPH-GRO, TPH-DRO, and TPH oil-range organics (ORO)): 2,500 mg/kg
- Chloride: 20,000 mg/kg

SITE ASSESSMENT ACTIVITIES

On June 17, 2022, Ensolum personnel visited the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. Preliminary soil samples SS01 through SS03 were collected within the release extent at a depth of approximately 0.5 feet bgs to assess the impacts to soil. The preliminary soil samples were field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. 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 assessment and a photographic log is included in Appendix B.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported at or below 4 degrees Celsius (°C) under strict chain-of-custody 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-ORO following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Laboratory analytical results indicated TPH-GRO/TPH-DRO concentrations in preliminary soil samples SS01 and SS02 and TPH concentrations in preliminary soil sample SS02 exceeded the Closure Criteria. BTEX and chloride concentrations in all preliminary soil samples were compliant with the Closure Criteria. Based on visible staining in the release area, elevated field screening results, and laboratory analytical results for preliminary soil samples SS01 and SS02, excavation and delineation activities appeared warranted.

DELINEATION AND EXCAVATION SOIL SAMPLING ACTIVITIES

On August 30 and 31, 2022, Ensolum personnel were at the Site to oversee delineation and excavation activities. Delineation samples from potholes PH01 through PH03 were advanced in the vicinity of the preliminary soil sample locations to assess the extent of the release. Potholes PH01 through PH03 were advanced within the release extent via trackhoe to depths extending to 1-foot bgs. Additionaly, surface samples SS04 through SS07 were collected at depths of 0.5 feet bgs laterally to assess the lateral extent of the release.

The delineation soil samples were field screened for volatile aromatic hydrocarbons and chloride and the screening results were utilized to direct excavation actvities.. Field screening results and observations for the potholes were logged on lithologic/soil sampling logs, which are included in Appendix C. The potholes and delineation soil sample locations are depicted on Figure 2.

Impacted soil was excavated from the release area as indicated by visible staining, field screening, and laboratory analytical results at preliminary soil sample locations SS01 and SS02. Excavation activities were performed using a backhoe and transport vehicle. To direct excavation activities, Ensolum personnel screened soil for volatile aromatic hydrocarbons and chloride. Following removal of impacted soil, Ensolum personnel collected 5-point composite soil samples representing no more than 200 square feet from the sidewalls and 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 FS11 were collected from the floor of the excavation at a depth of of 1 foot bgs. Due to the shallow depth of the excavation, sidewalls of the excavation were included in the composite samples. The excavation 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 final excavation extent measured approximately 2,156 square feet. A total of approximately 80 cubic yards of impacted soil were removed during the excavation activities. The impacted soil was transported, manifested, and properly disposed of at the R360 Facility in Hobbs, New Mexico. The excavation areas were secured with fencing after confirmation sampling was completed.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for delineation soil samples SS04 through SS07, collected at 0.5 feet bgs and pothole samples PH01 through PH03 collected at 1-foot bgs indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the strictest Table 1 Closure Criteria, and demonstrated lateral and vertical delineation of the release. Laboratory analytical results for excavation soil samples FS01 through FS11 indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with Table 1 Closure Criteria.

Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix D. Appendix E provides NMOCD correspondence email notification receipts associated with the subject release.

CLOSURE REQUEST

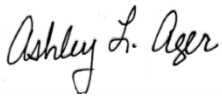
Site assessment and excavation activities were conducted at the Site to address Incident Number NAPP2210942764.

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 Criteria. In addition, delineation soil samples SS04 through SS07 and PH01 through PH03 at 1-foot bgs provide lateral and vertical delineation of the release to the strictest Table 1 Closure Criteria. Based on the soil sample analytical results, no further remediation appeared required. XTO will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions. The safety data sheet (SDS) for friction reducer is provided in Appendix F.

Excavation of impacted soil has mitigated impacts at this Site. Depth to groundwater has been estimated to be greater than 100 feet bgs and no other sensitive receptors were identified near the release extent. XTO believes these remedial actions are protective of human health, the environment, and groundwater. As such, XTO respectfully requests closure for Incident Number NAPP2210942764.

If you have any questions or comments, please contact Ms. Ashley Ager at (970) 946-1093 or aager@ensolum.com.

Sincerely,
Ensolum, LLC



Benjamin J. Belill
Project Geologist

Ashley L. Ager, M.S., PG
Program Director

cc: Garrett Green, XTO
Shelby Pennington, XTO

Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Referenced Well Records
Appendix B	Photographic Log
Appendix C	Lithologic / Soil Sampling Logs
Appendix D	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix E	NMOCD Notifications
Appendix F	Friction Reducer SDS

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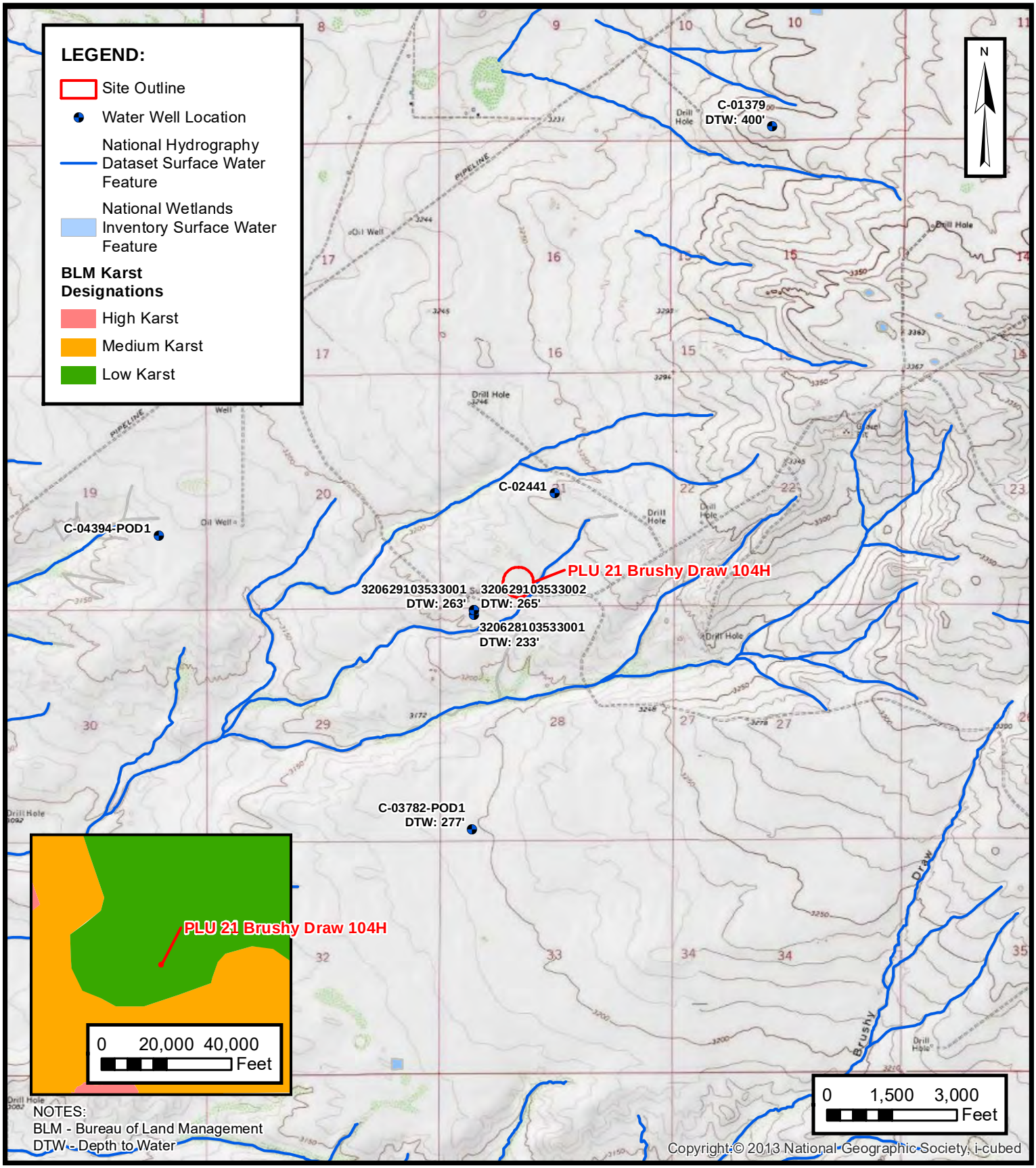
Figures

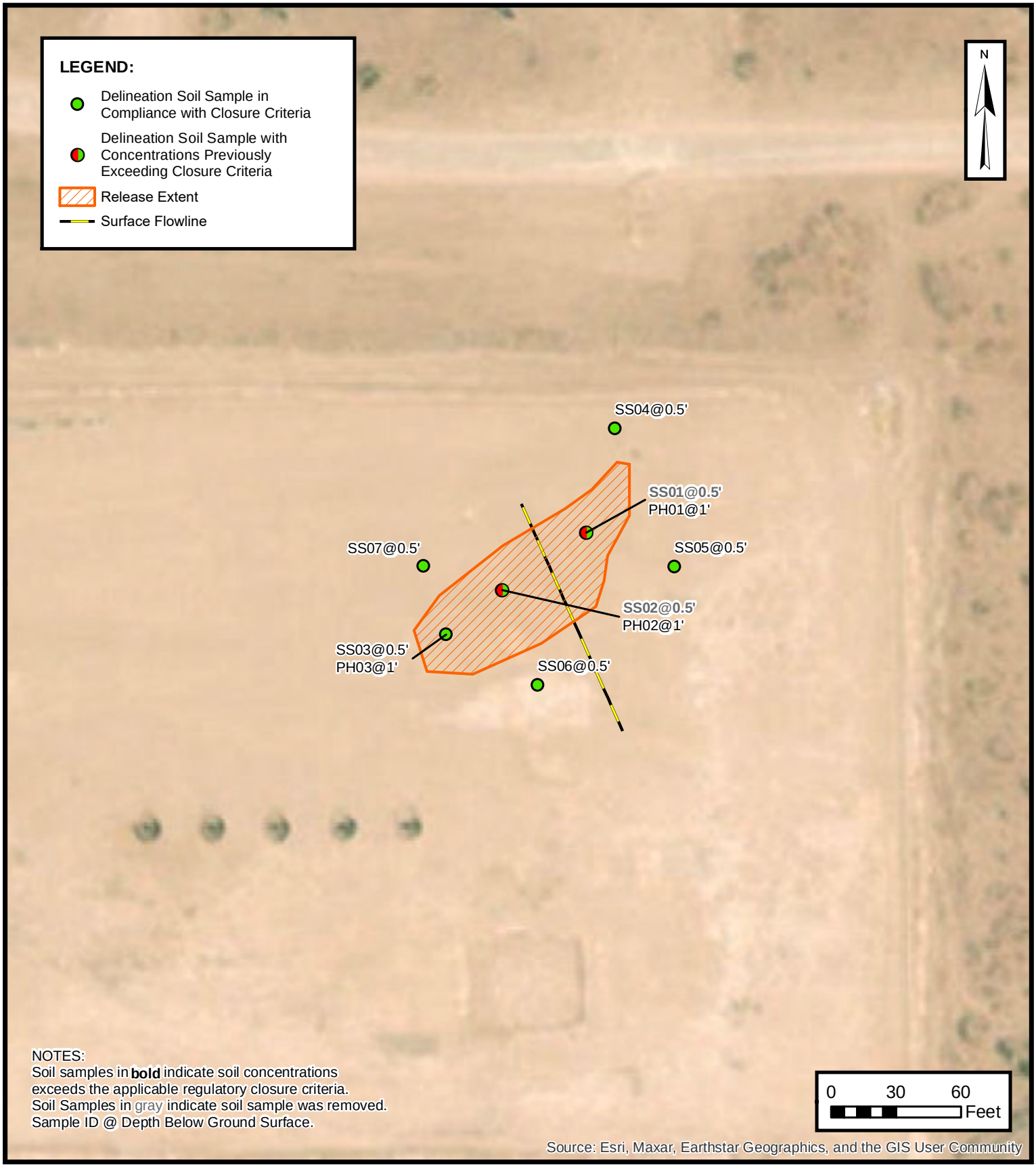


ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

SITE RECEPTOR MAP

XTO ENERGY, INC
PLU 21 BRUSHY DRAW 104H
NAPP2210942764
Unit N, Sec 21, T25S, R30E
Eddy County, New Mexico

FIGURE
1



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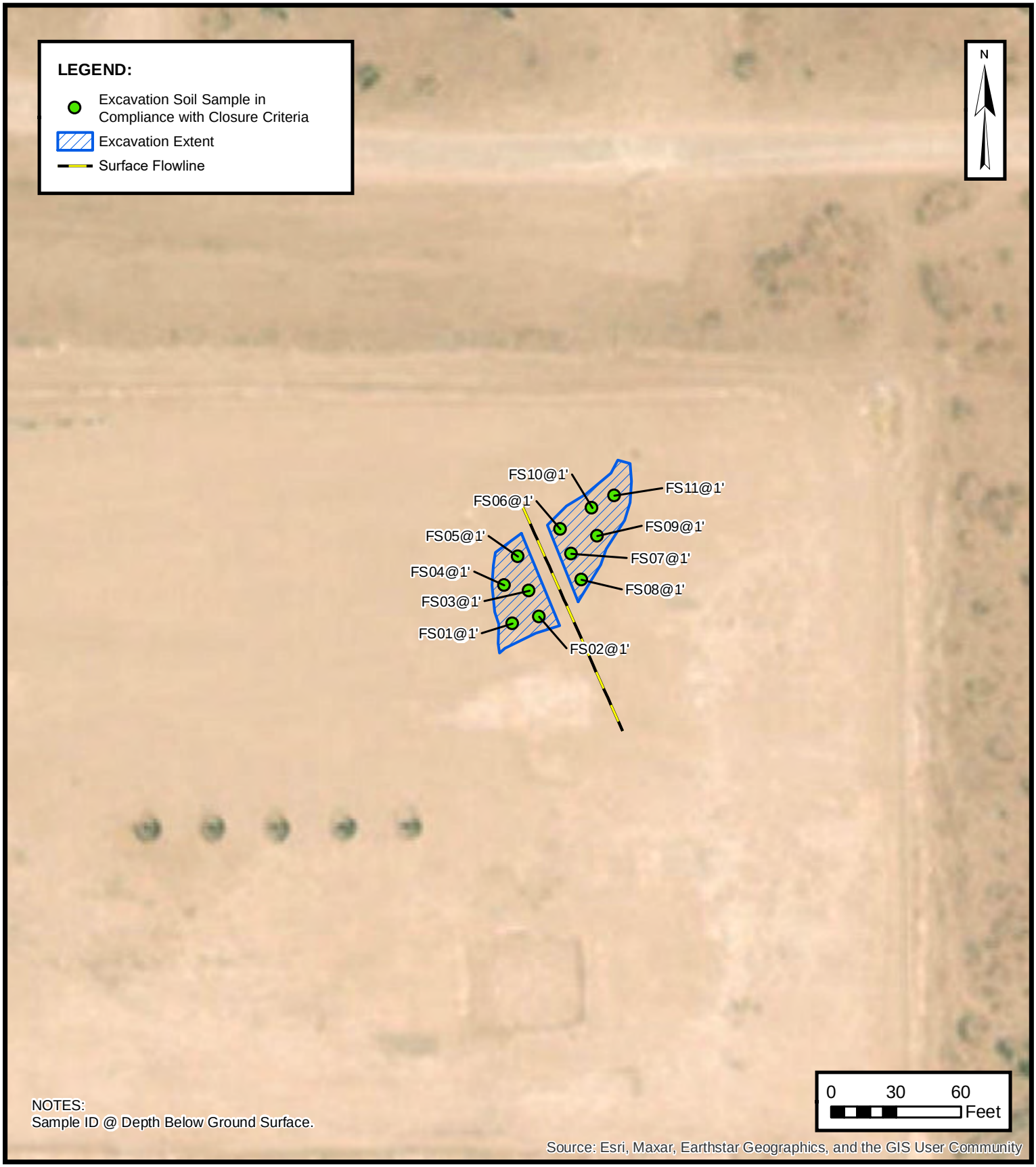
Environmental, Engineering and Hydrogeologic Consultants

DELINEATION SOIL SAMPLE LOCATIONS

XTO ENERGY, INC
PLU 21 BRUSHY DRAW 104H
NAPP2210942764
Unit N, Sec 21, T25S, R30E
Eddy County, New Mexico

FIGURE
2



ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

EXCAVATION SOIL SAMPLE LOCATIONS

XTO ENERGY, INC
PLU 21 BRUSHY DRAW 104H
NAPP2210942764
Unit N, Sec 21, T25S, R30E
Eddy County, New Mexico

FIGURE
3

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Tables

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
PLU 21 Brushy Draw 104H
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
Delineation Soil Samples										
SS01	*06/17/2022*	*0.5*	*<0.00199*	*<0.00398*	*69.9*	*2,370*	*<500*	***2,440***	*2,440*	*13,400*
PH01	08/30/2022	1	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	219
SS02	*06/17/2022*	*0.5*	*<0.00201*	*<0.00402*	*85.8*	*3,330*	*<49.8*	***3,416***	***3,420***	*12,800*
PH02	08/30/2022	1	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	66.3
SS03	06/17/2022	0.5	<0.00199	<0.00398	<49.8	131	392	131	523	4,780
PH03	08/30/2022	1	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	<50.0	276
SS04	08/30/2022	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	165
SS05	08/30/2022	0.5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	125
SS06	08/30/2022	0.5	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	252
SS07	08/30/2022	0.5	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	373
Confirmation Soil Samples										
FS01	08/31/2022	1	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	4,410
FS02	08/31/2022	1	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	2,470
FS03	08/31/2022	1	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	1,130
FS04	08/31/2022	1	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	5,300
FS05	08/31/2022	1	<0.00202	<0.00404	<49.9	<49.9	<49.9	<49.9	<49.9	555
FS06	08/31/2022	1	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	205
FS07	08/31/2022	1	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	2,880
FS08	08/31/2022	1	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	2,540
FS09	08/31/2022	1	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	7,220
FS10	08/31/2022	1	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	305
FS11	08/31/2022	1	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	2,300

Notes:

bgs: below ground surface
mg/kg: milligrams per kilogram
NMOCD: New Mexico Oil Conservation Division
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
TPH: Total Petroleum Hydrocarbon
Grey text indicate soil sample removed during excavation activities
Concentrations in bold exceed the NMOCD Table 1 Closure Criteria or reclamation standard where applicable.

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APPENDIX A

Referenced Well Records

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.
- Attention current WaterAlert users: NextGen WaterAlert is replacing Legacy WaterAlert. You must take action before 9/30/2022 to retain your alerts. Read more.
- Full News

Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 320628103533001

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

USGS 320628103533001 25S.30E.21.333424

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

Output formats

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

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

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Status	P	Pumping
Method of measurement	S	Steel-tape measurement.
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	A	Approved for publication -- Processing and review completed.

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APPENDIX B

Photographic Log

ENSOLUM

Photographic Log
XTO Energy, Inc.
PLU 21 Brushy Draw 104H
Incident Number: NAPP2210942764

Photograph 1 Date: June 17, 2022
Description: Site Assessment Activities

Photograph 2 Date: June 17, 2022
Description: Site Assessment Activities

Photograph 3 Date: August 30, 2022
Description: Excavation Activities

Photograph 4 Date: August 30, 2022
Description: Excavation Activities

ENSOLUM

APPENDIX C

Lithologic Soil Sampling Logs

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

	Sample Name: PH01	Date: 8/30/2022
	Site Name: PLU 21 BD 104H	
	Incident Number: NAPP2210942764	
	Job Number: 03E1558053	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: KP	Method: Trackhoe
Coordinates: 32.1099, -103.8886	Hole Diameter: N/A	Total Depth: 1'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	CCHE (fill)	0-1', CALICHE w/ fine sand, moist, tan, some small sub-round gravel, no stain, no H/C odor, fill.
M	948	0.7	N	SS01	0.5			
M	240	0.0	N	PH01	1	1		
							TD	Total Depth at 1-foot bgs.

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Sample Name: PH02	Date: 8/30/2022	
Site Name: PLU 21 BD 104H		
Incident Number: NAPP2210942764		
Job Number: 03E1558053		
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: KP	Method: Trackhoe
Coordinates: 32.1099, -103.8886	Hole Diameter: N/A	Total Depth: 1'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	CCHE (fill)	0-1', CALICHE w/ fine sand, moist, tan, some small sub-round gravel, no stain, no H/C odor, fill.
M	880	3.1	N	SS02	0.5			
M	<112	0.0	N	PH02	1	1		
							TD	Total Depth at 1-foot bgs.

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

	Sample Name: PH03	Date: 8/30/2022
	Site Name: PLU 21 BD 104H	
	Incident Number: NAPP2210942764	
	Job Number: 03E1558053	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: KP	Method: Trackhoe
Coordinates: 32.1099, -103.8886	Hole Diameter: N/A	Total Depth: 1'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	CCHE (fill)	0-1', CALICHE w/ fine sand, moist, tan, some small sub-round gravel, no stain, no H/C odor, fill.
M	948	6.2	N	SS03	0.5			
M	<112	0.0	N	PH03	1	1		
							TD	Total Depth at 1-foot bgs.

ENSOLUM

APPENDIX D

Laboratory Analytical Reports & Chain-of-Custody Documentation

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-2426-1
Laboratory Sample Delivery Group: 03E1558053
Client Project/Site: PLU 21 BD 104H, 123H, 124H

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

Attn: Ben Belill

JKramer

Authorized for release by:
6/24/2022 5:52:42 PM

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

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

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

Client: Ensolum
Project/Site: PLU 21 BD 104H, 123H, 124H

Laboratory Job ID: 890-2426-1
SDG: 03E1558053

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-2426-1
Project/Site: PLU 21 BD 104H, 123H, 124H SDG: 03E1558053

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
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
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: PLU 21 BD 104H, 123H, 124H

Job ID: 890-2426-1
SDG: 03E1558053

Job ID: 890-2426-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2426-1

Receipt
The sample was received on 6/17/2022 4:33 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 14.0°C

GC VOA
Method 8021B: The laboratory control sample (LCS) for preparation batch 880-28063 and analytical batch 880-28005 recovered outside control limits for the following analytes: o-Xylene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 880-28063 and analytical batch 880-28005 was outside control limits. Sample matrix interference is suspected.

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

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

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

Client Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H, 123H, 124H

Job ID: 890-2426-1
SDG: 03E1558053

Client Sample ID: SS03
Date Collected: 06/17/22 13:00
Date Received: 06/17/22 16:33
Sample Depth: 0.5'

Lab Sample ID: 890-2426-1
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U F1	0.00199		mg/Kg		06/21/22 14:42	06/21/22 23:31	1
Toluene	<0.00199	U F1	0.00199		mg/Kg		06/21/22 14:42	06/21/22 23:31	1
Ethylbenzene	<0.00199	U F1	0.00199		mg/Kg		06/21/22 14:42	06/21/22 23:31	1
m-Xylene & p-Xylene	<0.00398	U F1	0.00398		mg/Kg		06/21/22 14:42	06/21/22 23:31	1
o-Xylene	<0.00199	U F1 *+	0.00199		mg/Kg		06/21/22 14:42	06/21/22 23:31	1
Xylenes, Total	<0.00398	U F1	0.00398		mg/Kg		06/21/22 14:42	06/21/22 23:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*06/21/22 14:42*	*06/21/22 23:31*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*06/21/22 14:42*	*06/21/22 23:31*	*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			06/22/22 12:17	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**523**		49.8		mg/Kg			06/22/22 11:20	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		06/21/22 11:35	06/22/22 03:28	1
Diesel Range Organics (Over C10-C28)	**131**		49.8		mg/Kg		06/21/22 11:35	06/22/22 03:28	1
Oil Range Organics (Over C28-C36)	**392**		49.8		mg/Kg		06/21/22 11:35	06/22/22 03:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*06/21/22 11:35*	*06/22/22 03:28*	*1*
o-Terphenyl	*119*		*70 - 130*	*06/21/22 11:35*	*06/22/22 03:28*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4780**		50.0		mg/Kg			06/24/22 13:31	10

Surrogate Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H, 123H, 124H

Job ID: 890-2426-1
SDG: 03E1558053

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)
890-2426-1	SS03	97	88
890-2426-1 MS	SS03	110	99
890-2426-1 MSD	SS03	91	93
LCS 880-28063/1-A	Lab Control Sample	121	100
LCSD 880-28063/2-A	Lab Control Sample Dup	110	104
MB 880-27967/5-A	Method Blank	93	110
MB 880-28063/5-A	Method Blank	95	107

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)
880-16078-A-21-B MS	Matrix Spike	82	79
880-16078-A-21-C MSD	Matrix Spike Duplicate	86	82
890-2426-1	SS03	111	119
LCS 880-28045/2-A	Lab Control Sample	104	110
LCSD 880-28045/3-A	Lab Control Sample Dup	104	113
MB 880-28045/1-A	Method Blank	102	119

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H, 123H, 124H

Job ID: 890-2426-1
SDG: 03E1558053

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-27967/5-A
Matrix: Solid
Analysis Batch: 28005

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 27967

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/20/22 15:20	06/21/22 12:25	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/20/22 15:20	06/21/22 12:25	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/20/22 15:20	06/21/22 12:25	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/20/22 15:20	06/21/22 12:25	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/20/22 15:20	06/21/22 12:25	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/20/22 15:20	06/21/22 12:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*06/20/22 15:20*	*06/21/22 12:25*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*06/20/22 15:20*	*06/21/22 12:25*	*1*

Lab Sample ID: MB 880-28063/5-A
Matrix: Solid
Analysis Batch: 28005

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 28063

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/21/22 14:42	06/21/22 23:09	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/21/22 14:42	06/21/22 23:09	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/21/22 14:42	06/21/22 23:09	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/21/22 14:42	06/21/22 23:09	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/21/22 14:42	06/21/22 23:09	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/21/22 14:42	06/21/22 23:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*06/21/22 14:42*	*06/21/22 23:09*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*06/21/22 14:42*	*06/21/22 23:09*	*1*

Lab Sample ID: LCS 880-28063/1-A
Matrix: Solid
Analysis Batch: 28005

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 28063

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09845		mg/Kg		98	70 - 130		
Toluene			0.100	0.1157		mg/Kg		116	70 - 130		
Ethylbenzene			0.100	0.1118		mg/Kg		112	70 - 130		
m-Xylene & p-Xylene			0.200	0.2330		mg/Kg		117	70 - 130		
o-Xylene			0.100	0.1311	*+	mg/Kg		131	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 880-28063/2-A
Matrix: Solid
Analysis Batch: 28005

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 28063

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1045		mg/Kg		105	70 - 130	6	35

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H, 123H, 124H

Job ID: 890-2426-1
SDG: 03E1558053

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

Lab Sample ID: LCSD 880-28063/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 28005 — **Prep Batch: 28063**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.1127		mg/Kg		113	70 - 130	3	35
Ethylbenzene			0.100	0.1015		mg/Kg		102	70 - 130	10	35
m-Xylene & p-Xylene			0.200	0.2046		mg/Kg		102	70 - 130	13	35
o-Xylene			0.100	0.1150		mg/Kg		115	70 - 130	13	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: 890-2426-1 MS — **Client Sample ID: SS03**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 28005 — **Prep Batch: 28063**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U F1	0.100	0.07404		mg/Kg		74	70 - 130
Toluene	<0.00199	U F1	0.100	0.07758		mg/Kg		77	70 - 130
Ethylbenzene	<0.00199	U F1	0.100	0.06116	F1	mg/Kg		61	70 - 130
m-Xylene & p-Xylene	<0.00398	U F1	0.200	0.1209	F1	mg/Kg		60	70 - 130
o-Xylene	<0.00199	U F1 *+	0.100	0.06788	F1	mg/Kg		68	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 890-2426-1 MSD — **Client Sample ID: SS03**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 28005 — **Prep Batch: 28063**

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	0.06494	F1	mg/Kg		65	70 - 130	13	35
Toluene	<0.00199	U F1	0.100	0.06696	F1	mg/Kg		67	70 - 130	15	35
Ethylbenzene	<0.00199	U F1	0.100	0.04899	F1	mg/Kg		49	70 - 130	22	35
m-Xylene & p-Xylene	<0.00398	U F1	0.201	0.09419	F1	mg/Kg		47	70 - 130	25	35
o-Xylene	<0.00199	U F1 *+	0.100	0.05296	F1	mg/Kg		53	70 - 130	25	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

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

Lab Sample ID: MB 880-28045/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 27998 — **Prep Batch: 28045**

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		06/21/22 11:35	06/21/22 21:37	1

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H, 123H, 124H

Job ID: 890-2426-1
SDG: 03E1558053

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

Lab Sample ID: MB 880-28045/1-A
Matrix: Solid
Analysis Batch: 27998

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 28045

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		06/21/22 11:35	06/21/22 21:37	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/21/22 11:35	06/21/22 21:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*06/21/22 11:35*	*06/21/22 21:37*	*1*
o-Terphenyl	*119*		*70 - 130*	*06/21/22 11:35*	*06/21/22 21:37*	*1*

Lab Sample ID: LCS 880-28045/2-A
Matrix: Solid
Analysis Batch: 27998

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 28045

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	992.5		mg/Kg		99	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1042		mg/Kg		104	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*104*		*70 - 130*
o-Terphenyl	*110*		*70 - 130*

Lab Sample ID: LCSD 880-28045/3-A
Matrix: Solid
Analysis Batch: 27998

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 28045

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1036		mg/Kg		104	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			1000	1061		mg/Kg		106	70 - 130	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*104*		*70 - 130*
o-Terphenyl	*113*		*70 - 130*

Lab Sample ID: 880-16078-A-21-B MS
Matrix: Solid
Analysis Batch: 27998

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 28045

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	905.3		mg/Kg		87	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	998	799.1		mg/Kg		80	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*82*		*70 - 130*
o-Terphenyl	*79*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H, 123H, 124H

Job ID: 890-2426-1
SDG: 03E1558053

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

Lab Sample ID: 880-16078-A-21-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 27998 — **Prep Batch: 28045**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	933.1		mg/Kg		89	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	845.4		mg/Kg		85	70 - 130	6	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*86*		*70 - 130*
o-Terphenyl	*82*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-27963/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 28185

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			06/24/22 11:13	1

Lab Sample ID: LCS 880-27963/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 28185

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	272.5		mg/Kg		109	90 - 110		

Lab Sample ID: LCSD 880-27963/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 28185

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	274.8		mg/Kg		110	90 - 110	1	20

Lab Sample ID: 820-4663-A-67-I MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 28185

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	344		251	600.1		mg/Kg		102	90 - 110		

Lab Sample ID: 820-4663-A-67-J MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 28185

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	344		251	601.1		mg/Kg		103	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H, 123H, 124H

Job ID: 890-2426-1
SDG: 03E1558053

GC VOA

Prep Batch: 27967

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-27967/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 28005

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2426-1	SS03	Total/NA	Solid	8021B	28063
MB 880-27967/5-A	Method Blank	Total/NA	Solid	8021B	27967
MB 880-28063/5-A	Method Blank	Total/NA	Solid	8021B	28063
LCS 880-28063/1-A	Lab Control Sample	Total/NA	Solid	8021B	28063
LCSD 880-28063/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	28063
890-2426-1 MS	SS03	Total/NA	Solid	8021B	28063
890-2426-1 MSD	SS03	Total/NA	Solid	8021B	28063

Prep Batch: 28063

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2426-1	SS03	Total/NA	Solid	5035	
MB 880-28063/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-28063/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-28063/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2426-1 MS	SS03	Total/NA	Solid	5035	
890-2426-1 MSD	SS03	Total/NA	Solid	5035	

Analysis Batch: 28143

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2426-1	SS03	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 27998

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2426-1	SS03	Total/NA	Solid	8015B NM	28045
MB 880-28045/1-A	Method Blank	Total/NA	Solid	8015B NM	28045
LCS 880-28045/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	28045
LCSD 880-28045/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	28045
880-16078-A-21-B MS	Matrix Spike	Total/NA	Solid	8015B NM	28045
880-16078-A-21-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	28045

Prep Batch: 28045

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2426-1	SS03	Total/NA	Solid	8015NM Prep	
MB 880-28045/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-28045/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-28045/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-16078-A-21-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-16078-A-21-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 28127

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2426-1	SS03	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H, 123H, 124H

Job ID: 890-2426-1
SDG: 03E1558053

HPLC/IC

Leach Batch: 27963

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2426-1	SS03	Soluble	Solid	DI Leach	
MB 880-27963/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-27963/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-27963/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
820-4663-A-67-I MS	Matrix Spike	Soluble	Solid	DI Leach	
820-4663-A-67-J MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 28185

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2426-1	SS03	Soluble	Solid	300.0	27963
MB 880-27963/1-A	Method Blank	Soluble	Solid	300.0	27963
LCS 880-27963/2-A	Lab Control Sample	Soluble	Solid	300.0	27963
LCSD 880-27963/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	27963
820-4663-A-67-I MS	Matrix Spike	Soluble	Solid	300.0	27963
820-4663-A-67-J MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	27963

Lab Chronicle

Client: Ensolum
Project/Site: PLU 21 BD 104H, 123H, 124H

Job ID: 890-2426-1
SDG: 03E1558053

Client Sample ID: SS03
Date Collected: 06/17/22 13:00
Date Received: 06/17/22 16:33

Lab Sample ID: 890-2426-1
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	28063	06/21/22 14:42	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	28005	06/21/22 23:31	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			28143	06/22/22 12:17	SM	XEN MID
Total/NA	Analysis	8015 NM		1			28127	06/22/22 11:20	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	28045	06/21/22 11:35	DM	XEN MID
Total/NA	Analysis	8015B NM		1			27998	06/22/22 03:28	SM	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	27963	06/21/22 12:47	SC	XEN MID
Soluble	Analysis	300.0		10			28185	06/24/22 13:31	SC	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H, 123H, 124H

Job ID: 890-2426-1
SDG: 03E1558053

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	T104704400-21-22	06-30-22

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H, 123H, 124H

Job ID: 890-2426-1
SDG: 03E1558053

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN 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:

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

Sample Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H, 123H, 124H

Job ID: 890-2426-1
SDG: 03E1558053

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2426-1	SS03	Solid	06/17/22 13:00	06/17/22 16:33	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:	Ben Belill	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy, Inc.
Address:	3122 National parks Hwy	Address:	3104 E. Green Street
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	9898540852	Email:	bbelill@ensolum.com

Work Order Comments

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

Project Name:	PLU 21 BD 104H, 123H, & 124H	Turn Around	
Project Number:	03E1558053	☑ Routine ☐ Rush	
Project Location:	EDDY COUNTY, NM	Due Date:	
Sampler's Name:	Greg Palese	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT	Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No		Thermometer ID:	TNM007
Cooler Custody Seals:	Yes No (N/A)		Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)		Temperature Reading:	14.2
Total Containers:			Corrected Temperature:	14.0

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021
SS03	S	6/17/2022	1300	0.5'	Grab/	1	X	X	X

890-2426 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

Cost Centers: 1666351001, 1666401001, 166601001

Incident Numbers: NAPP2209736479, NAPP2210942764, NAPP2211651017, NAPP2211151438

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 Gregory Palese	Amanda [signature]	6/17/22 1633	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2426-1
SDG Number: 03E1558053

Login Number: 2426
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	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: 890-2426-1
SDG Number: 03E1558053

Login Number: 2426
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 06/21/22 10:52 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: 890-2430-1
Laboratory Sample Delivery Group: 03E1558053
Client Project/Site: PLU 21 BD 104H,123H, 124H

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

Attn: Ben Belill

JKramer

Authorized for release by:
6/24/2022 5:54:05 PM

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

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

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

Client: Ensolum
Project/Site: PLU 21 BD 104H,123H, 124H

Laboratory Job ID: 890-2430-1
SDG: 03E1558053

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 21 BD 104H,123H, 124H

Job ID: 890-2430-1
SDG: 03E1558053

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
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
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: PLU 21 BD 104H,123H, 124H

Job ID: 890-2430-1
SDG: 03E1558053

Job ID: 890-2430-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2430-1

Receipt
The sample was received on 6/17/2022 4:33 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 14.0°C

GC VOA
Method 8021B: The laboratory control sample (LCS) for preparation batch 880-28063 and analytical batch 880-28005 recovered outside control limits for the following analytes: o-Xylene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 880-28063 and analytical batch 880-28005 was outside control limits. Sample matrix interference is suspected.

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

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

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

Client Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H,123H, 124H

Job ID: 890-2430-1
SDG: 03E1558053

Client Sample ID: SS01
Date Collected: 06/17/22 12:20
Date Received: 06/17/22 16:33
Sample Depth: 0.5'

Lab Sample ID: 890-2430-1
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		06/21/22 14:42	06/22/22 00:54	1
Toluene	<0.00199	U	0.00199		mg/Kg		06/21/22 14:42	06/22/22 00:54	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		06/21/22 14:42	06/22/22 00:54	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		06/21/22 14:42	06/22/22 00:54	1
o-Xylene	<0.00199	U *+	0.00199		mg/Kg		06/21/22 14:42	06/22/22 00:54	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		06/21/22 14:42	06/22/22 00:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*06/21/22 14:42*	*06/22/22 00:54*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*06/21/22 14:42*	*06/22/22 00:54*	*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			06/22/22 12:17	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**2440**		500		mg/Kg			06/22/22 11:20	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	**69.9**		49.9		mg/Kg		06/21/22 11:35	06/22/22 04:30	1
Diesel Range Organics (Over C10-C28)	**2370**		49.9		mg/Kg		06/21/22 11:35	06/22/22 04:30	1
Oil Range Organics (Over C28-C36)	<500	U	500		mg/Kg		06/22/22 14:48	06/22/22 22:59	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*06/21/22 11:35*	*06/22/22 04:30*	*1*
o-Terphenyl	*107*		*70 - 130*	*06/21/22 11:35*	*06/22/22 04:30*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**13400**		99.0		mg/Kg			06/24/22 14:26	20

Surrogate Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H,123H, 124H

Job ID: 890-2430-1
SDG: 03E1558053

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)
890-2426-A-1-C MS	Matrix Spike	110	99
890-2426-A-1-D MSD	Matrix Spike Duplicate	91	93
890-2430-1	SS01	119	107
LCS 880-28063/1-A	Lab Control Sample	121	100
LCSD 880-28063/2-A	Lab Control Sample Dup	110	104
MB 880-27967/5-A	Method Blank	93	110
MB 880-28063/5-A	Method Blank	95	107

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)
880-16078-A-21-B MS	Matrix Spike	82	79
880-16078-A-21-C MSD	Matrix Spike Duplicate	86	82
890-2430-1	SS01	112	107
LCS 880-28045/2-A	Lab Control Sample	104	110
LCSD 880-28045/3-A	Lab Control Sample Dup	104	113
MB 880-28045/1-A	Method Blank	102	119

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H,123H, 124H

Job ID: 890-2430-1
SDG: 03E1558053

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-27967/5-A
Matrix: Solid
Analysis Batch: 28005

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 27967

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/20/22 15:20	06/21/22 12:25	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/20/22 15:20	06/21/22 12:25	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/20/22 15:20	06/21/22 12:25	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/20/22 15:20	06/21/22 12:25	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/20/22 15:20	06/21/22 12:25	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/20/22 15:20	06/21/22 12:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*06/20/22 15:20*	*06/21/22 12:25*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*06/20/22 15:20*	*06/21/22 12:25*	*1*

Lab Sample ID: MB 880-28063/5-A
Matrix: Solid
Analysis Batch: 28005

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 28063

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/21/22 14:42	06/21/22 23:09	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/21/22 14:42	06/21/22 23:09	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/21/22 14:42	06/21/22 23:09	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/21/22 14:42	06/21/22 23:09	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/21/22 14:42	06/21/22 23:09	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/21/22 14:42	06/21/22 23:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*06/21/22 14:42*	*06/21/22 23:09*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*06/21/22 14:42*	*06/21/22 23:09*	*1*

Lab Sample ID: LCS 880-28063/1-A
Matrix: Solid
Analysis Batch: 28005

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 28063

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09845		mg/Kg		98	70 - 130		
Toluene			0.100	0.1157		mg/Kg		116	70 - 130		
Ethylbenzene			0.100	0.1118		mg/Kg		112	70 - 130		
m-Xylene & p-Xylene			0.200	0.2330		mg/Kg		117	70 - 130		
o-Xylene			0.100	0.1311	*+	mg/Kg		131	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 880-28063/2-A
Matrix: Solid
Analysis Batch: 28005

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 28063

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1045		mg/Kg		105	70 - 130	6	35

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H,123H, 124H

Job ID: 890-2430-1
SDG: 03E1558053

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

Lab Sample ID: LCSD 880-28063/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 28005 — **Prep Batch: 28063**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.1127		mg/Kg		113	70 - 130	3	35
Ethylbenzene			0.100	0.1015		mg/Kg		102	70 - 130	10	35
m-Xylene & p-Xylene			0.200	0.2046		mg/Kg		102	70 - 130	13	35
o-Xylene			0.100	0.1150		mg/Kg		115	70 - 130	13	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: 890-2426-A-1-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 28005 — **Prep Batch: 28063**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U F1	0.100	0.07404		mg/Kg		74	70 - 130
Toluene	<0.00199	U F1	0.100	0.07758		mg/Kg		77	70 - 130
Ethylbenzene	<0.00199	U F1	0.100	0.06116	F1	mg/Kg		61	70 - 130
m-Xylene & p-Xylene	<0.00398	U F1	0.200	0.1209	F1	mg/Kg		60	70 - 130
o-Xylene	<0.00199	U F1 *+	0.100	0.06788	F1	mg/Kg		68	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 890-2426-A-1-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 28005 — **Prep Batch: 28063**

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	0.06494	F1	mg/Kg		65	70 - 130	13	35
Toluene	<0.00199	U F1	0.100	0.06696	F1	mg/Kg		67	70 - 130	15	35
Ethylbenzene	<0.00199	U F1	0.100	0.04899	F1	mg/Kg		49	70 - 130	22	35
m-Xylene & p-Xylene	<0.00398	U F1	0.201	0.09419	F1	mg/Kg		47	70 - 130	25	35
o-Xylene	<0.00199	U F1 *+	0.100	0.05296	F1	mg/Kg		53	70 - 130	25	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

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

Lab Sample ID: MB 880-28045/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 27998 — **Prep Batch: 28045**

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		06/21/22 11:35	06/21/22 21:37	1

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H,123H, 124H

Job ID: 890-2430-1
SDG: 03E1558053

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

Lab Sample ID: MB 880-28045/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 27998 — **Prep Batch: 28045**

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		06/21/22 11:35	06/21/22 21:37	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/21/22 11:35	06/21/22 21:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*06/21/22 11:35*	*06/21/22 21:37*	*1*
o-Terphenyl	*119*		*70 - 130*	*06/21/22 11:35*	*06/21/22 21:37*	*1*

Lab Sample ID: LCS 880-28045/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 27998 — **Prep Batch: 28045**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	992.5		mg/Kg		99	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1042		mg/Kg		104	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*104*		*70 - 130*
o-Terphenyl	*110*		*70 - 130*

Lab Sample ID: LCSD 880-28045/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 27998 — **Prep Batch: 28045**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1036		mg/Kg		104	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			1000	1061		mg/Kg		106	70 - 130	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*104*		*70 - 130*
o-Terphenyl	*113*		*70 - 130*

Lab Sample ID: 880-16078-A-21-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 27998 — **Prep Batch: 28045**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	905.3		mg/Kg		87	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	998	799.1		mg/Kg		80	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*82*		*70 - 130*
o-Terphenyl	*79*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H,123H, 124H

Job ID: 890-2430-1
SDG: 03E1558053

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

Lab Sample ID: 880-16078-A-21-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 27998 — **Prep Batch: 28045**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	933.1		mg/Kg		89	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	845.4		mg/Kg		85	70 - 130	6	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*86*		*70 - 130*
o-Terphenyl	*82*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-27963/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 28185

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			06/24/22 11:13	1

Lab Sample ID: LCS 880-27963/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 28185

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	272.5		mg/Kg		109	90 - 110		

Lab Sample ID: LCSD 880-27963/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 28185

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	274.8		mg/Kg		110	90 - 110	1	20

Lab Sample ID: 890-2428-A-1-G MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 28185

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	31300		12600	44610		mg/Kg		105	90 - 110		

Lab Sample ID: 890-2428-A-1-H MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 28185

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	31300		12600	44560		mg/Kg		105	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H,123H, 124H

Job ID: 890-2430-1
SDG: 03E1558053

GC VOA

Prep Batch: 27967

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-27967/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 28005

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2430-1	SS01	Total/NA	Solid	8021B	28063
MB 880-27967/5-A	Method Blank	Total/NA	Solid	8021B	27967
MB 880-28063/5-A	Method Blank	Total/NA	Solid	8021B	28063
LCS 880-28063/1-A	Lab Control Sample	Total/NA	Solid	8021B	28063
LCSD 880-28063/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	28063
890-2426-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	28063
890-2426-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	28063

Prep Batch: 28063

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2430-1	SS01	Total/NA	Solid	5035	
MB 880-28063/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-28063/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-28063/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2426-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-2426-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 28147

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2430-1	SS01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 27998

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2430-1	SS01	Total/NA	Solid	8015B NM	28045
MB 880-28045/1-A	Method Blank	Total/NA	Solid	8015B NM	28045
LCS 880-28045/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	28045
LCSD 880-28045/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	28045
880-16078-A-21-B MS	Matrix Spike	Total/NA	Solid	8015B NM	28045
880-16078-A-21-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	28045

Prep Batch: 28045

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2430-1	SS01	Total/NA	Solid	8015NM Prep	
MB 880-28045/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-28045/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-28045/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-16078-A-21-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-16078-A-21-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 28088

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2430-1	SS01	Total/NA	Solid	8015B NM	28163

QC Association Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H,123H, 124H

Job ID: 890-2430-1
SDG: 03E1558053

GC Semi VOA

Analysis Batch: 28130

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2430-1	SS01	Total/NA	Solid	8015 NM	

Prep Batch: 28163

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2430-1	SS01	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 27963

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2430-1	SS01	Soluble	Solid	DI Leach	
MB 880-27963/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-27963/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-27963/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2428-A-1-G MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2428-A-1-H MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 28185

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2430-1	SS01	Soluble	Solid	300.0	27963
MB 880-27963/1-A	Method Blank	Soluble	Solid	300.0	27963
LCS 880-27963/2-A	Lab Control Sample	Soluble	Solid	300.0	27963
LCSD 880-27963/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	27963
890-2428-A-1-G MS	Matrix Spike	Soluble	Solid	300.0	27963
890-2428-A-1-H MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	27963

Lab Chronicle

Client: Ensolum
Project/Site: PLU 21 BD 104H,123H, 124H

Job ID: 890-2430-1
SDG: 03E1558053

Client Sample ID: SS01

Date Collected: 06/17/22 12:20
Date Received: 06/17/22 16:33

Lab Sample ID: 890-2430-1

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	28063	06/21/22 14:42	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	28005	06/22/22 00:54	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			28147	06/22/22 12:17	SM	XEN MID
Total/NA	Analysis	8015 NM		1			28130	06/22/22 11:20	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	28045	06/21/22 11:35	DM	XEN MID
Total/NA	Analysis	8015B NM		1			27998	06/22/22 04:30	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	28163	06/22/22 14:48	DM	XEN MID
Total/NA	Analysis	8015B NM		10			28088	06/22/22 22:59	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	27963	06/21/22 12:47	SC	XEN MID
Soluble	Analysis	300.0		20			28185	06/24/22 14:26	SC	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H,123H, 124H

Job ID: 890-2430-1
SDG: 03E1558053

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	T104704400-21-22	06-30-22

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H,123H, 124H

Job ID: 890-2430-1
SDG: 03E1558053

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN 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:

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

Sample Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H,123H, 124H

Job ID: 890-2430-1
SDG: 03E1558053

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2430-1	SS01	Solid	06/17/22 12:20	06/17/22 16:33	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:	Ben Belill	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy, Inc.
Address:	3122 National parks Hwy	Address:	3104 E. Green Street
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	9898540852	Email:	bbelill@ensolum.com

Work Order Comments

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

Project Name:	PLU 21 BD 104H, 123H, & 124H	Turn Around	☑ Routine ☐ Rush
Project Number:	03E1558053	Due Date:	
Project Location:	EDDY COUNTY, NM	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Greg Falesé		
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:	14.2	
Total Containers:		Corrected Temperature:	14.0	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
SS01	S	6/17/2022	12:20	0.5'	Grab/	1		X	X	X

890-2430 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

Cost Centers: 1666351001, 1666401001, 166601001

Incident Numbers: NAPP2209736479, NAPP2210942764, NAPP2211651017, NAPP2211151438

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	Gregory Patton	Amanda Stutz	6/17/22 1633			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2430-1
SDG Number: 03E1558053

Login Number: 2430
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	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: 890-2430-1
SDG Number: 03E1558053

Login Number: 2430
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 06/21/22 10:52 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: 890-2432-1
Laboratory Sample Delivery Group: 03E1558053
Client Project/Site: PLU 21 BD 104H,123H, 124H

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

Attn: Ben Belill

JKramer

Authorized for release by:
6/23/2022 1:58:08 PM

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

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

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

Client: Ensolum
Project/Site: PLU 21 BD 104H,123H, 124H

Laboratory Job ID: 890-2432-1
SDG: 03E1558053

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 21 BD 104H,123H, 124H

Job ID: 890-2432-1
SDG: 03E1558053

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
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: PLU 21 BD 104H,123H, 124H

Job ID: 890-2432-1
SDG: 03E1558053

Job ID: 890-2432-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2432-1

Receipt
The sample was received on 6/17/2022 4:33 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 14.0°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-28109 and 880-28109 and analytical batch 880-28093 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 21 BD 104H,123H, 124H

Job ID: 890-2432-1
SDG: 03E1558053

Client Sample ID: SS02
Date Collected: 06/17/22 12:30
Date Received: 06/17/22 16:33
Sample Depth: 0.5'

Lab Sample ID: 890-2432-1
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		06/22/22 09:54	06/22/22 16:22	1
Toluene	<0.00201	U	0.00201		mg/Kg		06/22/22 09:54	06/22/22 16:22	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		06/22/22 09:54	06/22/22 16:22	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		06/22/22 09:54	06/22/22 16:22	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		06/22/22 09:54	06/22/22 16:22	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		06/22/22 09:54	06/22/22 16:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*06/22/22 09:54*	*06/22/22 16:22*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*06/22/22 09:54*	*06/22/22 16:22*	*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			06/23/22 13:13	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**3420**		49.8		mg/Kg			06/22/22 11:20	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	**85.8**		49.8		mg/Kg		06/22/22 14:48	06/22/22 21:57	1
Diesel Range Organics (Over C10-C28)	**3330**		49.8		mg/Kg		06/22/22 14:48	06/22/22 21:57	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		06/22/22 14:48	06/22/22 21:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*130*		*70 - 130*	*06/22/22 14:48*	*06/22/22 21:57*	*1*
o-Terphenyl	*118*		*70 - 130*	*06/22/22 14:48*	*06/22/22 21:57*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**12800**		50.5		mg/Kg			06/23/22 10:57	10

Surrogate Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H,123H, 124H

Job ID: 890-2432-1
SDG: 03E1558053

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)
880-16170-A-2-B MS	Matrix Spike	89	107
880-16170-A-2-C MSD	Matrix Spike Duplicate	90	109
890-2432-1	SS02	103	101
LCS 880-28109/1-A	Lab Control Sample	84	104
LCSD 880-28109/2-A	Lab Control Sample Dup	114	100
MB 880-28109/5-A	Method Blank	89	108

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)
890-2432-1	SS02	130	118

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H,123H, 124H

Job ID: 890-2432-1
SDG: 03E1558053

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-28109/5-A
Matrix: Solid
Analysis Batch: 28093

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 28109

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/22/22 09:54	06/22/22 15:18	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/22/22 09:54	06/22/22 15:18	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/22/22 09:54	06/22/22 15:18	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/22/22 09:54	06/22/22 15:18	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/22/22 09:54	06/22/22 15:18	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/22/22 09:54	06/22/22 15:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*06/22/22 09:54*	*06/22/22 15:18*	*1*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*	*06/22/22 09:54*	*06/22/22 15:18*	*1*

Lab Sample ID: LCS 880-28109/1-A
Matrix: Solid
Analysis Batch: 28093

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 28109

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1111		mg/Kg		111	70 - 130		
Toluene			0.100	0.09953		mg/Kg		100	70 - 130		
Ethylbenzene			0.100	0.08342		mg/Kg		83	70 - 130		
m-Xylene & p-Xylene			0.200	0.1608		mg/Kg		80	70 - 130		
o-Xylene			0.100	0.08874		mg/Kg		89	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 880-28109/2-A
Matrix: Solid
Analysis Batch: 28093

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 28109

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09307		mg/Kg		93	70 - 130	18	35
Toluene			0.100	0.1074		mg/Kg		107	70 - 130	8	35
Ethylbenzene			0.100	0.1046		mg/Kg		105	70 - 130	22	35
m-Xylene & p-Xylene			0.200	0.2178		mg/Kg		109	70 - 130	30	35
o-Xylene			0.100	0.1207		mg/Kg		121	70 - 130	31	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 880-16170-A-2-B MS
Matrix: Solid
Analysis Batch: 28093

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 28109

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U	0.0998	0.08502		mg/Kg		85	70 - 130		
Toluene	<0.00202	U	0.0998	0.07700		mg/Kg		77	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H,123H, 124H

Job ID: 890-2432-1
SDG: 03E1558053

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

Lab Sample ID: 880-16170-A-2-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 28093 — **Prep Batch: 28109**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U F1	0.0998	0.06401	F1	mg/Kg		64	70 - 130
m-Xylene & p-Xylene	<0.00403	U F1	0.200	0.1238	F1	mg/Kg		62	70 - 130
o-Xylene	<0.00202	U	0.0998	0.07016		mg/Kg		70	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: 880-16170-A-2-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 28093 — **Prep Batch: 28109**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.101	0.1023		mg/Kg		101	70 - 130	18	35
Toluene	<0.00202	U	0.101	0.08979		mg/Kg		89	70 - 130	15	35
Ethylbenzene	<0.00202	U F1	0.101	0.07376		mg/Kg		73	70 - 130	14	35
m-Xylene & p-Xylene	<0.00403	U F1	0.202	0.1398	F1	mg/Kg		69	70 - 130	12	35
o-Xylene	<0.00202	U	0.101	0.07887		mg/Kg		78	70 - 130	12	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-28057/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 28168

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			06/23/22 08:39	1

Lab Sample ID: LCS 880-28057/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 28168

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride			250	266.8		mg/Kg		107	90 - 110

Lab Sample ID: LCSD 880-28057/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 28168

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	266.1		mg/Kg		106	90 - 110	0	20

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H,123H, 124H

Job ID: 890-2432-1
SDG: 03E1558053

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-16133-A-1-E MS
Matrix: Solid
Analysis Batch: 28168

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	302		252	538.0		mg/Kg		94	90 - 110		

Lab Sample ID: 880-16133-A-1-F MSD
Matrix: Solid
Analysis Batch: 28168

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	302		252	536.6		mg/Kg		93	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H,123H, 124H

Job ID: 890-2432-1
SDG: 03E1558053

GC VOA

Analysis Batch: 28093

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2432-1	SS02	Total/NA	Solid	8021B	28109
MB 880-28109/5-A	Method Blank	Total/NA	Solid	8021B	28109
LCS 880-28109/1-A	Lab Control Sample	Total/NA	Solid	8021B	28109
LCSD 880-28109/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	28109
880-16170-A-2-B MS	Matrix Spike	Total/NA	Solid	8021B	28109
880-16170-A-2-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	28109

Prep Batch: 28109

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2432-1	SS02	Total/NA	Solid	5035	
MB 880-28109/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-28109/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-28109/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-16170-A-2-B MS	Matrix Spike	Total/NA	Solid	5035	
880-16170-A-2-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 28261

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2432-1	SS02	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 28088

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2432-1	SS02	Total/NA	Solid	8015B NM	28163

Analysis Batch: 28131

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2432-1	SS02	Total/NA	Solid	8015 NM	

Prep Batch: 28163

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2432-1	SS02	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 28057

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2432-1	SS02	Soluble	Solid	DI Leach	
MB 880-28057/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-28057/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-28057/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-16133-A-1-E MS	Matrix Spike	Soluble	Solid	DI Leach	
880-16133-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 28168

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2432-1	SS02	Soluble	Solid	300.0	28057
MB 880-28057/1-A	Method Blank	Soluble	Solid	300.0	28057
LCS 880-28057/2-A	Lab Control Sample	Soluble	Solid	300.0	28057
LCSD 880-28057/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	28057
880-16133-A-1-E MS	Matrix Spike	Soluble	Solid	300.0	28057

QC Association Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H,123H, 124H

Job ID: 890-2432-1
SDG: 03E1558053

HPLC/IC (Continued)

Analysis Batch: 28168 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-16133-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	28057

Lab Chronicle

Client: Ensolum
Project/Site: PLU 21 BD 104H,123H, 124H

Job ID: 890-2432-1
SDG: 03E1558053

Client Sample ID: SS02

Date Collected: 06/17/22 12:30
Date Received: 06/17/22 16:33

Lab Sample ID: 890-2432-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	28109	06/22/22 09:54	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	28093	06/22/22 16:22	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			28261	06/23/22 13:13	SM	XEN MID
Total/NA	Analysis	8015 NM		1			28131	06/22/22 11:20	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	28163	06/22/22 14:48	DM	XEN MID
Total/NA	Analysis	8015B NM		1			28088	06/22/22 21:57	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	28057	06/21/22 13:32	SC	XEN MID
Soluble	Analysis	300.0		10			28168	06/23/22 10:57	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H,123H, 124H

Job ID: 890-2432-1
SDG: 03E1558053

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	T104704400-21-22	06-30-22

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H,123H, 124H

Job ID: 890-2432-1
SDG: 03E1558053

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN 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:

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

Sample Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H,123H, 124H

Job ID: 890-2432-1
SDG: 03E1558053

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2432-1	SS02	Solid	06/17/22 12:30	06/17/22 16:33	0.5'

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Ben Belill	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy, Inc.
Address:	3122 National parks Hwy	Address:	3104 E. Green Street
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	9898540852	Email:	bbelill@ensolum.com

Work Order Comments

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

Project Name:	PLU 21 BD 104H, 123H, & 124H	Turn Around	
Project Number:	03E1558053	☑ Routine ☐ Rush	
Project Location:	EDDY COUNTY, NM	Due Date:	
Sampler's Name:	Grey Patese	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	TAM-007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	14.2
Total Containers:		Corrected Temperature:	14.0

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021
SS02	S	6/17/2022	12:30	0.5'	Grab/	1		X	X	X

Parameters

890-2432 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

Cost Centers: 1666351001, 1666401001, 166601001

Incident Numbers: NAPP2209736479, NAPP2210942764, NAPP2211651017, NAPP2211151438

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	Grey Patese	Amanda Stutz	6/17/22 1633			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2432-1
SDG Number: 03E1558053

Login Number: 2432
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	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: 890-2432-1
SDG Number: 03E1558053

Login Number: 2432
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 06/21/22 10:52 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: 890-2862-1
Laboratory Sample Delivery Group: Eddy County NM
Client Project/Site: PLU 21 BD 104H

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

Attn: Ben Belill

JKramer

Authorized for release by:
9/12/2022 9:23:18 AM

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

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

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

Client: Ensolum
Project/Site: PLU 21 BD 104H

Laboratory Job ID: 890-2862-1
SDG: Eddy County NM

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2862-1
SDG: Eddy County NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2862-1
SDG: Eddy County NM

Job ID: 890-2862-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2862-1

Receipt
The sample was received on 8/30/2022 4:04 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 20.4°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-34105 and analytical batch 880-34151 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-33565/2-A) and (LCSD 880-33565/3-A). Evidence of matrix interferences is not obvious.

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

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

Client Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2862-1
SDG: Eddy County NM

Client Sample ID: SS04

Date Collected: 08/30/22 13:30
Date Received: 08/30/22 16:04
Sample Depth: 0.5'

Lab Sample ID: 890-2862-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U F1 F2	0.00199		mg/Kg		09/09/22 12:34	09/11/22 05:56	1
Toluene	<0.00199	U F1 F2	0.00199		mg/Kg		09/09/22 12:34	09/11/22 05:56	1
Ethylbenzene	<0.00199	U F1 F2	0.00199		mg/Kg		09/09/22 12:34	09/11/22 05:56	1
m-Xylene & p-Xylene	<0.00398	U F1 F2	0.00398		mg/Kg		09/09/22 12:34	09/11/22 05:56	1
o-Xylene	<0.00199	U F1 F2	0.00199		mg/Kg		09/09/22 12:34	09/11/22 05:56	1
Xylenes, Total	<0.00398	U F1 F2	0.00398		mg/Kg		09/09/22 12:34	09/11/22 05:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*09/09/22 12:34*	*09/11/22 05:56*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*09/09/22 12:34*	*09/11/22 05:56*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/12/22 10:03	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			09/06/22 10:41	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		09/01/22 15:50	09/02/22 21:43	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/01/22 15:50	09/02/22 21:43	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/01/22 15:50	09/02/22 21:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*130*		*70 - 130*	*09/01/22 15:50*	*09/02/22 21:43*	*1*
o-Terphenyl	*114*		*70 - 130*	*09/01/22 15:50*	*09/02/22 21:43*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**165**		4.98		mg/Kg			09/08/22 14:36	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2862-1
SDG: Eddy County NM

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)
890-2862-1	SS04	80	101
890-2862-1 MS	SS04	64 S1-	116
890-2862-1 MSD	SS04	89	97
LCS 880-34105/1-A	Lab Control Sample	83	90
LCSD 880-34105/2-A	Lab Control Sample Dup	80	101
MB 880-34093/5-A	Method Blank	80	123
MB 880-34105/5-A	Method Blank	80	113

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)
890-2861-A-1-C MS	Matrix Spike	119	92
890-2861-A-1-D MSD	Matrix Spike Duplicate	121	97
890-2862-1	SS04	130	114
LCS 880-33565/2-A	Lab Control Sample	152 S1+	123
LCSD 880-33565/3-A	Lab Control Sample Dup	156 S1+	130
MB 880-33565/1-A	Method Blank	124	117

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2862-1
SDG: Eddy County NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-34093/5-A
Matrix: Solid
Analysis Batch: 34151

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34093

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/09/22 11:13	09/10/22 17:51	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/09/22 11:13	09/10/22 17:51	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/09/22 11:13	09/10/22 17:51	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/09/22 11:13	09/10/22 17:51	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/09/22 11:13	09/10/22 17:51	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/09/22 11:13	09/10/22 17:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*09/09/22 11:13*	*09/10/22 17:51*	*1*
1,4-Difluorobenzene (Surr)	*123*		*70 - 130*	*09/09/22 11:13*	*09/10/22 17:51*	*1*

Lab Sample ID: MB 880-34105/5-A
Matrix: Solid
Analysis Batch: 34151

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34105

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:34	09/11/22 05:27	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:34	09/11/22 05:27	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:34	09/11/22 05:27	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/09/22 12:34	09/11/22 05:27	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:34	09/11/22 05:27	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/09/22 12:34	09/11/22 05:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*09/09/22 12:34*	*09/11/22 05:27*	*1*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*09/09/22 12:34*	*09/11/22 05:27*	*1*

Lab Sample ID: LCS 880-34105/1-A
Matrix: Solid
Analysis Batch: 34151

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34105

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08120		mg/Kg		81	70 - 130		
Toluene			0.100	0.08547		mg/Kg		85	70 - 130		
Ethylbenzene			0.100	0.08953		mg/Kg		90	70 - 130		
m-Xylene & p-Xylene			0.200	0.1522		mg/Kg		76	70 - 130		
o-Xylene			0.100	0.07848		mg/Kg		78	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*

Lab Sample ID: LCSD 880-34105/2-A
Matrix: Solid
Analysis Batch: 34151

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34105

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1089		mg/Kg		109	70 - 130	29	35

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2862-1
SDG: Eddy County NM

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

Lab Sample ID: LCSD 880-34105/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 34151 — **Prep Batch: 34105**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.09966		mg/Kg		100	70 - 130	15	35
Ethylbenzene			0.100	0.09820		mg/Kg		98	70 - 130	9	35
m-Xylene & p-Xylene			0.200	0.1717		mg/Kg		86	70 - 130	12	35
o-Xylene			0.100	0.08621		mg/Kg		86	70 - 130	9	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 890-2862-1 MS — **Client Sample ID: SS04**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 34151 — **Prep Batch: 34105**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U F1 F2	0.0998	0.03691	F1	mg/Kg		37	70 - 130
Toluene	<0.00199	U F1 F2	0.0998	0.03406	F1	mg/Kg		34	70 - 130
Ethylbenzene	<0.00199	U F1 F2	0.0998	0.02475	F1	mg/Kg		25	70 - 130
m-Xylene & p-Xylene	<0.00398	U F1 F2	0.200	0.03414	F1	mg/Kg		17	70 - 130
o-Xylene	<0.00199	U F1 F2	0.0998	0.01758	F1	mg/Kg		18	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*64*	*S1-*	*70 - 130*
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*

Lab Sample ID: 890-2862-1 MSD — **Client Sample ID: SS04**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 34151 — **Prep Batch: 34105**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U F1 F2	0.100	0.07171	F2	mg/Kg		71	70 - 130	64	35
Toluene	<0.00199	U F1 F2	0.100	0.07701	F2	mg/Kg		77	70 - 130	77	35
Ethylbenzene	<0.00199	U F1 F2	0.100	0.07436	F2	mg/Kg		74	70 - 130	100	35
m-Xylene & p-Xylene	<0.00398	U F1 F2	0.201	0.1307	F1 F2	mg/Kg		65	70 - 130	117	35
o-Xylene	<0.00199	U F1 F2	0.100	0.06968	F1 F2	mg/Kg		69	70 - 130	119	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

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

Lab Sample ID: MB 880-33565/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 33582 — **Prep Batch: 33565**

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		09/01/22 15:50	09/02/22 19:12	1

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2862-1
SDG: Eddy County NM

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

Lab Sample ID: MB 880-33565/1-A
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 33565

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		09/01/22 15:50	09/02/22 19:12	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/01/22 15:50	09/02/22 19:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*124*		*70 - 130*	*09/01/22 15:50*	*09/02/22 19:12*	*1*
o-Terphenyl	*117*		*70 - 130*	*09/01/22 15:50*	*09/02/22 19:12*	*1*

Lab Sample ID: LCS 880-33565/2-A
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 33565

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	846.8		mg/Kg		85	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	876.5		mg/Kg		88	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*152*	*S1+*	*70 - 130*
o-Terphenyl	*123*		*70 - 130*

Lab Sample ID: LCSD 880-33565/3-A
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 33565

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	858.2		mg/Kg		86	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	909.9		mg/Kg		91	70 - 130	4	20

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

Lab Sample ID: 890-2861-A-1-C MS
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 33565

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	989.5		mg/Kg		99	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	999	1046		mg/Kg		105	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*119*		*70 - 130*
o-Terphenyl	*92*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2862-1
SDG: Eddy County NM

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

Lab Sample ID: 890-2861-A-1-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 33582 — **Prep Batch: 33565**

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	1037		mg/Kg		104	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<49.9	U	998	1069		mg/Kg		107	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*121*		*70 - 130*
o-Terphenyl	*97*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-33552/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 33925

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			09/08/22 12:35	1

Lab Sample ID: LCS 880-33552/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 33925

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	251.9		mg/Kg		101	90 - 110		

Lab Sample ID: LCSD 880-33552/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 33925

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	252.8		mg/Kg		101	90 - 110	0	20

Lab Sample ID: 880-18647-A-35-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 33925

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	30.9		251	282.5		mg/Kg		100	90 - 110		

Lab Sample ID: 880-18647-A-35-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 33925

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	30.9		251	282.1		mg/Kg		100	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2862-1
SDG: Eddy County NM

GC VOA

Prep Batch: 34093

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-34093/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 34105

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2862-1	SS04	Total/NA	Solid	5035	
MB 880-34105/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-34105/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-34105/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2862-1 MS	SS04	Total/NA	Solid	5035	
890-2862-1 MSD	SS04	Total/NA	Solid	5035	

Analysis Batch: 34151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2862-1	SS04	Total/NA	Solid	8021B	34105
MB 880-34093/5-A	Method Blank	Total/NA	Solid	8021B	34093
MB 880-34105/5-A	Method Blank	Total/NA	Solid	8021B	34105
LCS 880-34105/1-A	Lab Control Sample	Total/NA	Solid	8021B	34105
LCSD 880-34105/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	34105
890-2862-1 MS	SS04	Total/NA	Solid	8021B	34105
890-2862-1 MSD	SS04	Total/NA	Solid	8021B	34105

Analysis Batch: 34255

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2862-1	SS04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 33565

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2862-1	SS04	Total/NA	Solid	8015NM Prep	
MB 880-33565/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-33565/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-33565/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2861-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2861-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 33582

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2862-1	SS04	Total/NA	Solid	8015B NM	33565
MB 880-33565/1-A	Method Blank	Total/NA	Solid	8015B NM	33565
LCS 880-33565/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	33565
LCSD 880-33565/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	33565
890-2861-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	33565
890-2861-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	33565

Analysis Batch: 33829

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2862-1	SS04	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2862-1
SDG: Eddy County NM

HPLC/IC

Leach Batch: 33552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2862-1	SS04	Soluble	Solid	DI Leach	
MB 880-33552/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-33552/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-33552/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-18647-A-35-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-18647-A-35-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 33925

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2862-1	SS04	Soluble	Solid	300.0	33552
MB 880-33552/1-A	Method Blank	Soluble	Solid	300.0	33552
LCS 880-33552/2-A	Lab Control Sample	Soluble	Solid	300.0	33552
LCSD 880-33552/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	33552
880-18647-A-35-C MS	Matrix Spike	Soluble	Solid	300.0	33552
880-18647-A-35-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	33552

Lab Chronicle

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2862-1
SDG: Eddy County NM

Client Sample ID: SS04

Date Collected: 08/30/22 13:30
Date Received: 08/30/22 16:04

Lab Sample ID: 890-2862-1

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	34105	09/09/22 12:34	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34151	09/11/22 05:56	MR	EET MID
Total/NA	Analysis	Total BTEX		1			34255	09/12/22 10:03	AJ	EET MID
Total/NA	Analysis	8015 NM		1			33829	09/06/22 10:41	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	33565	09/01/22 15:50	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33582	09/02/22 21:43	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	33552	09/01/22 13:14	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	33925	09/08/22 14:36	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2862-1
SDG: Eddy County NM

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2862-1
SDG: Eddy County NM

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	MCAWW	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2862-1
SDG: Eddy County NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2862-1	SS04	Solid	08/30/22 13:30	08/30/22 16:04	0.5'

eurofins

Environment Testing
Xenco

Chain of Custody

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

Work Order No: _____

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Project Manager:	Ben Belill	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy, Inc.
Address:	3122 National parks Hwy	Address:	3104 E. Green Street
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	9898540852	Email:	bbelill@ensolum.com

Work Order Comments

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

Project Name:	PLU 21 BD 104H	Turn Around	☑ Routine ☐ Rush
Project Number:	03E1558053	Due Date:	
Project Location:	EDDY COUNTY, NM	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:			
Cooler Custody Seals:	Yes No N/A	Correction Factor:			
Sample Custody Seals:	Yes No N/A	Temperature Reading:			
Total Containers:		Corrected Temperature:			

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
SS04	S	8/30/2022	1330	0.5'	Grab/	1		X	X	X

890-2862 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

Cost Center: 1666351001

Incident Number: ~~NAPP2210942764~~

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	Amanda Stuff	8/30/22 1609			
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2862-1
SDG Number: Eddy County NM

Login Number: 2862
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	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: 890-2862-1
SDG Number: Eddy County NM

Login Number: 2862
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 09/01/22 11:10 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: 890-2863-1
Laboratory Sample Delivery Group: Eddy County
Client Project/Site: PLU 21 BD 104H

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

Attn: Ben Belill

JKramer

Authorized for release by:
9/12/2022 9:23:18 AM

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

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

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

Client: Ensolum
Project/Site: PLU 21 BD 104H

Laboratory Job ID: 890-2863-1
SDG: Eddy County

Table of Contents

Eurofins Carlsbad
9/12/2022

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2863-1
SDG: Eddy County

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2863-1
SDG: Eddy County

Job ID: 890-2863-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2863-1

Receipt
The samples were received on 8/30/2022 4:04 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 20.4°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-34105 and analytical batch 880-34151 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-33565/2-A) and (LCSD 880-33565/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: PH01 (890-2863-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

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

Client Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2863-1
SDG: Eddy County

Client Sample ID: PH01

Lab Sample ID: 890-2863-1
Matrix: Solid
Date Collected: 08/30/22 09:20
Date Received: 08/30/22 16:04
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		09/09/22 12:34	09/11/22 06:16	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:34	09/11/22 06:16	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:34	09/11/22 06:16	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/09/22 12:34	09/11/22 06:16	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:34	09/11/22 06:16	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/09/22 12:34	09/11/22 06:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*77*		*70 - 130*	*09/09/22 12:34*	*09/11/22 06:16*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*09/09/22 12:34*	*09/11/22 06:16*	*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			09/12/22 10:03	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			09/06/22 10:41	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		09/01/22 15:50	09/02/22 22:05	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/01/22 15:50	09/02/22 22:05	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/01/22 15:50	09/02/22 22:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*138*	*S1+*	*70 - 130*	*09/01/22 15:50*	*09/02/22 22:05*	*1*
o-Terphenyl	*123*		*70 - 130*	*09/01/22 15:50*	*09/02/22 22:05*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**219**		5.00		mg/Kg			09/08/22 14:41	1

Client Sample ID: PH02

Lab Sample ID: 890-2863-2
Matrix: Solid
Date Collected: 08/30/22 09:30
Date Received: 08/30/22 16:04
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		09/09/22 12:34	09/11/22 06:37	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/09/22 12:34	09/11/22 06:37	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/09/22 12:34	09/11/22 06:37	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/09/22 12:34	09/11/22 06:37	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/09/22 12:34	09/11/22 06:37	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/09/22 12:34	09/11/22 06:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*79*		*70 - 130*	*09/09/22 12:34*	*09/11/22 06:37*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2863-1
SDG: Eddy County

Client Sample ID: PH02

Lab Sample ID: 890-2863-2
Matrix: Solid
Date Collected: 08/30/22 09:30
Date Received: 08/30/22 16:04
Sample Depth: 1'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*09/09/22 12:34*	*09/11/22 06:37*	*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			09/12/22 10:03	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			09/06/22 10:41	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		09/01/22 15:50	09/02/22 22:26	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		09/01/22 15:50	09/02/22 22:26	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		09/01/22 15:50	09/02/22 22:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*112*		*70 - 130*	*09/01/22 15:50*	*09/02/22 22:26*	*1*
o-Terphenyl	*102*		*70 - 130*	*09/01/22 15:50*	*09/02/22 22:26*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**66.3**		5.02	mg/Kg			09/08/22 14:46	1

Client Sample ID: PH03

Lab Sample ID: 890-2863-3
Matrix: Solid
Date Collected: 08/30/22 09:40
Date Received: 08/30/22 16:04
Sample Depth: 1'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		09/09/22 12:34	09/11/22 06:57	1
Toluene	<0.00198	U	0.00198	mg/Kg		09/09/22 12:34	09/11/22 06:57	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		09/09/22 12:34	09/11/22 06:57	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		09/09/22 12:34	09/11/22 06:57	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		09/09/22 12:34	09/11/22 06:57	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		09/09/22 12:34	09/11/22 06:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*41*	*S1-*	*70 - 130*	*09/09/22 12:34*	*09/11/22 06:57*	*1*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*	*09/09/22 12:34*	*09/11/22 06:57*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396	mg/Kg			09/12/22 10:03	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			09/06/22 10:41	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2863-1
SDG: Eddy County

Client Sample ID: PH03

Date Collected: 08/30/22 09:40
Date Received: 08/30/22 16:04
Sample Depth: 1'

Lab Sample ID: 890-2863-3

Matrix: Solid

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		09/01/22 15:50	09/02/22 22:48	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/01/22 15:50	09/02/22 22:48	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/01/22 15:50	09/02/22 22:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*127*		*70 - 130*	*09/01/22 15:50*	*09/02/22 22:48*	*1*
o-Terphenyl	*114*		*70 - 130*	*09/01/22 15:50*	*09/02/22 22:48*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**276**		25.2		mg/Kg			09/08/22 14:51	5

Surrogate Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2863-1
SDG: Eddy County

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)
890-2862-A-1-D MS	Matrix Spike	64 S1-	116
890-2862-A-1-E MSD	Matrix Spike Duplicate	89	97
890-2863-1	PH01	77	110
890-2863-2	PH02	79	101
890-2863-3	PH03	41 S1-	109
LCS 880-34105/1-A	Lab Control Sample	83	90
LCSD 880-34105/2-A	Lab Control Sample Dup	80	101
MB 880-34093/5-A	Method Blank	80	123
MB 880-34105/5-A	Method Blank	80	113

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)
890-2861-A-1-C MS	Matrix Spike	119	92
890-2861-A-1-D MSD	Matrix Spike Duplicate	121	97
890-2863-1	PH01	138 S1+	123
890-2863-2	PH02	112	102
890-2863-3	PH03	127	114
LCS 880-33565/2-A	Lab Control Sample	152 S1+	123
LCSD 880-33565/3-A	Lab Control Sample Dup	156 S1+	130
MB 880-33565/1-A	Method Blank	124	117

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2863-1
SDG: Eddy County

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-34093/5-A
Matrix: Solid
Analysis Batch: 34151

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34093

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/09/22 11:13	09/10/22 17:51	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/09/22 11:13	09/10/22 17:51	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/09/22 11:13	09/10/22 17:51	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/09/22 11:13	09/10/22 17:51	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/09/22 11:13	09/10/22 17:51	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/09/22 11:13	09/10/22 17:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*09/09/22 11:13*	*09/10/22 17:51*	*1*
1,4-Difluorobenzene (Surr)	*123*		*70 - 130*	*09/09/22 11:13*	*09/10/22 17:51*	*1*

Lab Sample ID: MB 880-34105/5-A
Matrix: Solid
Analysis Batch: 34151

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34105

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:34	09/11/22 05:27	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:34	09/11/22 05:27	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:34	09/11/22 05:27	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/09/22 12:34	09/11/22 05:27	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:34	09/11/22 05:27	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/09/22 12:34	09/11/22 05:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*09/09/22 12:34*	*09/11/22 05:27*	*1*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*09/09/22 12:34*	*09/11/22 05:27*	*1*

Lab Sample ID: LCS 880-34105/1-A
Matrix: Solid
Analysis Batch: 34151

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34105

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08120		mg/Kg		81	70 - 130		
Toluene			0.100	0.08547		mg/Kg		85	70 - 130		
Ethylbenzene			0.100	0.08953		mg/Kg		90	70 - 130		
m-Xylene & p-Xylene			0.200	0.1522		mg/Kg		76	70 - 130		
o-Xylene			0.100	0.07848		mg/Kg		78	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*

Lab Sample ID: LCSD 880-34105/2-A
Matrix: Solid
Analysis Batch: 34151

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34105

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1089		mg/Kg		109	70 - 130	29	35

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2863-1
SDG: Eddy County

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

Lab Sample ID: LCSD 880-34105/2-A
Matrix: Solid
Analysis Batch: 34151

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34105

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.09966		mg/Kg		100	70 - 130	15	35
Ethylbenzene			0.100	0.09820		mg/Kg		98	70 - 130	9	35
m-Xylene & p-Xylene			0.200	0.1717		mg/Kg		86	70 - 130	12	35
o-Xylene			0.100	0.08621		mg/Kg		86	70 - 130	9	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 890-2862-A-1-D MS
Matrix: Solid
Analysis Batch: 34151

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 34105

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U F1 F2	0.0998	0.03691	F1	mg/Kg		37	70 - 130
Toluene	<0.00199	U F1 F2	0.0998	0.03406	F1	mg/Kg		34	70 - 130
Ethylbenzene	<0.00199	U F1 F2	0.0998	0.02475	F1	mg/Kg		25	70 - 130
m-Xylene & p-Xylene	<0.00398	U F1 F2	0.200	0.03414	F1	mg/Kg		17	70 - 130
o-Xylene	<0.00199	U F1 F2	0.0998	0.01758	F1	mg/Kg		18	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*64*	*S1-*	*70 - 130*
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*

Lab Sample ID: 890-2862-A-1-E MSD
Matrix: Solid
Analysis Batch: 34151

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 34105

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U F1 F2	0.100	0.07171	F2	mg/Kg		71	70 - 130	64	35
Toluene	<0.00199	U F1 F2	0.100	0.07701	F2	mg/Kg		77	70 - 130	77	35
Ethylbenzene	<0.00199	U F1 F2	0.100	0.07436	F2	mg/Kg		74	70 - 130	100	35
m-Xylene & p-Xylene	<0.00398	U F1 F2	0.201	0.1307	F1 F2	mg/Kg		65	70 - 130	117	35
o-Xylene	<0.00199	U F1 F2	0.100	0.06968	F1 F2	mg/Kg		69	70 - 130	119	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

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

Lab Sample ID: MB 880-33565/1-A
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 33565

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		09/01/22 15:50	09/02/22 19:12	1

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2863-1
SDG: Eddy County

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

Lab Sample ID: MB 880-33565/1-A
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 33565

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		09/01/22 15:50	09/02/22 19:12	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/01/22 15:50	09/02/22 19:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*124*		*70 - 130*	*09/01/22 15:50*	*09/02/22 19:12*	*1*
o-Terphenyl	*117*		*70 - 130*	*09/01/22 15:50*	*09/02/22 19:12*	*1*

Lab Sample ID: LCS 880-33565/2-A
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 33565

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	846.8		mg/Kg		85	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	876.5		mg/Kg		88	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*152*	*S1+*	*70 - 130*
o-Terphenyl	*123*		*70 - 130*

Lab Sample ID: LCSD 880-33565/3-A
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 33565

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	858.2		mg/Kg		86	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	909.9		mg/Kg		91	70 - 130	4	20

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

Lab Sample ID: 890-2861-A-1-C MS
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 33565

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	989.5		mg/Kg		99	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	999	1046		mg/Kg		105	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*119*		*70 - 130*
o-Terphenyl	*92*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2863-1
SDG: Eddy County

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

Lab Sample ID: 890-2861-A-1-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 33582 — **Prep Batch: 33565**

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	1037		mg/Kg		104	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<49.9	U	998	1069		mg/Kg		107	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*121*		*70 - 130*
o-Terphenyl	*97*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-33552/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 33925

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			09/08/22 12:35	1

Lab Sample ID: LCS 880-33552/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 33925

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	251.9		mg/Kg		101	90 - 110		

Lab Sample ID: LCSD 880-33552/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 33925

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	252.8		mg/Kg		101	90 - 110	0	20

Lab Sample ID: 880-18647-A-35-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 33925

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	30.9		251	282.5		mg/Kg		100	90 - 110		

Lab Sample ID: 880-18647-A-35-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 33925

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	30.9		251	282.1		mg/Kg		100	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2863-1
SDG: Eddy County

GC VOA

Prep Batch: 34093

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-34093/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 34105

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2863-1	PH01	Total/NA	Solid	5035	
890-2863-2	PH02	Total/NA	Solid	5035	
890-2863-3	PH03	Total/NA	Solid	5035	
MB 880-34105/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-34105/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-34105/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2862-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
890-2862-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 34151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2863-1	PH01	Total/NA	Solid	8021B	34105
890-2863-2	PH02	Total/NA	Solid	8021B	34105
890-2863-3	PH03	Total/NA	Solid	8021B	34105
MB 880-34093/5-A	Method Blank	Total/NA	Solid	8021B	34093
MB 880-34105/5-A	Method Blank	Total/NA	Solid	8021B	34105
LCS 880-34105/1-A	Lab Control Sample	Total/NA	Solid	8021B	34105
LCSD 880-34105/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	34105
890-2862-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	34105
890-2862-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	34105

Analysis Batch: 34256

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2863-1	PH01	Total/NA	Solid	Total BTEX	
890-2863-2	PH02	Total/NA	Solid	Total BTEX	
890-2863-3	PH03	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 33565

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2863-1	PH01	Total/NA	Solid	8015NM Prep	
890-2863-2	PH02	Total/NA	Solid	8015NM Prep	
890-2863-3	PH03	Total/NA	Solid	8015NM Prep	
MB 880-33565/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-33565/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-33565/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2861-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2861-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 33582

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2863-1	PH01	Total/NA	Solid	8015B NM	33565
890-2863-2	PH02	Total/NA	Solid	8015B NM	33565
890-2863-3	PH03	Total/NA	Solid	8015B NM	33565
MB 880-33565/1-A	Method Blank	Total/NA	Solid	8015B NM	33565
LCS 880-33565/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	33565

QC Association Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2863-1
SDG: Eddy County

GC Semi VOA (Continued)

Analysis Batch: 33582 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-33565/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	33565
890-2861-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	33565
890-2861-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	33565

Analysis Batch: 33830

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2863-1	PH01	Total/NA	Solid	8015 NM	
890-2863-2	PH02	Total/NA	Solid	8015 NM	
890-2863-3	PH03	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 33552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2863-1	PH01	Soluble	Solid	DI Leach	
890-2863-2	PH02	Soluble	Solid	DI Leach	
890-2863-3	PH03	Soluble	Solid	DI Leach	
MB 880-33552/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-33552/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-33552/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-18647-A-35-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-18647-A-35-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 33925

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2863-1	PH01	Soluble	Solid	300.0	33552
890-2863-2	PH02	Soluble	Solid	300.0	33552
890-2863-3	PH03	Soluble	Solid	300.0	33552
MB 880-33552/1-A	Method Blank	Soluble	Solid	300.0	33552
LCS 880-33552/2-A	Lab Control Sample	Soluble	Solid	300.0	33552
LCSD 880-33552/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	33552
880-18647-A-35-C MS	Matrix Spike	Soluble	Solid	300.0	33552
880-18647-A-35-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	33552

Lab Chronicle

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2863-1
SDG: Eddy County

Client Sample ID: PH01

Date Collected: 08/30/22 09:20
Date Received: 08/30/22 16:04

Lab Sample ID: 890-2863-1
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	34105	09/09/22 12:34	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34151	09/11/22 06:16	MR	EET MID
Total/NA	Analysis	Total BTEX		1			34256	09/12/22 10:03	AJ	EET MID
Total/NA	Analysis	8015 NM		1			33830	09/06/22 10:41	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	33565	09/01/22 15:50	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33582	09/02/22 22:05	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	33552	09/01/22 13:14	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	33925	09/08/22 14:41	CH	EET MID

Client Sample ID: PH02

Date Collected: 08/30/22 09:30
Date Received: 08/30/22 16:04

Lab Sample ID: 890-2863-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	34105	09/09/22 12:34	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34151	09/11/22 06:37	MR	EET MID
Total/NA	Analysis	Total BTEX		1			34256	09/12/22 10:03	AJ	EET MID
Total/NA	Analysis	8015 NM		1			33830	09/06/22 10:41	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	33565	09/01/22 15:50	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33582	09/02/22 22:26	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	33552	09/01/22 13:14	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	33925	09/08/22 14:46	CH	EET MID

Client Sample ID: PH03

Date Collected: 08/30/22 09:40
Date Received: 08/30/22 16:04

Lab Sample ID: 890-2863-3
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			5.05 g	5 mL	34105	09/09/22 12:34	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34151	09/11/22 06:57	MR	EET MID
Total/NA	Analysis	Total BTEX		1			34256	09/12/22 10:03	AJ	EET MID
Total/NA	Analysis	8015 NM		1			33830	09/06/22 10:41	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	33565	09/01/22 15:50	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33582	09/02/22 22:48	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	33552	09/01/22 13:14	SMC	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	33925	09/08/22 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 21 BD 104H

Job ID: 890-2863-1
SDG: Eddy County

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2863-1
SDG: Eddy County

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	MCAWW	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2863-1
SDG: Eddy County

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2863-1	PH01	Solid	08/30/22 09:20	08/30/22 16:04	1'
890-2863-2	PH02	Solid	08/30/22 09:30	08/30/22 16:04	1'
890-2863-3	PH03	Solid	08/30/22 09:40	08/30/22 16:04	1'

eurofins

Environment Testing
Xenco

Chain of Custody

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

Work Order No: _____

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Project Manager:	Ben Belill	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy, Inc.
Address:	3122 National parks Hwy	Address:	3104 E. Green Street
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	9898540852	Email:	bbelill@ensolum.com

Work Order Comments

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

Project Name:	PLU 21 BD 104H	Turn Around	
Project Number:	03E1558053	☑ Routine ☐ Rush	
Project Location:	EDDY COUNTY, NM	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:	TPM-09	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	20.6	
Total Containers:		Corrected Temperature:	20.4	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
PH01	S	8/30/2022	0920	1'	Grab/	1		X	X	X
PH02	S	8/30/2022	0930	1'	Grab/	1		X	X	X
PH03	S	8/30/2022	0940	1'	Grab/	1		X	X	X

890-2863 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

Cost Center: 1666351001

Incident Number: ~~NAPP2210942764~~

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			8/30/22 1604			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2863-1
SDG Number: Eddy County

Login Number: 2863
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	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: 890-2863-1
SDG Number: Eddy County

Login Number: 2863
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 09/01/22 11:10 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: 890-2864-1
Laboratory Sample Delivery Group: Eddy County NM
Client Project/Site: PLU 21 BD 104H

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

Attn: Ben Belill

JKramer

Authorized for release by:
9/12/2022 9:24:15 AM

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

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

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

Client: Ensolum
Project/Site: PLU 21 BD 104H

Laboratory Job ID: 890-2864-1
SDG: Eddy County NM

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2864-1
SDG: Eddy County NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2864-1
SDG: Eddy County NM

Job ID: 890-2864-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2864-1

Receipt
The sample was received on 8/30/2022 4:04 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 20.4°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-34105 and analytical batch 880-34151 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-33565/2-A) and (LCSD 880-33565/3-A). Evidence of matrix interferences is not obvious.

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

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

Client Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2864-1
SDG: Eddy County NM

Client Sample ID: SS05

Date Collected: 08/30/22 13:35
Date Received: 08/30/22 16:04
Sample Depth: 0.5'

Lab Sample ID: 890-2864-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/09/22 12:34	09/11/22 07:18	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/09/22 12:34	09/11/22 07:18	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/09/22 12:34	09/11/22 07:18	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/09/22 12:34	09/11/22 07:18	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/09/22 12:34	09/11/22 07:18	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/09/22 12:34	09/11/22 07:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*79*		*70 - 130*	*09/09/22 12:34*	*09/11/22 07:18*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*09/09/22 12:34*	*09/11/22 07:18*	*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			09/12/22 10:03	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			09/06/22 10:41	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		09/01/22 15:50	09/02/22 23:09	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/01/22 15:50	09/02/22 23:09	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/01/22 15:50	09/02/22 23:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*09/01/22 15:50*	*09/02/22 23:09*	*1*
o-Terphenyl	*101*		*70 - 130*	*09/01/22 15:50*	*09/02/22 23:09*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**125**		5.05		mg/Kg			09/08/22 14:56	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2864-1
SDG: Eddy County NM

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)
890-2862-A-1-D MS	Matrix Spike	64 S1-	116
890-2862-A-1-E MSD	Matrix Spike Duplicate	89	97
890-2864-1	SS05	79	100
LCS 880-34105/1-A	Lab Control Sample	83	90
LCSD 880-34105/2-A	Lab Control Sample Dup	80	101
MB 880-34093/5-A	Method Blank	80	123
MB 880-34105/5-A	Method Blank	80	113

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)
890-2861-A-1-C MS	Matrix Spike	119	92
890-2861-A-1-D MSD	Matrix Spike Duplicate	121	97
890-2864-1	SS05	113	101
LCS 880-33565/2-A	Lab Control Sample	152 S1+	123
LCSD 880-33565/3-A	Lab Control Sample Dup	156 S1+	130
MB 880-33565/1-A	Method Blank	124	117

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2864-1
SDG: Eddy County NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-34093/5-A
Matrix: Solid
Analysis Batch: 34151

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34093

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/09/22 11:13	09/10/22 17:51	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/09/22 11:13	09/10/22 17:51	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/09/22 11:13	09/10/22 17:51	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/09/22 11:13	09/10/22 17:51	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/09/22 11:13	09/10/22 17:51	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/09/22 11:13	09/10/22 17:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*09/09/22 11:13*	*09/10/22 17:51*	*1*
1,4-Difluorobenzene (Surr)	*123*		*70 - 130*	*09/09/22 11:13*	*09/10/22 17:51*	*1*

Lab Sample ID: MB 880-34105/5-A
Matrix: Solid
Analysis Batch: 34151

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34105

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:34	09/11/22 05:27	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:34	09/11/22 05:27	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:34	09/11/22 05:27	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/09/22 12:34	09/11/22 05:27	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:34	09/11/22 05:27	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/09/22 12:34	09/11/22 05:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*09/09/22 12:34*	*09/11/22 05:27*	*1*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*09/09/22 12:34*	*09/11/22 05:27*	*1*

Lab Sample ID: LCS 880-34105/1-A
Matrix: Solid
Analysis Batch: 34151

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34105

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08120		mg/Kg		81	70 - 130		
Toluene			0.100	0.08547		mg/Kg		85	70 - 130		
Ethylbenzene			0.100	0.08953		mg/Kg		90	70 - 130		
m-Xylene & p-Xylene			0.200	0.1522		mg/Kg		76	70 - 130		
o-Xylene			0.100	0.07848		mg/Kg		78	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*

Lab Sample ID: LCSD 880-34105/2-A
Matrix: Solid
Analysis Batch: 34151

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34105

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1089		mg/Kg		109	70 - 130	29	35

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2864-1
SDG: Eddy County NM

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

Lab Sample ID: LCSD 880-34105/2-A
Matrix: Solid
Analysis Batch: 34151

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34105

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.09966		mg/Kg		100	70 - 130	15	35
Ethylbenzene			0.100	0.09820		mg/Kg		98	70 - 130	9	35
m-Xylene & p-Xylene			0.200	0.1717		mg/Kg		86	70 - 130	12	35
o-Xylene			0.100	0.08621		mg/Kg		86	70 - 130	9	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 890-2862-A-1-D MS
Matrix: Solid
Analysis Batch: 34151

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 34105

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U F1 F2	0.0998	0.03691	F1	mg/Kg		37	70 - 130
Toluene	<0.00199	U F1 F2	0.0998	0.03406	F1	mg/Kg		34	70 - 130
Ethylbenzene	<0.00199	U F1 F2	0.0998	0.02475	F1	mg/Kg		25	70 - 130
m-Xylene & p-Xylene	<0.00398	U F1 F2	0.200	0.03414	F1	mg/Kg		17	70 - 130
o-Xylene	<0.00199	U F1 F2	0.0998	0.01758	F1	mg/Kg		18	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*64*	*S1-*	*70 - 130*
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*

Lab Sample ID: 890-2862-A-1-E MSD
Matrix: Solid
Analysis Batch: 34151

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 34105

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U F1 F2	0.100	0.07171	F2	mg/Kg		71	70 - 130	64	35
Toluene	<0.00199	U F1 F2	0.100	0.07701	F2	mg/Kg		77	70 - 130	77	35
Ethylbenzene	<0.00199	U F1 F2	0.100	0.07436	F2	mg/Kg		74	70 - 130	100	35
m-Xylene & p-Xylene	<0.00398	U F1 F2	0.201	0.1307	F1 F2	mg/Kg		65	70 - 130	117	35
o-Xylene	<0.00199	U F1 F2	0.100	0.06968	F1 F2	mg/Kg		69	70 - 130	119	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

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

Lab Sample ID: MB 880-33565/1-A
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 33565

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		09/01/22 15:50	09/02/22 19:12	1

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2864-1
SDG: Eddy County NM

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

Lab Sample ID: MB 880-33565/1-A
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 33565

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		09/01/22 15:50	09/02/22 19:12	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/01/22 15:50	09/02/22 19:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*124*		*70 - 130*	*09/01/22 15:50*	*09/02/22 19:12*	*1*
o-Terphenyl	*117*		*70 - 130*	*09/01/22 15:50*	*09/02/22 19:12*	*1*

Lab Sample ID: LCS 880-33565/2-A
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 33565

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	846.8		mg/Kg		85	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	876.5		mg/Kg		88	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*152*	*S1+*	*70 - 130*
o-Terphenyl	*123*		*70 - 130*

Lab Sample ID: LCSD 880-33565/3-A
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 33565

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	858.2		mg/Kg		86	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	909.9		mg/Kg		91	70 - 130	4	20

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

Lab Sample ID: 890-2861-A-1-C MS
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 33565

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	989.5		mg/Kg		99	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	999	1046		mg/Kg		105	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*119*		*70 - 130*
o-Terphenyl	*92*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2864-1
SDG: Eddy County NM

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

Lab Sample ID: 890-2861-A-1-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 33582 — **Prep Batch: 33565**

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	1037		mg/Kg		104	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<49.9	U	998	1069		mg/Kg		107	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*121*		*70 - 130*
o-Terphenyl	*97*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-33552/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 33925

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			09/08/22 12:35	1

Lab Sample ID: LCS 880-33552/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 33925

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	251.9		mg/Kg		101	90 - 110		

Lab Sample ID: LCSD 880-33552/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 33925

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	252.8		mg/Kg		101	90 - 110	0	20

Lab Sample ID: 880-18647-A-35-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 33925

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	30.9		251	282.5		mg/Kg		100	90 - 110		

Lab Sample ID: 880-18647-A-35-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 33925

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	30.9		251	282.1		mg/Kg		100	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2864-1
SDG: Eddy County NM

GC VOA

Prep Batch: 34093

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-34093/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 34105

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2864-1	SS05	Total/NA	Solid	5035	
MB 880-34105/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-34105/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-34105/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2862-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
890-2862-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 34151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2864-1	SS05	Total/NA	Solid	8021B	34105
MB 880-34093/5-A	Method Blank	Total/NA	Solid	8021B	34093
MB 880-34105/5-A	Method Blank	Total/NA	Solid	8021B	34105
LCS 880-34105/1-A	Lab Control Sample	Total/NA	Solid	8021B	34105
LCSD 880-34105/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	34105
890-2862-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	34105
890-2862-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	34105

Analysis Batch: 34257

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2864-1	SS05	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 33565

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2864-1	SS05	Total/NA	Solid	8015NM Prep	
MB 880-33565/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-33565/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-33565/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2861-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2861-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 33582

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2864-1	SS05	Total/NA	Solid	8015B NM	33565
MB 880-33565/1-A	Method Blank	Total/NA	Solid	8015B NM	33565
LCS 880-33565/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	33565
LCSD 880-33565/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	33565
890-2861-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	33565
890-2861-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	33565

Analysis Batch: 33831

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2864-1	SS05	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2864-1
SDG: Eddy County NM

HPLC/IC

Leach Batch: 33552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2864-1	SS05	Soluble	Solid	DI Leach	
MB 880-33552/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-33552/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-33552/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-18647-A-35-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-18647-A-35-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 33925

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2864-1	SS05	Soluble	Solid	300.0	33552
MB 880-33552/1-A	Method Blank	Soluble	Solid	300.0	33552
LCS 880-33552/2-A	Lab Control Sample	Soluble	Solid	300.0	33552
LCSD 880-33552/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	33552
880-18647-A-35-C MS	Matrix Spike	Soluble	Solid	300.0	33552
880-18647-A-35-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	33552

Lab Chronicle

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2864-1
SDG: Eddy County NM

Client Sample ID: SS05

Date Collected: 08/30/22 13:35
Date Received: 08/30/22 16:04

Lab Sample ID: 890-2864-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	34105	09/09/22 12:34	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34151	09/11/22 07:18	MR	EET MID
Total/NA	Analysis	Total BTEX		1			34257	09/12/22 10:03	AJ	EET MID
Total/NA	Analysis	8015 NM		1			33831	09/06/22 10:41	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	33565	09/01/22 15:50	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33582	09/02/22 23:09	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	33552	09/01/22 13:14	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	33925	09/08/22 14:56	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2864-1
SDG: Eddy County NM

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2864-1
SDG: Eddy County NM

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	MCAWW	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2864-1
SDG: Eddy County NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2864-1	SS05	Solid	08/30/22 13:35	08/30/22 16:04	0.5'

eurofins

Environment Testing
Xenco

Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Ben Belill	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy, Inc.
Address:	3122 National parks Hwy	Address:	3104 E. Green Street
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	9898540852	Email:	bbelill@ensolum.com

Work Order Comments

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

Project Name:	PLU 21 BD 104H	Turn Around	
Project Number:	03E1558053	☑ Routine ☐ Rush	
Project Location:	EDDY COUNTY, NM	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:	TM-007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	20.6	
Total Containers:		Corrected Temperature:	20.4	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
SS05	S	8/30/2022	1335	0.5'	Grab/	1		X	X	X

890-2864 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

Cost Center: 1666351001

Incident Number: ~~NAPP2210942764~~

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		Amanda Salcedo	8/31/22 1600	2		
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2864-1
SDG Number: Eddy County NM

Login Number: 2864
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	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: 890-2864-1
SDG Number: Eddy County NM

Login Number: 2864
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 09/01/22 11:10 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: 890-2865-1
Laboratory Sample Delivery Group: Eddy County NM
Client Project/Site: PLU 21 BD 104H

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

Attn: Ben Belill

JKramer

Authorized for release by:
9/12/2022 9:18:37 AM

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

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

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

Client: Ensolum
Project/Site: PLU 21 BD 104H

Laboratory Job ID: 890-2865-1
SDG: Eddy County NM

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2865-1
SDG: Eddy County NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2865-1
SDG: Eddy County NM

Job ID: 890-2865-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2865-1

Receipt
The sample was received on 8/30/2022 4:04 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 20.4°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-34107 and analytical batch 880-34153 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-33565/2-A) and (LCSD 880-33565/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: SS07 (890-2865-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

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

Client Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2865-1
SDG: Eddy County NM

Client Sample ID: SS07

Date Collected: 08/30/22 13:45
Date Received: 08/30/22 16:04
Sample Depth: 0.5'

Lab Sample ID: 890-2865-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U F1	0.00201		mg/Kg		09/09/22 12:37	09/10/22 19:30	1
Toluene	<0.00201	U F1	0.00201		mg/Kg		09/09/22 12:37	09/10/22 19:30	1
Ethylbenzene	<0.00201	U F1 F2	0.00201		mg/Kg		09/09/22 12:37	09/10/22 19:30	1
m-Xylene & p-Xylene	<0.00402	U F1 F2	0.00402		mg/Kg		09/09/22 12:37	09/10/22 19:30	1
o-Xylene	<0.00201	U F1 F2	0.00201		mg/Kg		09/09/22 12:37	09/10/22 19:30	1
Xylenes, Total	<0.00402	U F1 F2	0.00402		mg/Kg		09/09/22 12:37	09/10/22 19:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*09/09/22 12:37*	*09/10/22 19:30*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*09/09/22 12:37*	*09/10/22 19:30*	*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			09/12/22 09:52	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			09/06/22 10:41	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		09/01/22 15:50	09/02/22 23:31	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/01/22 15:50	09/02/22 23:31	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/01/22 15:50	09/02/22 23:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*131*	*S1+*	*70 - 130*	*09/01/22 15:50*	*09/02/22 23:31*	*1*
o-Terphenyl	*118*		*70 - 130*	*09/01/22 15:50*	*09/02/22 23:31*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**373**		25.3		mg/Kg			09/08/22 15:01	5

Surrogate Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2865-1
SDG: Eddy County NM

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)
890-2865-1	SS07	101	87
890-2865-1 MS	SS07	85	92
890-2865-1 MSD	SS07	116	98
LCS 880-34107/1-A	Lab Control Sample	103	107
LCSD 880-34107/2-A	Lab Control Sample Dup	132 S1+	105
MB 880-34107/5-A	Method Blank	96	89

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-2861-A-1-C MS	Matrix Spike	119	92
890-2861-A-1-D MSD	Matrix Spike Duplicate	121	97
890-2865-1	SS07	131 S1+	118
LCS 880-33565/2-A	Lab Control Sample	152 S1+	123
LCSD 880-33565/3-A	Lab Control Sample Dup	156 S1+	130
MB 880-33565/1-A	Method Blank	124	117

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2865-1
SDG: Eddy County NM

Method: 8021B - Volatile Organic Compounds (GC)

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

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

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

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

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

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

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

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

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

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

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

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

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

Client Sample ID: SS07
Prep Type: Total/NA
Prep Batch: 34107

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

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2865-1
SDG: Eddy County NM

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

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

Client Sample ID: SS07
Prep Type: Total/NA
Prep Batch: 34107

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

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

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

Client Sample ID: SS07
Prep Type: Total/NA
Prep Batch: 34107

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

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

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

Lab Sample ID: MB 880-33565/1-A
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 33565

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		09/01/22 15:50	09/02/22 19:12	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/01/22 15:50	09/02/22 19:12	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/01/22 15:50	09/02/22 19:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*124*		*70 - 130*	*09/01/22 15:50*	*09/02/22 19:12*	*1*
o-Terphenyl	*117*		*70 - 130*	*09/01/22 15:50*	*09/02/22 19:12*	*1*

Lab Sample ID: LCS 880-33565/2-A
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 33565

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	846.8		mg/Kg		85	70 - 130
Diesel Range Organics (Over C10-C28)			1000	876.5		mg/Kg		88	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2865-1
SDG: Eddy County NM

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

Lab Sample ID: LCS 880-33565/2-A
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 33565

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	152	S1+	70 - 130
o-Terphenyl	123		70 - 130

Lab Sample ID: LCSD 880-33565/3-A
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 33565

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	858.2		mg/Kg		86	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	909.9		mg/Kg		91	70 - 130	4	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	156	S1+	70 - 130
o-Terphenyl	130		70 - 130

Lab Sample ID: 890-2861-A-1-C MS
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 33565

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	989.5		mg/Kg		99	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	999	1046		mg/Kg		105	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	119		70 - 130
o-Terphenyl	92		70 - 130

Lab Sample ID: 890-2861-A-1-D MSD
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 33565

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	1037		mg/Kg		104	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<49.9	U	998	1069		mg/Kg		107	70 - 130	2	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	121		70 - 130
o-Terphenyl	97		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2865-1
SDG: Eddy County NM

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-33552/1-A
Matrix: Solid
Analysis Batch: 33925

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			09/08/22 12:35	1

Lab Sample ID: LCS 880-33552/2-A
Matrix: Solid
Analysis Batch: 33925

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	251.9		mg/Kg		101	90 - 110		

Lab Sample ID: LCSD 880-33552/3-A
Matrix: Solid
Analysis Batch: 33925

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	252.8		mg/Kg		101	90 - 110	0	20

Lab Sample ID: 880-18647-A-35-C MS
Matrix: Solid
Analysis Batch: 33925

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	30.9		251	282.5		mg/Kg		100	90 - 110		

Lab Sample ID: 880-18647-A-35-D MSD
Matrix: Solid
Analysis Batch: 33925

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	30.9		251	282.1		mg/Kg		100	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2865-1
SDG: Eddy County NM

GC VOA

Prep Batch: 34107

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2865-1	SS07	Total/NA	Solid	5035	
MB 880-34107/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-34107/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-34107/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2865-1 MS	SS07	Total/NA	Solid	5035	
890-2865-1 MSD	SS07	Total/NA	Solid	5035	

Analysis Batch: 34153

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2865-1	SS07	Total/NA	Solid	8021B	34107
MB 880-34107/5-A	Method Blank	Total/NA	Solid	8021B	34107
LCS 880-34107/1-A	Lab Control Sample	Total/NA	Solid	8021B	34107
LCSD 880-34107/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	34107
890-2865-1 MS	SS07	Total/NA	Solid	8021B	34107
890-2865-1 MSD	SS07	Total/NA	Solid	8021B	34107

Analysis Batch: 34234

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2865-1	SS07	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 33565

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2865-1	SS07	Total/NA	Solid	8015NM Prep	
MB 880-33565/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-33565/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-33565/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2861-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2861-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 33582

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2865-1	SS07	Total/NA	Solid	8015B NM	33565
MB 880-33565/1-A	Method Blank	Total/NA	Solid	8015B NM	33565
LCS 880-33565/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	33565
LCSD 880-33565/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	33565
890-2861-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	33565
890-2861-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	33565

Analysis Batch: 33832

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2865-1	SS07	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 33552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2865-1	SS07	Soluble	Solid	DI Leach	
MB 880-33552/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-33552/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-33552/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2865-1
SDG: Eddy County NM

HPLC/IC (Continued)

Leach Batch: 33552 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-18647-A-35-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-18647-A-35-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 33925

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2865-1	SS07	Soluble	Solid	300.0	33552
MB 880-33552/1-A	Method Blank	Soluble	Solid	300.0	33552
LCS 880-33552/2-A	Lab Control Sample	Soluble	Solid	300.0	33552
LCSD 880-33552/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	33552
880-18647-A-35-C MS	Matrix Spike	Soluble	Solid	300.0	33552
880-18647-A-35-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	33552

Lab Chronicle

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2865-1
SDG: Eddy County NM

Client Sample ID: SS07

Date Collected: 08/30/22 13:45
Date Received: 08/30/22 16:04

Lab Sample ID: 890-2865-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	34107	09/09/22 12:37	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34153	09/10/22 19:30	MR	EET MID
Total/NA	Analysis	Total BTEX		1			34234	09/12/22 09:52	AJ	EET MID
Total/NA	Analysis	8015 NM		1			33832	09/06/22 10:41	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	33565	09/01/22 15:50	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33582	09/02/22 23:31	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	33552	09/01/22 13:14	SMC	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	33925	09/08/22 15:01	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2865-1
SDG: Eddy County NM

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2865-1
SDG: Eddy County NM

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	MCAWW	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2865-1
SDG: Eddy County NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2865-1	SS07	Solid	08/30/22 13:45	08/30/22 16:04	0.5'

eurofins

Environment Testing
Xenco

Chain of Custody

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

Work Order No: _____

www.xenco.com Page ___1__ of ___1___

Project Manager:	Ben Belill	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy, Inc.
Address:	3122 National parks Hwy	Address:	3104 E. Green Street
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	9898540852	Email:	bbelill@ensolum.com

Work Order Comments

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

Project Name:	PLU 21 BD 104H	Turn Around	
Project Number:	03E1558053	☑ Routine ☐ Rush	
Project Location:	EDDY COUNTY, NM	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:	IR-07	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	20.6	
Total Containers:		Corrected Temperature:	20.4	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
SS07	S	8/30/2022	1345	0.5'	Grab/	1		X	X	X

Parameters

ANALYSIS REQUEST

890-2865 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

Cost Center: 1666351001

Incident Number: ~~NAPP2210942764~~

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			8/30/22 1600	2		
3				4		
5				6		

Revised Date 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2865-1
SDG Number: Eddy County NM

Login Number: 2865
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	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: 890-2865-1
SDG Number: Eddy County NM

Login Number: 2865
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 09/01/22 11:10 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: 890-2866-1
Laboratory Sample Delivery Group: Eddy County NM
Client Project/Site: PLU 21 BD 104H

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

Attn: Ben Belill

JKramer

Authorized for release by:
9/12/2022 9:18:37 AM

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

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

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

Client: Ensolum
Project/Site: PLU 21 BD 104H

Laboratory Job ID: 890-2866-1
SDG: Eddy County NM

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2866-1
SDG: Eddy County NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2866-1
SDG: Eddy County NM

Job ID: 890-2866-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2866-1

Receipt
The sample was received on 8/30/2022 4:04 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 20.4°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-34107 and analytical batch 880-34153 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-33565/2-A) and (LCSD 880-33565/3-A). Evidence of matrix interferences is not obvious.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-33553 and analytical batch 880-33674 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2866-1
SDG: Eddy County NM

Client Sample ID: SS06

Date Collected: 08/30/22 13:40
Date Received: 08/30/22 16:04
Sample Depth: 0.5'

Lab Sample ID: 890-2866-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		09/09/22 12:37	09/10/22 19:51	1
Toluene	<0.00198	U	0.00198		mg/Kg		09/09/22 12:37	09/10/22 19:51	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		09/09/22 12:37	09/10/22 19:51	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		09/09/22 12:37	09/10/22 19:51	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		09/09/22 12:37	09/10/22 19:51	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		09/09/22 12:37	09/10/22 19:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*09/09/22 12:37*	*09/10/22 19:51*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*09/09/22 12:37*	*09/10/22 19:51*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			09/12/22 09:52	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/06/22 10:41	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		09/01/22 15:50	09/02/22 23:52	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/01/22 15:50	09/02/22 23:52	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/01/22 15:50	09/02/22 23:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*09/01/22 15:50*	*09/02/22 23:52*	*1*
o-Terphenyl	*102*		*70 - 130*	*09/01/22 15:50*	*09/02/22 23:52*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**252**		25.0		mg/Kg			09/07/22 09:04	5

Surrogate Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2866-1
SDG: Eddy County NM

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)
890-2865-A-1-C MS	Matrix Spike	85	92
890-2865-A-1-D MSD	Matrix Spike Duplicate	116	98
890-2866-1	SS06	110	91
LCS 880-34107/1-A	Lab Control Sample	103	107
LCSD 880-34107/2-A	Lab Control Sample Dup	132 S1+	105
MB 880-34107/5-A	Method Blank	96	89

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-2861-A-1-C MS	Matrix Spike	119	92
890-2861-A-1-D MSD	Matrix Spike Duplicate	121	97
890-2866-1	SS06	113	102
LCS 880-33565/2-A	Lab Control Sample	152 S1+	123
LCSD 880-33565/3-A	Lab Control Sample Dup	156 S1+	130
MB 880-33565/1-A	Method Blank	124	117

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2866-1
SDG: Eddy County NM

Method: 8021B - Volatile Organic Compounds (GC)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2866-1
SDG: Eddy County NM

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

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

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

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

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

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

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

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

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

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

Lab Sample ID: MB 880-33565/1-A
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 33565

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		09/01/22 15:50	09/02/22 19:12	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		09/01/22 15:50	09/02/22 19:12	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		09/01/22 15:50	09/02/22 19:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*124*		*70 - 130*	*09/01/22 15:50*	*09/02/22 19:12*	*1*
o-Terphenyl	*117*		*70 - 130*	*09/01/22 15:50*	*09/02/22 19:12*	*1*

Lab Sample ID: LCS 880-33565/2-A
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 33565

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	846.8		mg/Kg		85	70 - 130
Diesel Range Organics (Over C10-C28)	1000	876.5		mg/Kg		88	70 - 130

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2866-1
SDG: Eddy County NM

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

Lab Sample ID: LCS 880-33565/2-A
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 33565

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	152	S1+	70 - 130
o-Terphenyl	123		70 - 130

Lab Sample ID: LCSD 880-33565/3-A
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 33565

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	858.2		mg/Kg		86	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	909.9		mg/Kg		91	70 - 130	4	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	156	S1+	70 - 130
o-Terphenyl	130		70 - 130

Lab Sample ID: 890-2861-A-1-C MS
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 33565

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	989.5		mg/Kg		99	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	999	1046		mg/Kg		105	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	119		70 - 130
o-Terphenyl	92		70 - 130

Lab Sample ID: 890-2861-A-1-D MSD
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 33565

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	1037		mg/Kg		104	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<49.9	U	998	1069		mg/Kg		107	70 - 130	2	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	121		70 - 130
o-Terphenyl	97		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2866-1
SDG: Eddy County NM

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-33553/1-A
Matrix: Solid
Analysis Batch: 33674

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			09/07/22 04:38	1

Lab Sample ID: LCS 880-33553/2-A
Matrix: Solid
Analysis Batch: 33674

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	249.7		mg/Kg		100	90 - 110		

Lab Sample ID: LCSD 880-33553/3-A
Matrix: Solid
Analysis Batch: 33674

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	249.2		mg/Kg		100	90 - 110	0	20

Lab Sample ID: 880-18698-A-7-B MS
Matrix: Solid
Analysis Batch: 33674

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	1170	F1	1250	2391		mg/Kg		97	90 - 110		

Lab Sample ID: 880-18698-A-7-C MSD
Matrix: Solid
Analysis Batch: 33674

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	1170	F1	1250	2789	F1	mg/Kg		129	90 - 110	15	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2866-1
SDG: Eddy County NM

GC VOA

Prep Batch: 34107

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2866-1	SS06	Total/NA	Solid	5035	
MB 880-34107/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-34107/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-34107/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2865-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-2865-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 34153

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2866-1	SS06	Total/NA	Solid	8021B	34107
MB 880-34107/5-A	Method Blank	Total/NA	Solid	8021B	34107
LCS 880-34107/1-A	Lab Control Sample	Total/NA	Solid	8021B	34107
LCSD 880-34107/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	34107
890-2865-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	34107
890-2865-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	34107

Analysis Batch: 34235

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2866-1	SS06	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 33565

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2866-1	SS06	Total/NA	Solid	8015NM Prep	
MB 880-33565/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-33565/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-33565/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2861-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2861-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 33582

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2866-1	SS06	Total/NA	Solid	8015B NM	33565
MB 880-33565/1-A	Method Blank	Total/NA	Solid	8015B NM	33565
LCS 880-33565/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	33565
LCSD 880-33565/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	33565
890-2861-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	33565
890-2861-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	33565

Analysis Batch: 33833

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2866-1	SS06	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 33553

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2866-1	SS06	Soluble	Solid	DI Leach	
MB 880-33553/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-33553/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-33553/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2866-1
SDG: Eddy County NM

HPLC/IC (Continued)

Leach Batch: 33553 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-18698-A-7-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-18698-A-7-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 33674

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2866-1	SS06	Soluble	Solid	300.0	33553
MB 880-33553/1-A	Method Blank	Soluble	Solid	300.0	33553
LCS 880-33553/2-A	Lab Control Sample	Soluble	Solid	300.0	33553
LCSD 880-33553/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	33553
880-18698-A-7-B MS	Matrix Spike	Soluble	Solid	300.0	33553
880-18698-A-7-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	33553

Lab Chronicle

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2866-1
SDG: Eddy County NM

Client Sample ID: SS06

Date Collected: 08/30/22 13:40
Date Received: 08/30/22 16:04

Lab Sample ID: 890-2866-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	34107	09/09/22 12:37	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34153	09/10/22 19:51	MR	EET MID
Total/NA	Analysis	Total BTEX		1			34235	09/12/22 09:52	AJ	EET MID
Total/NA	Analysis	8015 NM		1			33833	09/06/22 10:41	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	33565	09/01/22 15:50	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33582	09/02/22 23:52	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	33553	09/01/22 13:18	SMC	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	33674	09/07/22 09:04	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2866-1
SDG: Eddy County NM

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2866-1
SDG: Eddy County NM

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	MCAWW	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: PLU 21 BD 104H

Job ID: 890-2866-1
SDG: Eddy County NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2866-1	SS06	Solid	08/30/22 13:40	08/30/22 16:04	0.5'

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page ___1__ of ___1___

Project Manager:	Ben Belill	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy, Inc.
Address:	3122 National parks Hwy	Address:	3104 E. Green Street
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	9898540852	Email:	bbelill@ensolum.com

Work Order Comments

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

Project Name:	PLU 21 BD 104H	Turn Around	☑ Routine ☐ Rush
Project Number:	03E1558053	Due Date:	
Project Location:	EDDY COUNTY, NM	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:	IR-01	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	20.6	
Total Containers:		Corrected Temperature:	20.4	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
SS06	S	8/30/2022	1340	0.5'	Grab/	1	X	X	X

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

Cost Center: 1666351001

Incident Number: ~~NAPP2210942764~~

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			8/30/22 1604	2		
3				4		
5				6		

Revised Date: 08/25/2020 Rev: 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2866-1
SDG Number: Eddy County NM

Login Number: 2866
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	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: 890-2866-1
SDG Number: Eddy County NM

Login Number: 2866
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 09/01/22 11:10 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: 890-2875-1
Laboratory Sample Delivery Group: 03E1558053
Client Project/Site: PLU 21 BD 104

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

Attn: Ben Belill

JKramer

Authorized for release by:
9/12/2022 9:25:09 AM

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

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

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

Client: Ensolum
Project/Site: PLU 21 BD 104

Laboratory Job ID: 890-2875-1
SDG: 03E1558053

Table of Contents

Eurofins Carlsbad
9/12/2022

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 21 BD 104

Job ID: 890-2875-1
SDG: 03E1558053

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: PLU 21 BD 104

Job ID: 890-2875-1
SDG: 03E1558053

Job ID: 890-2875-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2875-1

Receipt
The samples were received on 9/1/2022 9:21 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.4°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-34105 and analytical batch 880-34151 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-33656/2-A) and (LCSD 880-33656/3-A). Evidence of matrix interferences is not obvious.

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

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

Client Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104

Job ID: 890-2875-1
SDG: 03E1558053

Client Sample ID: FS01

Lab Sample ID: 890-2875-1
Matrix: Solid
Date Collected: 08/31/22 12:30
Date Received: 09/01/22 09:21
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		09/09/22 12:34	09/11/22 07:38	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:34	09/11/22 07:38	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:34	09/11/22 07:38	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		09/09/22 12:34	09/11/22 07:38	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:34	09/11/22 07:38	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		09/09/22 12:34	09/11/22 07:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*35*	*S1-*	*70 - 130*	*09/09/22 12:34*	*09/11/22 07:38*	*1*
1,4-Difluorobenzene (Surr)	*123*		*70 - 130*	*09/09/22 12:34*	*09/11/22 07:38*	*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			09/12/22 10:03	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			09/06/22 09:47	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		09/02/22 15:07	09/03/22 12:01	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/02/22 15:07	09/03/22 12:01	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/02/22 15:07	09/03/22 12:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*87*		*70 - 130*	*09/02/22 15:07*	*09/03/22 12:01*	*1*
o-Terphenyl	*112*		*70 - 130*	*09/02/22 15:07*	*09/03/22 12:01*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4410**		25.2		mg/Kg			09/09/22 03:54	5

Client Sample ID: FS02

Lab Sample ID: 890-2875-2
Matrix: Solid
Date Collected: 08/31/22 12:35
Date Received: 09/01/22 09:21
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		09/09/22 12:34	09/11/22 07:58	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:34	09/11/22 07:58	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:34	09/11/22 07:58	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/09/22 12:34	09/11/22 07:58	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:34	09/11/22 07:58	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/09/22 12:34	09/11/22 07:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*81*		*70 - 130*	*09/09/22 12:34*	*09/11/22 07:58*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104

Job ID: 890-2875-1
SDG: 03E1558053

Client Sample ID: FS02

Lab Sample ID: 890-2875-2
Matrix: Solid
Date Collected: 08/31/22 12:35
Date Received: 09/01/22 09:21
Sample Depth: 1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*09/09/22 12:34*	*09/11/22 07:58*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			09/12/22 10:03	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			09/06/22 09:47	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		09/02/22 15:07	09/03/22 13:05	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/02/22 15:07	09/03/22 13:05	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/02/22 15:07	09/03/22 13:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*90*		*70 - 130*	*09/02/22 15:07*	*09/03/22 13:05*	*1*
o-Terphenyl	*117*		*70 - 130*	*09/02/22 15:07*	*09/03/22 13:05*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2470**		24.9		mg/Kg			09/09/22 04:09	5

Client Sample ID: FS03

Lab Sample ID: 890-2875-3
Matrix: Solid
Date Collected: 08/31/22 12:40
Date Received: 09/01/22 09:21
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		09/09/22 12:34	09/11/22 08:19	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/09/22 12:34	09/11/22 08:19	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/09/22 12:34	09/11/22 08:19	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/09/22 12:34	09/11/22 08:19	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/09/22 12:34	09/11/22 08:19	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/09/22 12:34	09/11/22 08:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*	*09/09/22 12:34*	*09/11/22 08:19*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*09/09/22 12:34*	*09/11/22 08:19*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/12/22 10:03	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			09/06/22 09:47	1

Client Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104

Job ID: 890-2875-1
SDG: 03E1558053

Client Sample ID: FS03

Lab Sample ID: 890-2875-3
Matrix: Solid
Date Collected: 08/31/22 12:40
Date Received: 09/01/22 09:21
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	<50.0	U	50.0		mg/Kg		09/02/22 15:07	09/03/22 13:25	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/02/22 15:07	09/03/22 13:25	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/02/22 15:07	09/03/22 13:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*09/02/22 15:07*	*09/03/22 13:25*	*1*
o-Terphenyl	*121*		*70 - 130*	*09/02/22 15:07*	*09/03/22 13:25*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1130**		4.95		mg/Kg			09/09/22 04:14	1

Client Sample ID: FS04

Lab Sample ID: 890-2875-4
Matrix: Solid
Date Collected: 08/31/22 12:45
Date Received: 09/01/22 09:21
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		09/09/22 12:34	09/11/22 08:39	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/09/22 12:34	09/11/22 08:39	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/09/22 12:34	09/11/22 08:39	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/09/22 12:34	09/11/22 08:39	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/09/22 12:34	09/11/22 08:39	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/09/22 12:34	09/11/22 08:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*09/09/22 12:34*	*09/11/22 08:39*	*1*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*09/09/22 12:34*	*09/11/22 08:39*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/12/22 10:03	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			09/06/22 09:47	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		09/02/22 15:07	09/03/22 13:45	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/02/22 15:07	09/03/22 13:45	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/02/22 15:07	09/03/22 13:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*09/02/22 15:07*	*09/03/22 13:45*	*1*
o-Terphenyl	*114*		*70 - 130*	*09/02/22 15:07*	*09/03/22 13:45*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104

Job ID: 890-2875-1
SDG: 03E1558053

Client Sample ID: FS04

Lab Sample ID: 890-2875-4
Matrix: Solid
Date Collected: 08/31/22 12:45
Date Received: 09/01/22 09:21
Sample Depth: 1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5300		49.5		mg/Kg			09/09/22 04:18	10

Client Sample ID: FS05

Lab Sample ID: 890-2875-5
Matrix: Solid
Date Collected: 08/31/22 12:50
Date Received: 09/01/22 09:21
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		09/09/22 12:34	09/11/22 09:00	1
Toluene	<0.00202	U	0.00202		mg/Kg		09/09/22 12:34	09/11/22 09:00	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		09/09/22 12:34	09/11/22 09:00	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		09/09/22 12:34	09/11/22 09:00	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		09/09/22 12:34	09/11/22 09:00	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		09/09/22 12:34	09/11/22 09:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*81*		*70 - 130*	*09/09/22 12:34*	*09/11/22 09:00*	*1*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*	*09/09/22 12:34*	*09/11/22 09:00*	*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			09/12/22 10:03	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			09/06/22 09:47	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		09/02/22 15:07	09/03/22 14:06	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/02/22 15:07	09/03/22 14:06	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/02/22 15:07	09/03/22 14:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*09/02/22 15:07*	*09/03/22 14:06*	*1*
o-Terphenyl	*122*		*70 - 130*	*09/02/22 15:07*	*09/03/22 14:06*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	555		4.99		mg/Kg			09/09/22 04:23	1

Client Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104

Job ID: 890-2875-1
SDG: 03E1558053

Client Sample ID: FS06

Lab Sample ID: 890-2875-6
Matrix: Solid
Date Collected: 08/31/22 12:55
Date Received: 09/01/22 09:21
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		09/09/22 12:34	09/11/22 10:49	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:34	09/11/22 10:49	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:34	09/11/22 10:49	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/09/22 12:34	09/11/22 10:49	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:34	09/11/22 10:49	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/09/22 12:34	09/11/22 10:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*	*09/09/22 12:34*	*09/11/22 10:49*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*09/09/22 12:34*	*09/11/22 10:49*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			09/12/22 10:03	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			09/06/22 09:47	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		09/02/22 15:07	09/03/22 14:26	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/02/22 15:07	09/03/22 14:26	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/02/22 15:07	09/03/22 14:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*91*		*70 - 130*	*09/02/22 15:07*	*09/03/22 14:26*	*1*
o-Terphenyl	*118*		*70 - 130*	*09/02/22 15:07*	*09/03/22 14:26*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**205**		5.01		mg/Kg			09/09/22 04:28	1

Client Sample ID: FS07

Lab Sample ID: 890-2875-7
Matrix: Solid
Date Collected: 08/31/22 13:00
Date Received: 09/01/22 09:21
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		09/09/22 12:34	09/11/22 11:10	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/09/22 12:34	09/11/22 11:10	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/09/22 12:34	09/11/22 11:10	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/09/22 12:34	09/11/22 11:10	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/09/22 12:34	09/11/22 11:10	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/09/22 12:34	09/11/22 11:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*74*		*70 - 130*	*09/09/22 12:34*	*09/11/22 11:10*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104

Job ID: 890-2875-1
SDG: 03E1558053

Client Sample ID: FS07

Lab Sample ID: 890-2875-7
Matrix: Solid
Date Collected: 08/31/22 13:00
Date Received: 09/01/22 09:21
Sample Depth: 1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*09/09/22 12:34*	*09/11/22 11:10*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/12/22 10:03	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			09/06/22 09:47	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		09/02/22 15:07	09/03/22 14:46	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/02/22 15:07	09/03/22 14:46	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/02/22 15:07	09/03/22 14:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*92*		*70 - 130*	*09/02/22 15:07*	*09/03/22 14:46*	*1*
o-Terphenyl	*120*		*70 - 130*	*09/02/22 15:07*	*09/03/22 14:46*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2880**		25.2		mg/Kg			09/09/22 04:33	5

Client Sample ID: FS08

Lab Sample ID: 890-2875-8
Matrix: Solid
Date Collected: 08/31/22 13:05
Date Received: 09/01/22 09:21
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		09/09/22 12:34	09/11/22 11:30	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:34	09/11/22 11:30	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:34	09/11/22 11:30	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		09/09/22 12:34	09/11/22 11:30	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:34	09/11/22 11:30	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		09/09/22 12:34	09/11/22 11:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*82*		*70 - 130*	*09/09/22 12:34*	*09/11/22 11:30*	*1*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*09/09/22 12:34*	*09/11/22 11:30*	*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			09/12/22 10:03	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			09/06/22 09:47	1

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Client Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104

Job ID: 890-2875-1
SDG: 03E1558053

Client Sample ID: FS08

Lab Sample ID: 890-2875-8
Matrix: Solid
Date Collected: 08/31/22 13:05
Date Received: 09/01/22 09:21
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	<50.0	U	50.0		mg/Kg		09/02/22 15:07	09/03/22 15:06	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/02/22 15:07	09/03/22 15:06	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/02/22 15:07	09/03/22 15:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*09/02/22 15:07*	*09/03/22 15:06*	*1*
o-Terphenyl	*114*		*70 - 130*	*09/02/22 15:07*	*09/03/22 15:06*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2540**		25.2		mg/Kg			09/09/22 08:53	5

Client Sample ID: FS09

Lab Sample ID: 890-2875-9
Matrix: Solid
Date Collected: 08/31/22 13:10
Date Received: 09/01/22 09:21
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		09/09/22 12:34	09/11/22 11:50	1
Toluene	<0.00202	U	0.00202		mg/Kg		09/09/22 12:34	09/11/22 11:50	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		09/09/22 12:34	09/11/22 11:50	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		09/09/22 12:34	09/11/22 11:50	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		09/09/22 12:34	09/11/22 11:50	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		09/09/22 12:34	09/11/22 11:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*78*		*70 - 130*	*09/09/22 12:34*	*09/11/22 11:50*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*09/09/22 12:34*	*09/11/22 11:50*	*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			09/12/22 10:03	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			09/06/22 09:47	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/02/22 15:07	09/03/22 15:27	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/02/22 15:07	09/03/22 15:27	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/02/22 15:07	09/03/22 15:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*86*		*70 - 130*	*09/02/22 15:07*	*09/03/22 15:27*	*1*
o-Terphenyl	*110*		*70 - 130*	*09/02/22 15:07*	*09/03/22 15:27*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104

Job ID: 890-2875-1
SDG: 03E1558053

Client Sample ID: FS09

Lab Sample ID: 890-2875-9
Matrix: Solid
Date Collected: 08/31/22 13:10
Date Received: 09/01/22 09:21
Sample Depth: 1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7220		49.7		mg/Kg			09/07/22 18:38	10

Client Sample ID: FS10

Lab Sample ID: 890-2875-10
Matrix: Solid
Date Collected: 08/31/22 13:15
Date Received: 09/01/22 09:21
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		09/09/22 12:34	09/11/22 12:11	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:34	09/11/22 12:11	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:34	09/11/22 12:11	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/09/22 12:34	09/11/22 12:11	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:34	09/11/22 12:11	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/09/22 12:34	09/11/22 12:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*76*		*70 - 130*	*09/09/22 12:34*	*09/11/22 12:11*	*1*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*	*09/09/22 12:34*	*09/11/22 12:11*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			09/12/22 10:03	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			09/06/22 09:47	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		09/02/22 15:07	09/03/22 15:47	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/02/22 15:07	09/03/22 15:47	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/02/22 15:07	09/03/22 15:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*86*		*70 - 130*	*09/02/22 15:07*	*09/03/22 15:47*	*1*
o-Terphenyl	*108*		*70 - 130*	*09/02/22 15:07*	*09/03/22 15:47*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	305		5.03		mg/Kg			09/07/22 18:43	1

Client Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104

Job ID: 890-2875-1
SDG: 03E1558053

Client Sample ID: FS11

Date Collected: 08/31/22 13:20
Date Received: 09/01/22 09:21
Sample Depth: 1

Lab Sample ID: 890-2875-11

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/09/22 12:34	09/11/22 12:31	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/09/22 12:34	09/11/22 12:31	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/09/22 12:34	09/11/22 12:31	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/09/22 12:34	09/11/22 12:31	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/09/22 12:34	09/11/22 12:31	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/09/22 12:34	09/11/22 12:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*77*		*70 - 130*	*09/09/22 12:34*	*09/11/22 12:31*	*1*
1,4-Difluorobenzene (Surr)	*118*		*70 - 130*	*09/09/22 12:34*	*09/11/22 12:31*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/12/22 10:03	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			09/06/22 09:47	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/02/22 15:07	09/03/22 16:27	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/02/22 15:07	09/03/22 16:27	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/02/22 15:07	09/03/22 16:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*84*		*70 - 130*	*09/02/22 15:07*	*09/03/22 16:27*	*1*
o-Terphenyl	*106*		*70 - 130*	*09/02/22 15:07*	*09/03/22 16:27*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2300**		24.8		mg/Kg			09/07/22 18:48	5

Surrogate Summary

Client: Ensolum
Project/Site: PLU 21 BD 104

Job ID: 890-2875-1
SDG: 03E1558053

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)
890-2862-A-1-D MS	Matrix Spike	64 S1-	116
890-2862-A-1-E MSD	Matrix Spike Duplicate	89	97
890-2875-1	FS01	35 S1-	123
890-2875-2	FS02	81	107
890-2875-3	FS03	83	110
890-2875-4	FS04	80	113
890-2875-5	FS05	81	108
890-2875-6	FS06	86	103
890-2875-7	FS07	74	112
890-2875-8	FS08	82	111
890-2875-9	FS09	78	112
890-2875-10	FS10	76	109
890-2875-11	FS11	77	118
LCS 880-34105/1-A	Lab Control Sample	83	90
LCSD 880-34105/2-A	Lab Control Sample Dup	80	101
MB 880-34093/5-A	Method Blank	80	123
MB 880-34105/5-A	Method Blank	80	113

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-2875-1	FS01	87	112
890-2875-1 MS	FS01	86	92
890-2875-1 MSD	FS01	82	91
890-2875-2	FS02	90	117
890-2875-3	FS03	93	121
890-2875-4	FS04	89	114
890-2875-5	FS05	94	122
890-2875-6	FS06	91	118
890-2875-7	FS07	92	120
890-2875-8	FS08	89	114
890-2875-9	FS09	86	110
890-2875-10	FS10	86	108
890-2875-11	FS11	84	106
LCS 880-33656/2-A	Lab Control Sample	114	143 S1+
LCSD 880-33656/3-A	Lab Control Sample Dup	114	146 S1+
MB 880-33656/1-A	Method Blank	91	114

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104

Job ID: 890-2875-1
SDG: 03E1558053

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-34093/5-A
Matrix: Solid
Analysis Batch: 34151

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34093

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/09/22 11:13	09/10/22 17:51	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/09/22 11:13	09/10/22 17:51	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/09/22 11:13	09/10/22 17:51	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/09/22 11:13	09/10/22 17:51	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/09/22 11:13	09/10/22 17:51	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/09/22 11:13	09/10/22 17:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*09/09/22 11:13*	*09/10/22 17:51*	*1*
1,4-Difluorobenzene (Surr)	*123*		*70 - 130*	*09/09/22 11:13*	*09/10/22 17:51*	*1*

Lab Sample ID: MB 880-34105/5-A
Matrix: Solid
Analysis Batch: 34151

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34105

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:34	09/11/22 05:27	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:34	09/11/22 05:27	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:34	09/11/22 05:27	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/09/22 12:34	09/11/22 05:27	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:34	09/11/22 05:27	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/09/22 12:34	09/11/22 05:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*09/09/22 12:34*	*09/11/22 05:27*	*1*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*09/09/22 12:34*	*09/11/22 05:27*	*1*

Lab Sample ID: LCS 880-34105/1-A
Matrix: Solid
Analysis Batch: 34151

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34105

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08120		mg/Kg		81	70 - 130		
Toluene			0.100	0.08547		mg/Kg		85	70 - 130		
Ethylbenzene			0.100	0.08953		mg/Kg		90	70 - 130		
m-Xylene & p-Xylene			0.200	0.1522		mg/Kg		76	70 - 130		
o-Xylene			0.100	0.07848		mg/Kg		78	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*

Lab Sample ID: LCSD 880-34105/2-A
Matrix: Solid
Analysis Batch: 34151

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34105

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1089		mg/Kg		109	70 - 130	29	35

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QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104

Job ID: 890-2875-1
SDG: 03E1558053

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

Lab Sample ID: LCSD 880-34105/2-A
Matrix: Solid
Analysis Batch: 34151

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34105

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.09966		mg/Kg		100	70 - 130	15	35
Ethylbenzene			0.100	0.09820		mg/Kg		98	70 - 130	9	35
m-Xylene & p-Xylene			0.200	0.1717		mg/Kg		86	70 - 130	12	35
o-Xylene			0.100	0.08621		mg/Kg		86	70 - 130	9	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 890-2862-A-1-D MS
Matrix: Solid
Analysis Batch: 34151

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 34105

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U F1 F2	0.0998	0.03691	F1	mg/Kg		37	70 - 130
Toluene	<0.00199	U F1 F2	0.0998	0.03406	F1	mg/Kg		34	70 - 130
Ethylbenzene	<0.00199	U F1 F2	0.0998	0.02475	F1	mg/Kg		25	70 - 130
m-Xylene & p-Xylene	<0.00398	U F1 F2	0.200	0.03414	F1	mg/Kg		17	70 - 130
o-Xylene	<0.00199	U F1 F2	0.0998	0.01758	F1	mg/Kg		18	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*64*	*S1-*	*70 - 130*
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*

Lab Sample ID: 890-2862-A-1-E MSD
Matrix: Solid
Analysis Batch: 34151

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 34105

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U F1 F2	0.100	0.07171	F2	mg/Kg		71	70 - 130	64	35
Toluene	<0.00199	U F1 F2	0.100	0.07701	F2	mg/Kg		77	70 - 130	77	35
Ethylbenzene	<0.00199	U F1 F2	0.100	0.07436	F2	mg/Kg		74	70 - 130	100	35
m-Xylene & p-Xylene	<0.00398	U F1 F2	0.201	0.1307	F1 F2	mg/Kg		65	70 - 130	117	35
o-Xylene	<0.00199	U F1 F2	0.100	0.06968	F1 F2	mg/Kg		69	70 - 130	119	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

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

Lab Sample ID: MB 880-33656/1-A
Matrix: Solid
Analysis Batch: 33684

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 33656

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/02/22 15:07	09/03/22 10:57	1

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104

Job ID: 890-2875-1
SDG: 03E1558053

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

Lab Sample ID: MB 880-33656/1-A
Matrix: Solid
Analysis Batch: 33684

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 33656

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		09/02/22 15:07	09/03/22 10:57	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/02/22 15:07	09/03/22 10:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*91*		*70 - 130*	*09/02/22 15:07*	*09/03/22 10:57*	*1*
o-Terphenyl	*114*		*70 - 130*	*09/02/22 15:07*	*09/03/22 10:57*	*1*

Lab Sample ID: LCS 880-33656/2-A
Matrix: Solid
Analysis Batch: 33684

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 33656

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	894.9		mg/Kg		89	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1162		mg/Kg		116	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*114*		*70 - 130*
o-Terphenyl	*143*	*S1+*	*70 - 130*

Lab Sample ID: LCSD 880-33656/3-A
Matrix: Solid
Analysis Batch: 33684

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 33656

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	917.3		mg/Kg		92	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	1227		mg/Kg		123	70 - 130	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*114*		*70 - 130*
o-Terphenyl	*146*	*S1+*	*70 - 130*

Lab Sample ID: 890-2875-1 MS
Matrix: Solid
Analysis Batch: 33684

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 33656

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	834.8		mg/Kg		84	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	999	845.0		mg/Kg		82	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*86*		*70 - 130*
o-Terphenyl	*92*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104

Job ID: 890-2875-1
SDG: 03E1558053

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

Lab Sample ID: 890-2875-1 MSD — **Client Sample ID: FS01**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 33684 — **Prep Batch: 33656**

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	821.8		mg/Kg		82	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<49.9	U	998	840.0		mg/Kg		81	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*82*		*70 - 130*
o-Terphenyl	*91*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-33690/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 33886

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			09/07/22 16:56	1

Lab Sample ID: LCS 880-33690/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 33886

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	261.9		mg/Kg		105	90 - 110		

Lab Sample ID: LCSD 880-33690/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 33886

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	261.6		mg/Kg		105	90 - 110	0	20

Lab Sample ID: 890-2875-11 MS — **Client Sample ID: FS11**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 33886

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	2300		1240	3640		mg/Kg		108	90 - 110		

Lab Sample ID: 890-2875-11 MSD — **Client Sample ID: FS11**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 33886

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	2300		1240	3642		mg/Kg		108	90 - 110	0	20

QC Sample Results

Client: Ensolum
Project/Site: PLU 21 BD 104

Job ID: 890-2875-1
SDG: 03E1558053

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 880-33691/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 33933

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			09/09/22 02:38	1

Lab Sample ID: LCS 880-33691/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 33933

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

Lab Sample ID: LCSD 880-33691/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 33933

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	241.4		mg/Kg		97	90 - 110	0	20

Lab Sample ID: 890-2872-A-1-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 33933

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

Lab Sample ID: 890-2872-A-1-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 33933

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

Lab Sample ID: 890-2874-A-3-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 33933

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	541		251	769.3		mg/Kg		91	90 - 110		

Lab Sample ID: 890-2874-A-3-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 33933

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	541		251	768.7		mg/Kg		91	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 21 BD 104

Job ID: 890-2875-1
SDG: 03E1558053

GC VOA

Prep Batch: 34093

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-34093/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 34105

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2875-1	FS01	Total/NA	Solid	5035	
890-2875-2	FS02	Total/NA	Solid	5035	
890-2875-3	FS03	Total/NA	Solid	5035	
890-2875-4	FS04	Total/NA	Solid	5035	
890-2875-5	FS05	Total/NA	Solid	5035	
890-2875-6	FS06	Total/NA	Solid	5035	
890-2875-7	FS07	Total/NA	Solid	5035	
890-2875-8	FS08	Total/NA	Solid	5035	
890-2875-9	FS09	Total/NA	Solid	5035	
890-2875-10	FS10	Total/NA	Solid	5035	
890-2875-11	FS11	Total/NA	Solid	5035	
MB 880-34105/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-34105/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-34105/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2862-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
890-2862-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 34151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2875-1	FS01	Total/NA	Solid	8021B	34105
890-2875-2	FS02	Total/NA	Solid	8021B	34105
890-2875-3	FS03	Total/NA	Solid	8021B	34105
890-2875-4	FS04	Total/NA	Solid	8021B	34105
890-2875-5	FS05	Total/NA	Solid	8021B	34105
890-2875-6	FS06	Total/NA	Solid	8021B	34105
890-2875-7	FS07	Total/NA	Solid	8021B	34105
890-2875-8	FS08	Total/NA	Solid	8021B	34105
890-2875-9	FS09	Total/NA	Solid	8021B	34105
890-2875-10	FS10	Total/NA	Solid	8021B	34105
890-2875-11	FS11	Total/NA	Solid	8021B	34105
MB 880-34093/5-A	Method Blank	Total/NA	Solid	8021B	34093
MB 880-34105/5-A	Method Blank	Total/NA	Solid	8021B	34105
LCS 880-34105/1-A	Lab Control Sample	Total/NA	Solid	8021B	34105
LCSD 880-34105/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	34105
890-2862-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	34105
890-2862-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	34105

Analysis Batch: 34258

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2875-1	FS01	Total/NA	Solid	Total BTEX	
890-2875-2	FS02	Total/NA	Solid	Total BTEX	
890-2875-3	FS03	Total/NA	Solid	Total BTEX	
890-2875-4	FS04	Total/NA	Solid	Total BTEX	
890-2875-5	FS05	Total/NA	Solid	Total BTEX	
890-2875-6	FS06	Total/NA	Solid	Total BTEX	
890-2875-7	FS07	Total/NA	Solid	Total BTEX	
890-2875-8	FS08	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Ensolum
Project/Site: PLU 21 BD 104

Job ID: 890-2875-1
SDG: 03E1558053

GC VOA (Continued)

Analysis Batch: 34258 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2875-9	FS09	Total/NA	Solid	Total BTEX	
890-2875-10	FS10	Total/NA	Solid	Total BTEX	
890-2875-11	FS11	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 33656

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2875-1	FS01	Total/NA	Solid	8015NM Prep	
890-2875-2	FS02	Total/NA	Solid	8015NM Prep	
890-2875-3	FS03	Total/NA	Solid	8015NM Prep	
890-2875-4	FS04	Total/NA	Solid	8015NM Prep	
890-2875-5	FS05	Total/NA	Solid	8015NM Prep	
890-2875-6	FS06	Total/NA	Solid	8015NM Prep	
890-2875-7	FS07	Total/NA	Solid	8015NM Prep	
890-2875-8	FS08	Total/NA	Solid	8015NM Prep	
890-2875-9	FS09	Total/NA	Solid	8015NM Prep	
890-2875-10	FS10	Total/NA	Solid	8015NM Prep	
890-2875-11	FS11	Total/NA	Solid	8015NM Prep	
MB 880-33656/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-33656/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-33656/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2875-1 MS	FS01	Total/NA	Solid	8015NM Prep	
890-2875-1 MSD	FS01	Total/NA	Solid	8015NM Prep	

Analysis Batch: 33684

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2875-1	FS01	Total/NA	Solid	8015B NM	33656
890-2875-2	FS02	Total/NA	Solid	8015B NM	33656
890-2875-3	FS03	Total/NA	Solid	8015B NM	33656
890-2875-4	FS04	Total/NA	Solid	8015B NM	33656
890-2875-5	FS05	Total/NA	Solid	8015B NM	33656
890-2875-6	FS06	Total/NA	Solid	8015B NM	33656
890-2875-7	FS07	Total/NA	Solid	8015B NM	33656
890-2875-8	FS08	Total/NA	Solid	8015B NM	33656
890-2875-9	FS09	Total/NA	Solid	8015B NM	33656
890-2875-10	FS10	Total/NA	Solid	8015B NM	33656
890-2875-11	FS11	Total/NA	Solid	8015B NM	33656
MB 880-33656/1-A	Method Blank	Total/NA	Solid	8015B NM	33656
LCS 880-33656/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	33656
LCSD 880-33656/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	33656
890-2875-1 MS	FS01	Total/NA	Solid	8015B NM	33656
890-2875-1 MSD	FS01	Total/NA	Solid	8015B NM	33656

Analysis Batch: 33811

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2875-1	FS01	Total/NA	Solid	8015 NM	
890-2875-2	FS02	Total/NA	Solid	8015 NM	
890-2875-3	FS03	Total/NA	Solid	8015 NM	
890-2875-4	FS04	Total/NA	Solid	8015 NM	
890-2875-5	FS05	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: PLU 21 BD 104

Job ID: 890-2875-1
SDG: 03E1558053

GC Semi VOA (Continued)

Analysis Batch: 33811 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2875-6	FS06	Total/NA	Solid	8015 NM	
890-2875-7	FS07	Total/NA	Solid	8015 NM	
890-2875-8	FS08	Total/NA	Solid	8015 NM	
890-2875-9	FS09	Total/NA	Solid	8015 NM	
890-2875-10	FS10	Total/NA	Solid	8015 NM	
890-2875-11	FS11	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 33690

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2875-9	FS09	Soluble	Solid	DI Leach	
890-2875-10	FS10	Soluble	Solid	DI Leach	
890-2875-11	FS11	Soluble	Solid	DI Leach	
MB 880-33690/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-33690/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-33690/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2875-11 MS	FS11	Soluble	Solid	DI Leach	
890-2875-11 MSD	FS11	Soluble	Solid	DI Leach	

Leach Batch: 33691

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2875-1	FS01	Soluble	Solid	DI Leach	
890-2875-2	FS02	Soluble	Solid	DI Leach	
890-2875-3	FS03	Soluble	Solid	DI Leach	
890-2875-4	FS04	Soluble	Solid	DI Leach	
890-2875-5	FS05	Soluble	Solid	DI Leach	
890-2875-6	FS06	Soluble	Solid	DI Leach	
890-2875-7	FS07	Soluble	Solid	DI Leach	
890-2875-8	FS08	Soluble	Solid	DI Leach	
MB 880-33691/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-33691/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-33691/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2872-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2872-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
890-2874-A-3-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2874-A-3-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 33886

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2875-9	FS09	Soluble	Solid	300.0	33690
890-2875-10	FS10	Soluble	Solid	300.0	33690
890-2875-11	FS11	Soluble	Solid	300.0	33690
MB 880-33690/1-A	Method Blank	Soluble	Solid	300.0	33690
LCS 880-33690/2-A	Lab Control Sample	Soluble	Solid	300.0	33690
LCSD 880-33690/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	33690
890-2875-11 MS	FS11	Soluble	Solid	300.0	33690
890-2875-11 MSD	FS11	Soluble	Solid	300.0	33690

QC Association Summary

Client: Ensolum
Project/Site: PLU 21 BD 104

Job ID: 890-2875-1
SDG: 03E1558053

HPLC/IC

Analysis Batch: 33933

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2875-1	FS01	Soluble	Solid	300.0	33691
890-2875-2	FS02	Soluble	Solid	300.0	33691
890-2875-3	FS03	Soluble	Solid	300.0	33691
890-2875-4	FS04	Soluble	Solid	300.0	33691
890-2875-5	FS05	Soluble	Solid	300.0	33691
890-2875-6	FS06	Soluble	Solid	300.0	33691
890-2875-7	FS07	Soluble	Solid	300.0	33691
890-2875-8	FS08	Soluble	Solid	300.0	33691
MB 880-33691/1-A	Method Blank	Soluble	Solid	300.0	33691
LCS 880-33691/2-A	Lab Control Sample	Soluble	Solid	300.0	33691
LCSD 880-33691/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	33691
890-2872-A-1-C MS	Matrix Spike	Soluble	Solid	300.0	33691
890-2872-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	33691
890-2874-A-3-C MS	Matrix Spike	Soluble	Solid	300.0	33691
890-2874-A-3-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	33691

Lab Chronicle

Client: Ensolum
Project/Site: PLU 21 BD 104

Job ID: 890-2875-1
SDG: 03E1558053

Client Sample ID: FS01

Lab Sample ID: 890-2875-1
Matrix: Solid
Date Collected: 08/31/22 12:30
Date Received: 09/01/22 09:21

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	34105	09/09/22 12:34	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34151	09/11/22 07:38	MR	EET MID
Total/NA	Analysis	Total BTEX		1			34258	09/12/22 10:03	AJ	EET MID
Total/NA	Analysis	8015 NM		1			33811	09/06/22 09:47	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	33656	09/02/22 15:07	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33684	09/03/22 12:01	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	33691	09/03/22 13:12	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	33933	09/09/22 03:54	CH	EET MID

Client Sample ID: FS02

Lab Sample ID: 890-2875-2
Matrix: Solid
Date Collected: 08/31/22 12:35
Date Received: 09/01/22 09:21

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	34105	09/09/22 12:34	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34151	09/11/22 07:58	MR	EET MID
Total/NA	Analysis	Total BTEX		1			34258	09/12/22 10:03	AJ	EET MID
Total/NA	Analysis	8015 NM		1			33811	09/06/22 09:47	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	33656	09/02/22 15:07	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33684	09/03/22 13:05	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	33691	09/03/22 13:12	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	33933	09/09/22 04:09	CH	EET MID

Client Sample ID: FS03

Lab Sample ID: 890-2875-3
Matrix: Solid
Date Collected: 08/31/22 12:40
Date Received: 09/01/22 09:21

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	34105	09/09/22 12:34	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34151	09/11/22 08:19	MR	EET MID
Total/NA	Analysis	Total BTEX		1			34258	09/12/22 10:03	AJ	EET MID
Total/NA	Analysis	8015 NM		1			33811	09/06/22 09:47	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	33656	09/02/22 15:07	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33684	09/03/22 13:25	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	33691	09/03/22 13:12	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	33933	09/09/22 04:14	CH	EET MID

Client Sample ID: FS04

Lab Sample ID: 890-2875-4
Matrix: Solid
Date Collected: 08/31/22 12:45
Date Received: 09/01/22 09:21

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	34105	09/09/22 12:34	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34151	09/11/22 08:39	MR	EET MID
Total/NA	Analysis	Total BTEX		1			34258	09/12/22 10:03	AJ	EET MID

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Lab Chronicle

Client: Ensolum
Project/Site: PLU 21 BD 104

Job ID: 890-2875-1
SDG: 03E1558053

Client Sample ID: FS04
Date Collected: 08/31/22 12:45
Date Received: 09/01/22 09:21

Lab Sample ID: 890-2875-4
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			33811	09/06/22 09:47	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	33656	09/02/22 15:07	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33684	09/03/22 13:45	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	33691	09/03/22 13:12	KS	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	33933	09/09/22 04:18	CH	EET MID

Client Sample ID: FS05
Date Collected: 08/31/22 12:50
Date Received: 09/01/22 09:21

Lab Sample ID: 890-2875-5
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			4.95 g	5 mL	34105	09/09/22 12:34	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34151	09/11/22 09:00	MR	EET MID
Total/NA	Analysis	Total BTEX		1			34258	09/12/22 10:03	AJ	EET MID
Total/NA	Analysis	8015 NM		1			33811	09/06/22 09:47	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	33656	09/02/22 15:07	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33684	09/03/22 14:06	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	33691	09/03/22 13:12	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	33933	09/09/22 04:23	CH	EET MID

Client Sample ID: FS06
Date Collected: 08/31/22 12:55
Date Received: 09/01/22 09:21

Lab Sample ID: 890-2875-6
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			5.01 g	5 mL	34105	09/09/22 12:34	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34151	09/11/22 10:49	MR	EET MID
Total/NA	Analysis	Total BTEX		1			34258	09/12/22 10:03	AJ	EET MID
Total/NA	Analysis	8015 NM		1			33811	09/06/22 09:47	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	33656	09/02/22 15:07	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33684	09/03/22 14:26	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	33691	09/03/22 13:12	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	33933	09/09/22 04:28	CH	EET MID

Client Sample ID: FS07
Date Collected: 08/31/22 13:00
Date Received: 09/01/22 09:21

Lab Sample ID: 890-2875-7
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			5.03 g	5 mL	34105	09/09/22 12:34	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34151	09/11/22 11:10	MR	EET MID
Total/NA	Analysis	Total BTEX		1			34258	09/12/22 10:03	AJ	EET MID
Total/NA	Analysis	8015 NM		1			33811	09/06/22 09:47	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	33656	09/02/22 15:07	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33684	09/03/22 14:46	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: PLU 21 BD 104

Job ID: 890-2875-1
SDG: 03E1558053

Client Sample ID: FS07

Date Collected: 08/31/22 13:00
Date Received: 09/01/22 09:21

Lab Sample ID: 890-2875-7
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			4.97 g	50 mL	33691	09/03/22 13:12	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	33933	09/09/22 04:33	CH	EET MID

Client Sample ID: FS08

Date Collected: 08/31/22 13:05
Date Received: 09/01/22 09:21

Lab Sample ID: 890-2875-8
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			4.99 g	5 mL	34105	09/09/22 12:34	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34151	09/11/22 11:30	MR	EET MID
Total/NA	Analysis	Total BTEX		1			34258	09/12/22 10:03	AJ	EET MID
Total/NA	Analysis	8015 NM		1			33811	09/06/22 09:47	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	33656	09/02/22 15:07	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33684	09/03/22 15:06	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	33691	09/03/22 13:12	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	33933	09/09/22 08:53	CH	EET MID

Client Sample ID: FS09

Date Collected: 08/31/22 13:10
Date Received: 09/01/22 09:21

Lab Sample ID: 890-2875-9
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	34105	09/09/22 12:34	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34151	09/11/22 11:50	MR	EET MID
Total/NA	Analysis	Total BTEX		1			34258	09/12/22 10:03	AJ	EET MID
Total/NA	Analysis	8015 NM		1			33811	09/06/22 09:47	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	33656	09/02/22 15:07	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33684	09/03/22 15:27	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	33690	09/03/22 13:21	KS	EET MID
Soluble	Analysis	300.0		10			33886	09/07/22 18:38	CH	EET MID

Client Sample ID: FS10

Date Collected: 08/31/22 13:15
Date Received: 09/01/22 09:21

Lab Sample ID: 890-2875-10
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	34105	09/09/22 12:34	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34151	09/11/22 12:11	MR	EET MID
Total/NA	Analysis	Total BTEX		1			34258	09/12/22 10:03	AJ	EET MID
Total/NA	Analysis	8015 NM		1			33811	09/06/22 09:47	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	33656	09/02/22 15:07	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33684	09/03/22 15:47	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	33690	09/03/22 13:21	KS	EET MID
Soluble	Analysis	300.0		1			33886	09/07/22 18:43	CH	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: PLU 21 BD 104

Job ID: 890-2875-1
SDG: 03E1558053

Client Sample ID: FS11

Date Collected: 08/31/22 13:20
Date Received: 09/01/22 09:21

Lab Sample ID: 890-2875-11

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	34105	09/09/22 12:34	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34151	09/11/22 12:31	MR	EET MID
Total/NA	Analysis	Total BTEX		1			34258	09/12/22 10:03	AJ	EET MID
Total/NA	Analysis	8015 NM		1			33811	09/06/22 09:47	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	33656	09/02/22 15:07	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33684	09/03/22 16:27	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	33690	09/03/22 13:21	KS	EET MID
Soluble	Analysis	300.0		5			33886	09/07/22 18:48	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: PLU 21 BD 104

Job ID: 890-2875-1
SDG: 03E1558053

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 21 BD 104

Job ID: 890-2875-1
SDG: 03E1558053

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	MCAWW	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: PLU 21 BD 104

Job ID: 890-2875-1
SDG: 03E1558053

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2875-1	FS01	Solid	08/31/22 12:30	09/01/22 09:21	1
890-2875-2	FS02	Solid	08/31/22 12:35	09/01/22 09:21	1
890-2875-3	FS03	Solid	08/31/22 12:40	09/01/22 09:21	1
890-2875-4	FS04	Solid	08/31/22 12:45	09/01/22 09:21	1
890-2875-5	FS05	Solid	08/31/22 12:50	09/01/22 09:21	1
890-2875-6	FS06	Solid	08/31/22 12:55	09/01/22 09:21	1
890-2875-7	FS07	Solid	08/31/22 13:00	09/01/22 09:21	1
890-2875-8	FS08	Solid	08/31/22 13:05	09/01/22 09:21	1
890-2875-9	FS09	Solid	08/31/22 13:10	09/01/22 09:21	1
890-2875-10	FS10	Solid	08/31/22 13:15	09/01/22 09:21	1
890-2875-11	FS11	Solid	08/31/22 13:20	09/01/22 09:21	1

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Ben Belill	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 21 BD 104	Turn Around	
Project Number:	03E1558053	☑ Routine ☐ Rush	
Project Location:	32.10990, -103.88862	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:	Thm007
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	8/31/2022	12:30	1'				x	x	x
FS02	S	8/31/2022	12:35	1'				x	x	x
FS03	S	8/31/2022	12:40	1'				x	x	x
FS04	S	8/31/2022	12:45	1'				x	x	x
FS05	S	8/31/2022	12:50	1'				x	x	x
FS06	S	8/31/2022	12:55	1'				x	x	x
FS07	S	8/31/2022	13:00	1'				x	x	x
FS08	S	8/31/2022	13:05	1'				x	x	x
FS09	S	8/31/2022	13:10	1'				x	x	x
FS10	S	8/31/2022	13:15	1'				x	x	x

ANALYSIS REQUEST

890-2875 Chain of Custody

Sample Comments

Incident ID: nAPP2210942764
Cost Center: 1666351001
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			9.1.22 921	2		
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Ben Belill	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 21 BD 104	Turn Around	
Project Number:	03E1558053	☑ Routine ☐ Rush	
Project Location:	32.10990, -103.88862	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:	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	
Total Containers:		Corrected Temperature:	

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
FS11	S	8/31/2022	13:20	1'				x	x	x

Parameters

Sample Comments

Incident ID: nAPP2210942764
Cost Center: 1666351001
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		9-1-22 9:21	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020 2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2875-1
SDG Number: 03E1558053

Login Number: 2875
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: 890-2875-1
SDG Number: 03E1558053

Login Number: 2875
List Number: 2
Creator: Rodriguez, Leticia

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

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

ENSOLUM

APPENDIX E

NMOCD Notifications

From: Green, Garrett J
To: ocd.enviro@state.nm.us; mike.bratcher@state.nm.us; Hamlet, Robert, EMNRD
Cc: Tacoma Morrissey
Subject: XTO - Sampling Notification (Week of 8/29/22 - 9/2/22)
Date: Friday, August 26, 2022 3:15:37 PM

[**EXTERNAL EMAIL**]

All,

XTO plans to complete final sampling activities at the following sites the week of August 29, 2022.

Monday
- Brushy Draw West 25 / nAPP2216138431
- Big Sinks 2-24-30 / nAPP2219644709 & nAPP2220224382

Tuesday
- Brushy Draw West 25 / nAPP2216138431
- PLU 21 BD 123-124 & 104 / nAPP2211651017, nAPP2211151438, nAPP2210942764, & nAPP2209736479
- ADU 816/ NAB1435334641

Wednesday
- Brushy Draw West 25 / nAPP2216138431
- PLU 21 BD 123-124 & 104 / nAPP2211651017, nAPP2211151438, nAPP2210942764, & nAPP2209736479
- ADU 816/ NAB1435334641
- PLU Pierce Canyon 12 / nAPP2222044186

Thursday
- PLU 21 BD 123-124 & 104 / nAPP2211651017, nAPP2211151438, nAPP2210942764, & nAPP2209736479
- JRU DI2/ nAPP2211654411 & nAPP2208349430

Friday
- PLU 21 BD 123-124 & 104 / nAPP2211651017, nAPP2211151438, nAPP2210942764, & nAPP2209736479
- PLU S Frac Pond / nAPP2211150068

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:	Collins, Melanie
To:	DelawareSpills /SM
Cc:	Aimee Cole; Ben Belill
Subject:	FW: (Extension Approval) - PLU 21 BD 104H(2), 123H and 124H / nAPP22097363379, nAPP2210942764, nAPP221651017, nAPP2211151438
Date:	Thursday, June 23, 2022 4:38:46 PM
Attachments:	image002.png

[**EXTERNAL EMAIL**]

From: Hamlet, Robert, EMNRD [mailto:Robert.Hamlet@state.nm.us]
Sent: Thursday, June 23, 2022 3:27 PM
To: Collins, Melanie <melanie.collins@exxonmobil.com>
Subject: (Extension Approval) - PLU 21 BD 104H(2), 123H and 124H / nAPP22097363379, nAPP2210942764, nAPP221651017, nAPP2211151438

External Email – Think Before You Click

RE: Incident **#NAPP2209736479, NAPP2210942764, NAPP221651017, NAPP2211151438**

Melanie,

Your request for an extension to **September 21st, 2022** is approved. Please include this e-mail correspondence in the remediation and/or closure report.

Robert Hamlet ● Environmental Specialist - Advanced
Environmental Bureau
EMNRD - Oil Conservation Division
811 S. First Street | Artesia, NM 88210
575.909.0302 | robert.hamlet@state.nm.us
http://www.emnrd.state.nm.us/OCD/

From: Collins, Melanie <melanie.collins@exxonmobil.com>
Sent: Thursday, June 23, 2022 2:15 PM
To: Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>
Subject: RE: [EXTERNAL] XTO - Extension Request - PLU 21 BD 104H(2), 123H and 124H / nAPP22097363379, nAPP2210942764, nAPP221651017, nAPP2211151438

My apologies for that. The correct incident number for the 3/25/2022 spill should be nAPP2209736479.

Thank you,
Melanie Collins

From: Hamlet, Robert, EMNRD [mailto:Robert.Hamlet@state.nm.us]
Sent: Thursday, June 23, 2022 3:11 PM
To: Collins, Melanie <melanie.collins@exxonmobil.com>
Subject: RE: [EXTERNAL] XTO - Extension Request - PLU 21 BD 104H(2), 123H and 124H / nAPP22097363379, nAPP2210942764, nAPP221651017, nAPP2211151438

External Email – Think Before You Click

Melanie,

The incident nAPP22097363379 has one too many numbers. What's the correct incident number?
Thanks

Robert Hamlet ● Environmental Specialist - Advanced
Environmental Bureau
EMNRD - Oil Conservation Division
811 S. First Street | Artesia, NM 88210
575.909.0302 | robert.hamlet@state.nm.us
http://www.emnrd.state.nm.us/OCD/

From: Collins, Melanie <melanie.collins@exxonmobil.com>
Sent: Thursday, June 23, 2022 7:46 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>
Cc: Pennington, Shelby G <shelby.g.pennington@exxonmobil.com>; DelawareSpills /SM <DelawareSpills@exxonmobil.com>; acole@ensolum.com; bbelill@ensolum.com
Subject: [EXTERNAL] XTO - Extension Request - PLU 21 BD 104H(2), 123H and 124H / nAPP22097363379, nAPP2210942764, nAPP221651017, nAPP2211151438

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

All,

XTO - Extension Request - PLU 21 BD 104H(2), 123H and 124H / nAPP22097363379, nAPP2210942764, nAPP221651017, nAPP2211151438

XTO is requesting an extension of the current deadlines of June 23, 2022, July 4, 2022, July 7, 2022, and July 14, 2022, for submitting a remediation work plan or closure report required in 19.15.29.12.B.(1) NMAC for the Poker Lake Unit 21 BD 104H(2), 124H, and 123H (Incident Numbers nAPP22097363379, nAPP2210942764, nAPP2211151438 and nAPP221651017). The four releases are located on the same well pad and occurred during frac operations on March 25, 2022, April 5, 2022, April 8, 2022, and April 15, 2022, respectively. Initial assessment of the release areas has been completed, however; remediation work could not begin until frac operations were complete. XTO operations provided notification that the pad was clear, and additional site assessment was completed on June 17, 2022. Based on the most recent analytical results, additional remediation activities are required. In order to complete the remediation activities and submit a remediation work plan or closure request, XTO is requesting a 90-day extension until September 21, 2022.

Thank you,

Melanie Collins

XTO ENERGY

Environmental Technician

melanie.collins@exxonmobil.com

432-556-3756

ENSOLUM

APPENDIX F

Friction Reducer SDS

ENSOLUM

APPENDIX F

Friction Reducer Safety Data Sheet

PFP INDUSTRIES

SAFETY DATA SHEET

Issuing Date 01-Aug-2019 **Revision Date** 01-Aug-2019 **Revision Number** 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name POLYglide Xcel-200

Other means of identification

Product Code(s) 10497

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use No information available

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Address
PfP Industries
29738 Goynes Rd.
Katy, TX 77493

Manufacturer Address
PfP Industries
29738 Goynes Rd.
Katy, TX 77493

Emergency telephone number

Company Phone Number 281-371-2000

Emergency Telephone Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids	Category 4

Hazards not otherwise classified (HNOC)
Not applicable

Label elements

Warning

Combustible liquid

Appearance Opaque **Physical state** Liquid **Odor** Mineral Oil

Precautionary Statements - Prevention
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

In case of fire: Use CO2, dry chemical, or foam for extinction

Precautionary Statements - Storage
Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Other Information
May be harmful in contact with skin
Harmful to aquatic life

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Chemical name	CAS No	Weight-%	Trade secret
Petroleum distillates, hydrotreated light	64742-47-8	40 - 70	

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

Inhalation Remove to fresh air.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Ingestion Clean mouth with water and drink afterwards plenty of water.

Self-protection of the first aider Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Dry chemical. Carbon dioxide (CO2). Water spray. Alcohol resistant foam.

Unsuitable extinguishing media CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Take precautionary measures against static discharges. Do not touch or walk through spilled material.

Environmental precautions

Environmental precautions Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Do not touch or walk through spilled material. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use personal protection equipment. Do not breathe vapor or mist. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Use with local exhaust ventilation.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Store in accordance with the particular national regulations. Store in accordance with local regulations.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles.

Skin and body protection No special protective equipment required.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Opaque
Color	Milky white to yellow
Odor	Mineral Oil
Odor threshold	No information available

Property	Values	Remarks • Method
pH	No data available	None known
Melting point / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash point	>= 67 °C / 153 °F	
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability limit:	No data available	
Lower flammability limit:	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	0.97 - 1.03	
Water solubility	Miscible in water	
Solubility in other solvents	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	≥150 mm²/s	
Dynamic viscosity	No data available	None known
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Liquid Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	Specific test data for the substance or mixture is not available.
Ingestion	Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Numerical measures of toxicity

Acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document.

ATEmix (oral)	5,005.00 mg/kg
ATEmix (dermal)	2,002.00 mg/kg
ATEmix (inhalation-dust/mist)	5.20 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Petroleum distillates, hydrotreated light 64742-47-8	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.2 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Petroleum distillates, hydrotreated light 64742-47-8	-	2.4: 96 h Oncorhynchus mykiss mg/L LC50 static 45: 96 h Pimephales promelas mg/L LC50 flow-through 2.2: 96 h Lepomis macrochirus mg/L LC50 static	-	4720: 96 h Den-dronereides heteropoda mg/L LC50

Persistence and degradability No information available.

Bioaccumulation There is no data for this product.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

14. TRANSPORT INFORMATION

DOT Not regulated. Product does not sustain combustion (49 CFR 173.120(b)(3))

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Does not comply
IECSC	Complies
KECL	Complies

PICCS	Complies
AICS	Complies

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	Yes
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

US State Regulations This product does not contain any substances regulated by state right-to-know regulations

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	Health hazards	2	Flammability	2	Instability	0	Physical and chemical properties -
HMIS	Health hazards	2	Flammability	2	Physical hazards	0	Personal protection X

Issuing Date	01-Aug-2019
Revision Date	01-Aug-2019
Revision Note	No information available.

Disclaimer

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End of Safety Data Sheet

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

CONDITIONS

Action 145405

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 145405
	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 #NAPP2210942764 PLU 21 BRUSHY DRAW 104H, thank you. This closure is approved.	12/13/2022