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	NAPP2205641685
District RP	
Facility ID	
Application ID	

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 32.20882 Longitude -103.77076
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Poker Lake Unit 15 Twin Wells Ranch	Site Type Tank Battery
Date Release Discovered 02/11/2022	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
D	22	24S	31E	Eddy

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 27.30	Volume Recovered (bbls) 21.50
☐ 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)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: An open line on the bottom of the inlet filter pot overflowed the LACT skid into containment and onto pad. Vacuum trucks recovered free fluids. A third-party contractor has been retained for remediation purposes.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2205641685
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? A release equal to or greater than 25 barrels.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Yes, by Adrian Baker to ocd.enviro@state.nm.us; Hamlet, Robert, EMNRD; Bratcher, Mike, EMNRD on Saturday, February 12, 2022 1:42 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: Adrian Baker
Title: SSHE Coordinator
Signature:
Date: 2/25/22
email: adrian.baker@exxonmobil.com
Telephone: 432-236-3808

OCD Only

Received by: Ramona Marcus
Date: 3/1/2022

Location:	Poker Lake TWR Battery	
Spill Date:	2/11/2022	
Area 1		
Approximate Area =	2481.40	sq. ft.
Average Saturation (or depth) of spill =	5.25	inches
Average Porosity Factor =	0.03	
VOLUME OF LEAK		
Total Crude Oil =	27.30	bbls
Total Produced Water =	0.00	bbls
TOTAL VOLUME OF LEAK		
Total Crude Oil =	**27.30**	**bbls**
Total Produced Water =	**0.00**	**bbls**
TOTAL VOLUME RECOVERED		
Total Crude Oil =	**21.50**	**bbls**
Total Produced Water =	**0.00**	**bbls**

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2205641685
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2205641685
District RP	
Facility ID	
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I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: _Garrett Green_____ Title: _Environmental Coordinator_____

Signature:_____ Date: ____08/10/2022_____

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

OCD Only

Received by: Jocelyn Harimon Date: 08/10/2022

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2205641685
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: __08/10/2022_____

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

OCD Only

Received by: Jocelyn Harimon Date: 08/10/2022

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: Jennifer Nobui Date: 09/20/2022

Printed Name: Jennifer Nobui Title: Environmental Specialist A

August 10, 2022

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

Re: Closure Request
Poker Lake Unit 15 Twin Wells Ranch
Incident Number NAPP2205641685
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 Poker Lake Unit 15 Twin Wells Ranch (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 crude oil into a lined containment and onto the well pad. Based on field observations, field screening activities, and soil sample laboratory analytical results, XTO is submitting this Closure Request, describing site assessment, excavation, and delineation activities that have occurred and requesting no further action for Incident Number NAPP2205641685.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit D, Section 22, Township 24 South, Range 31 East, in Eddy County, New Mexico (32.20882° N, 103.77076°W) and is associated with oil and gas exploration and production operations on Bureau of Land Management (BLM) Federal Land.

On February 11, 2022, an open line on the bottom of the inlet filter pot overflowed the Lease Automatic Custody Transfer (LACT) skid, resulting in the release of approximately 27.3 barrels (bbls) of crude oil into the lined containment and onto the pad. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; 21.50 bbls of released crude oil were recovered. XTO reported the release to the NMOCD via email on February 12, 2022 and submitted a Release Notification Form C-141 (Form C-141) on February 25, 2022. The release was assigned Incident Number NAPP2205641685.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

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

Depth to groundwater at the Site is greater than 100 feet below ground surface (bgs) based on a recent soil boring drilled for determination of regional groundwater depth. On December 29, 2020, a soil boring

(C-4508) was drilled 0.3 miles southeast of the Site utilizing a track-mounted hollow-stem auger rig. Soil boring C-4508 was drilled to a depth of 111 feet bgs. A field geologist logged and described soils continuously. No moisture or groundwater was encountered during drilling activites. The borehole was left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period without observing groundwater, it was confirmed that groundwater beneath the Site is greater than 111 feet bgs. The borehole was properly abandoned with drill cuttings and hydrated bentonite chips. All wells used to determing depth to groundwater are depicted on Figure 1. The Well Record and Log is included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is an intermittent dry wash, located approximately 14,830 feet northwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

Based on the results of the Site Characterization, the following NMOCD Table 1 Closure Criteria (Closure Criteria) apply:

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

SITE ASSESSMENT ACTIVITIES

On April 18, 2022, Ensolum personnel visited the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. Seven preliminary soil samples (SS01 through SS07) were collected within the release extent from a depth of approximately 0.25 feet bgs to assess the lateral extent of the impacted 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 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 (COC) procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Laboratory analytical results for preliminary soil samples SS01 through SS03 indicated that BTEX, TPH-GRO/TPH-DRO, and TPH concentrations exceeded the Closure Criteria. Based on visible staining in the release area, elevated field screening results, and laboratory analytical results for the preliminary soil samples, excavation and delineation activities were warranted.

A 48-hour advance notice of liner inspection was provided via email to the New Mexico Oil Conservation Division (NMOCD) District II office. A liner integrity inspection was conducted by Ensolum personnel on July 14, 2022 to evaluate the potential of any release of fluids that accumulated in containment. The liner was determined to be in good working condition. Photo documentation was conducted during the liner inspection and a photographic log is included in Appendix B.

DELINEATION AND EXCAVATION SOIL SAMPLING ACTIVITIES

Between July 13, 2022 and July 18, 2022, Ensolum personnel were at the Site to oversee delineation and excavation activities. Borehole, BH01 and potholes PH01 through PH06 were advanced via hand auger, hydrovac, and backhoe to a depth of 3 feet bgs within and around the release extent, to assess the lateral and vertical extent of the release. Delineation soil samples were collected from each pothole at depths ranging from 0.5 feet to 3 feet bgs. Soil from the delineation borehole and potholes was field screened for volatile aromatic hydrocarbons and chloride using a PID and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations for the borehole and 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 3.

Laboratory analytical results for delineation soil sample PH03 at 1 foot bgs indicated that TPH-GRO/TPH-DRO and TPH concentrations exceeded the Closure Criteria. Laboratory analytical results for all other delineation soil samples indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations are compliant with the Closure Criteria. Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included in Appendix D.

Impacted soil was excavated from the release area as indicated by visible staining, field screening activities, and laboratory analytical results for the preliminary soil samples. Excavation activities were performed using a backhoe, transport vehicle, and hydrovac. The excavation occurred on the well pad near the production equipment. To direct excavation activities, Ensolum personnel screened soil for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively.

Following removal of impacted soil to the extent possible, Ensolum personnel collected 5-point composite soil samples representing at least 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 FS07 were collected from the floor of the excavation from depths ranging from of 2 feet bgs to 4 feet bgs. Composite soil samples SW01 and SW05 were collected from the sidewalls of the excavation at depths ranging from the ground surface to 4 feet bgs. 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 4.

The final excavation extent measured approximately 1,375 square feet. A total of approximately 200 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Facility in Carlsbad, New Mexico. After completion of confirmation sampling, the excavation areas were secured with fencing.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for the excavation floor soil samples FS01 through FS07 and sidewall soil samples SW01 through SW05, collected at depths ranging from ground surface to 4 feet bgs indicated that benzene, BTEX, TPH-DRO/TPH-GRO, TPH, and chloride concentrations were compliant with the

Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix D.

CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the February 11, 2022, release of crude oil. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria. Based on the soil sample analytical results, no further remediation was required. XTO will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions.

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 NAPP2205641685.

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

Sincerely,
Ensolum, LLC

Tacoma Morrissey
Senior Geologist

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

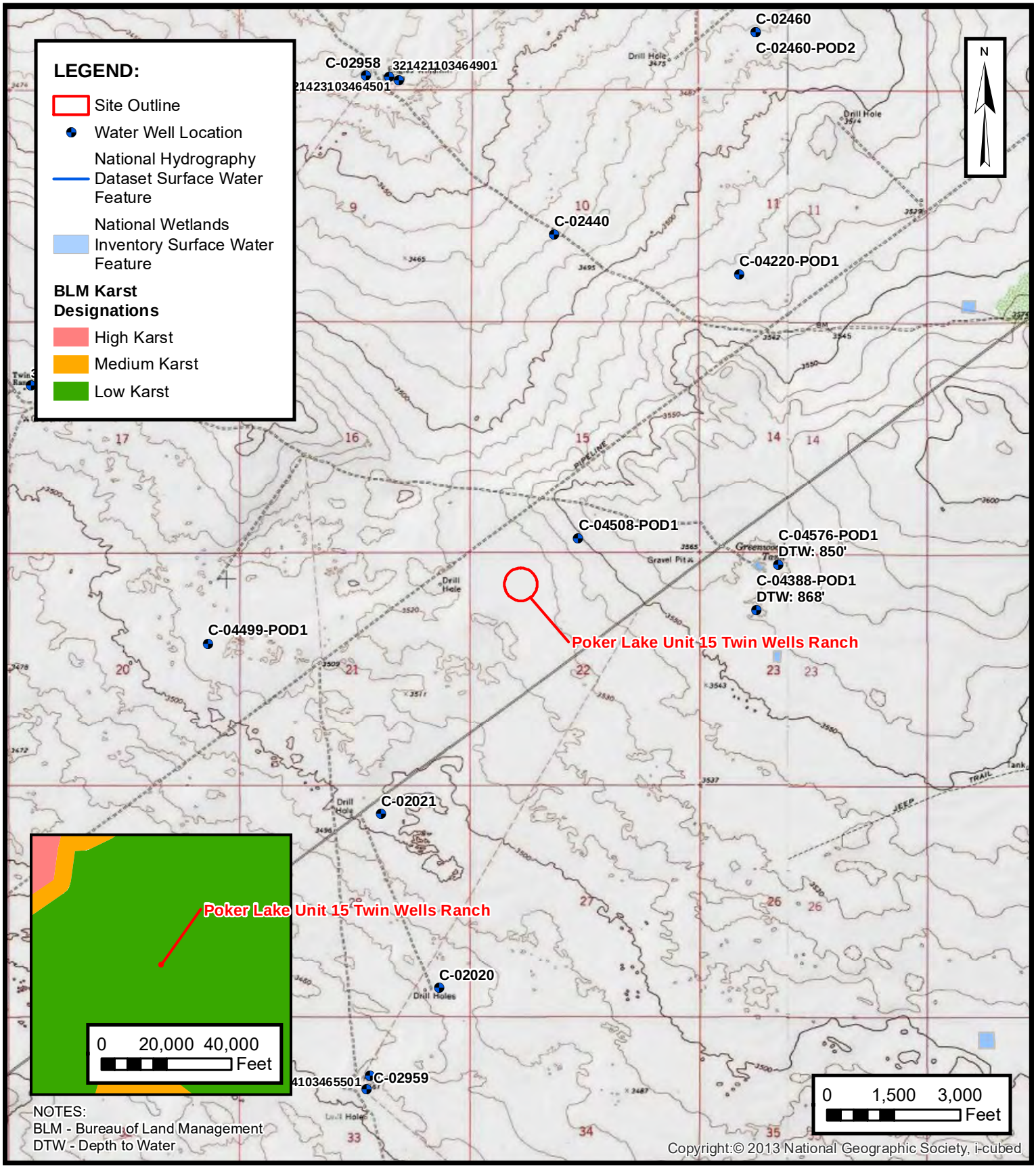
cc: Garrett Green, XTO
Shelby Pennington, XTO
Bureau of Land Management

Appendices:

Figure 1	Site Receptor Map
Figure 2	Preliminary Soil Sample Locations
Figure 3	Delineation Soil Sample Locations
Figure 4	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

ENSOLUM

FIGURES



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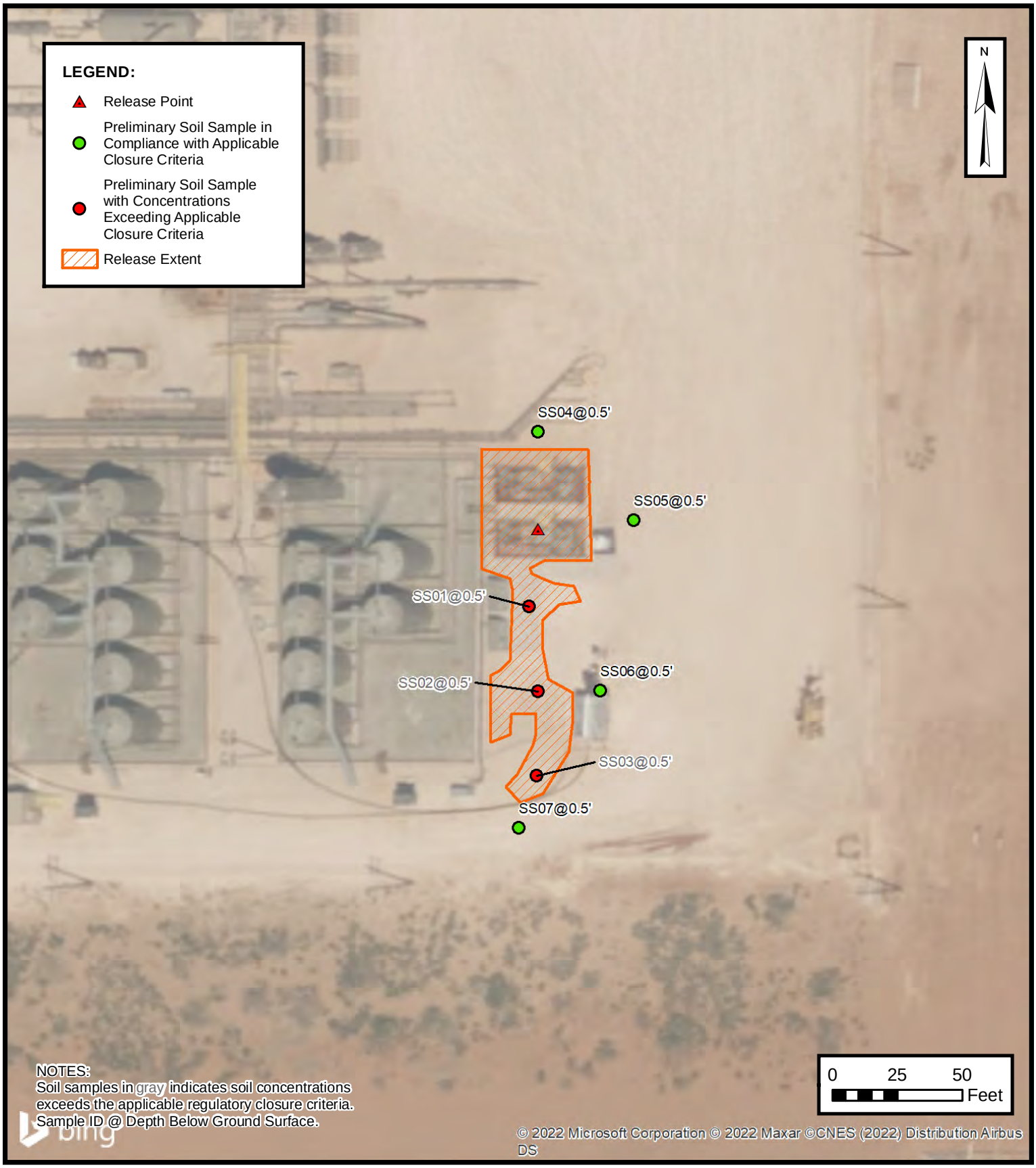
Environmental & Hydrogeologic Consultants

SITE RECEPTOR MAP

XTO ENERGY, INC
POKER LAKE UNIT 15 TWIN WELLS RANCH
Incident Number NAPP2205641685
Unit D, Section 22, Township 24S, Range 31E
Eddy County, New Mexico

FIGURE
1



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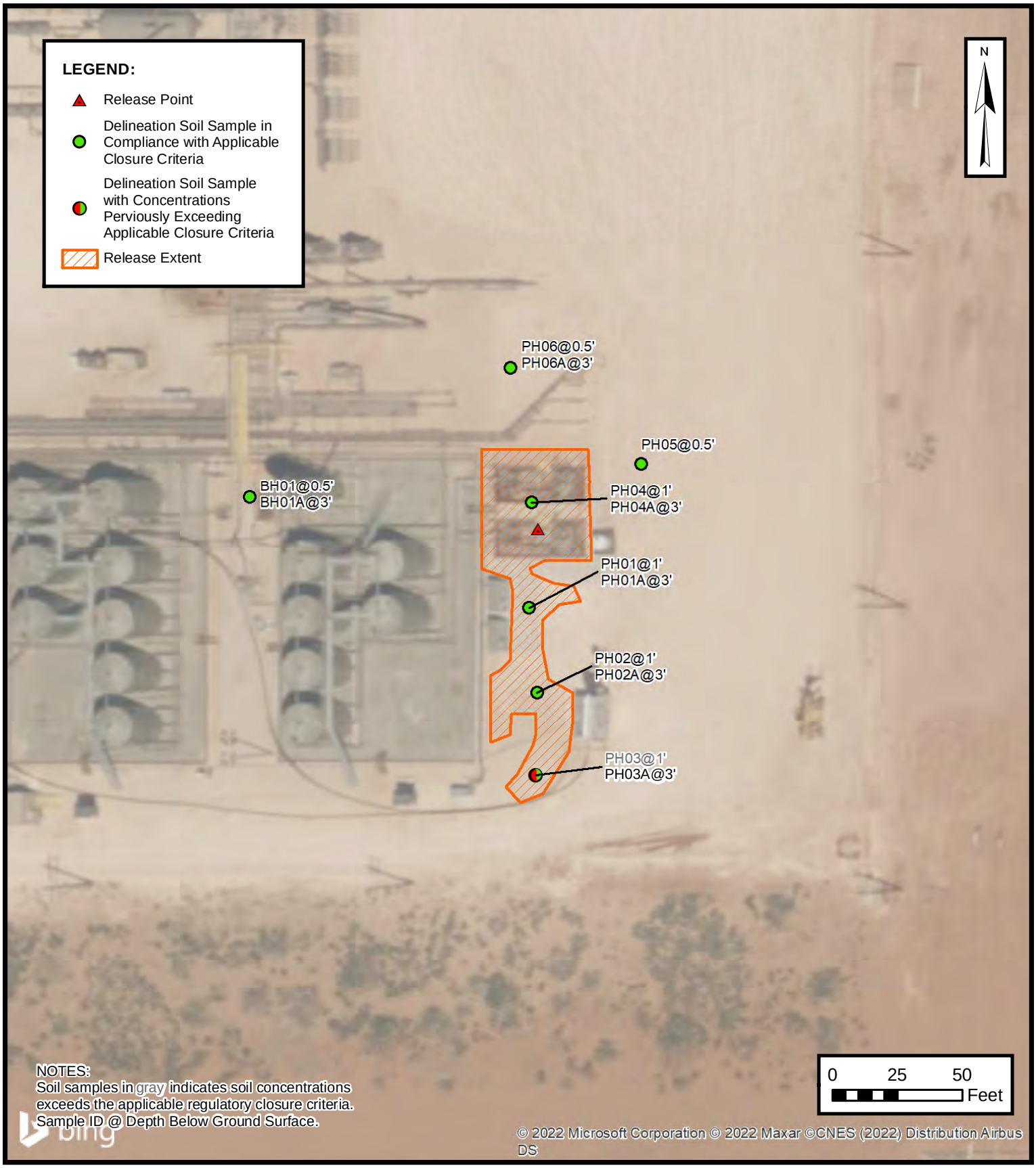
PRELIMINARY SOIL SAMPLE LOCATIONS

XTO ENERGY, INC
POKER LAKE UNIT 15 TWIN WELLS RANCH
Incident Number NAPP2205641685
Unit D, Section 22, Township 24S, Range 31E
Eddy County, New Mexico

FIGURE
2



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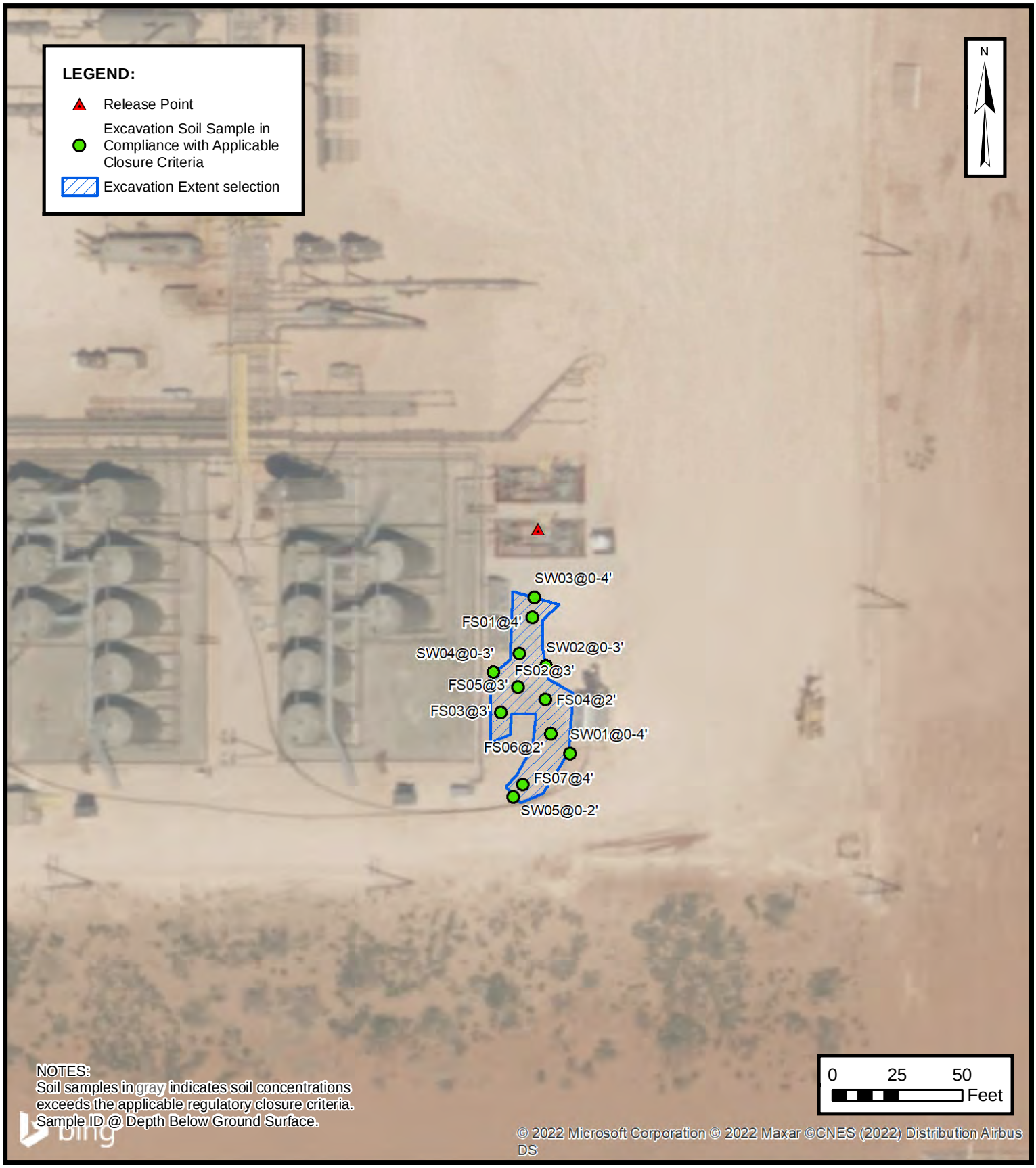
DELINEATION SOIL SAMPLE LOCATIONS

XTO ENERGY, INC
POKER LAKE UNIT 15 TWIN WELLS RANCH
Incident Number NAPP2205641685
Unit D, Section 22, Township 24S, Range 31E
Eddy County, New Mexico

FIGURE
3



ENSOLUM
Environmental & Hydrogeologic Consultants

EXCAVATION SOIL SAMPLE LOCATIONS

XTO ENERGY, INC
POKER LAKE UNIT 15 TWIN WELLS RANCH
Incident Number NAPP2205641685
Unit D, Section 22, Township 24S, Range 31E
Eddy County, New Mexico

FIGURE
4

ENSOLUM

TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Poker Lake Unit 15 Twin Wells Ranch
XTO Energy, Inc.
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			**10**	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**
Preliminary Soil Samples										
SS01	04/18/2022	0.5	0.0554	**65.4**	2,810	12,500	<250	**15,300**	**15,300**	1,370
SS02	04/18/2022	0.5	<0.0998	**84.1**	2,450	12,900	<250	**15,400**	**15,400**	155
SS03	04/18/2022	0.5	0.00239	47.0	1,870	10,800	<250	**12,700**	**12,700**	1,970
SS04	04/18/2022	0.5	<0.00202	<0.00404	<49.9	56.0	<49.9	56.0	56.0	523
SS05	04/18/2022	0.5	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	109
SS06	04/18/2022	0.5	<0.00200	0.166	<49.9	<49.9	<49.9	<49.9	<49.9	213
SS07	04/18/2022	0.5	<0.00199	0.0400	<50.0	<50.0	<50.0	<50.0	<50.0	111
Delineation Soil Samples										
BH01	07/18/2022	0.5	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	179
BH01A	07/18/2022	3	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	36.5
PH01	07/13/2022	1	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	304
PH01A	07/13/2022	3	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	46.4
PH02	07/13/2022	1	<0000199	<0.00398	<50.0	109	<50.0	109	109	75.7
PH02A	07/13/2022	3	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	9.02
PH03	07/13/2022	1	<0.200	103	1,890	4,200	822	**6,090**	**6,910**	23.5
PH03A	07/13/2022	3	<0.00201	<0.004202	<50.0	<50.0	<50.0	<50.0	<50.0	5.42
PH04	07/18/2022	1	<0.00200	0.0408	80	868	<50.0	948	948	143
PH04A	07/18/2022	3	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	130
PH05	07/18/2022	0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	106
PH05A	07/18/2022	3	>0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	<5.00
PH06	07/18/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	49.7
PH06A	07/18/2022	3	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	8.83
Excavation Floor Soil Samples										
FS01	07/18/2022	4	<0.00201	0.0115	<50.0	<50.0	<50.0	<50.0	<50.0	8.81
FS02	07/18/2022	3	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	15.6
FS03	07/18/2022	3	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	11.1
FS04	07/14/2022	2	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	50.6

ENSOLUM

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Poker Lake Unit 15 Twin Wells Ranch
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**
FS05	07/18/2022	3	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	7.78
FS06	07/14/2022	2	<0.00202	<0.00403	<49.8	<49.8	<49.8	<49.8	<49.8	65.9
FS07	07/15/2022	4	<0.00200	<0.00401	195	<50.0	<50.0	195	195	10.9
Excavation Sidewall Soil Samples										
SW01	07/18/2022	0 - 4	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	771
SW02	07/18/2022	0 - 3	<0.00198	<0.00396	<50.0	68.1	<50.0	68.1	68.1	326
SW03	07/18/2022	0 - 4	<0.0401	<0.0802	<49.9	<49.9	<49.9	<49.9	<49.9	53.8
SW04	07/18/2022	0 - 3	<0.0402	<0.0803	<49.8	<49.8	<49.8	<49.8	<49.8	141
SW05	07/18/2022	0 - 2	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	155

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

Concentrations in **bold** exceed the NMOCD Table 1 Closure Criteria for Soils Impacted by a Release

ENSOLUM

APPENDIX A

Referenced Well Records

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
POD1 (BH-01)	n/a	C-4508

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

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

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32°	12'	46.69"	N
	LONGITUDE	-103°	45'	55.29"	W

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

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

SW SE Sec. 15 T24S R31E

2. DRILLING & CASING INFORMATION

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

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
12/29/2020	12/29/2020	temporary well material	110	n/a

COMPLETED WELL IS: ☐ ARTESIAN ☑ DRY HOLE ☐ SHALLOW (UNCONFINED) — STATIC WATER LEVEL IN COMPLETED WELL (FT): n/a

DRILLING FLUID: ☐ AIR ☐ MUD ADDITIVES – SPECIFY:

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

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	110	±8.5	Boring- HSA	--	--	--	--

3. ANNULAR MATERIAL

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

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

FILE NO.	C-4508	POD NO.	1	TRN NO.	686651
LOCATION	Exp 1 24S.31E.15.344			WELL TAG ID NO.	—

PAGE 1 OF 2

OSE DII FEB 12 2021 PM3:10

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	14	14	SAND, medium-fine grain, poorly graded,someclaiche, light-brown-tan,dry	Y ✓ N	
14	15	1	SAND, fine grain, poorly graded,someclaiche, light-brown-tan,dry	Y ✓ N	
15	25	5	CALICHE, moderately consolidated,silty, some gravel, off-white-tan, dry	Y ✓ N	
25	46	21	SILTSTONE, mod. consolidated, some sand, red-brown, dry	Y ✓ N	
46	64	18	CLAYSTONE, mod. consolidated, cohesive, few sand, red-brown, dry	Y ✓ N	
64	72	8	SANDSTONE, high consolidated, medium-grain, well graded,white/lightbrown	Y ✓ N	
72	90	18	CLAYSTONE, high consolidated, cohesive, medium plasticity, few sand, red-br	Y ✓ N	
90	101	11	SANDSTONE, high consolidated, fine grain, few silt,white/offwhite	Y ✓ N	
101	108	7	CLAYSTONE, high consolidated, cohesive, med.-low plasticity, few sand, red-b	Y ✓ N	
108	111	3	SANDSTONE, high consolidated, fine grain, few silt, white/offwhite, dry	Y ✓ N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

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

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

5. TEST; RIG SUPERVISION

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

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

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

Shane Eldridge

6. SIGNATURE

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

Jack Atkins — Jackie D. Atkins — 02/11/2021

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

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

FILE NO. C-4508	POD NO. 1	TRN NO. 686651	
LOCATION		WELL TAG ID NO. —	PAGE 2 OF 2

OSE DII FEB 12 2021 PM3:10

National Water Information System: Web Interface

USGS Water Resources

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

Click to hideNews Bulletins

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

Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

site_no list =

- 321310103482101

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

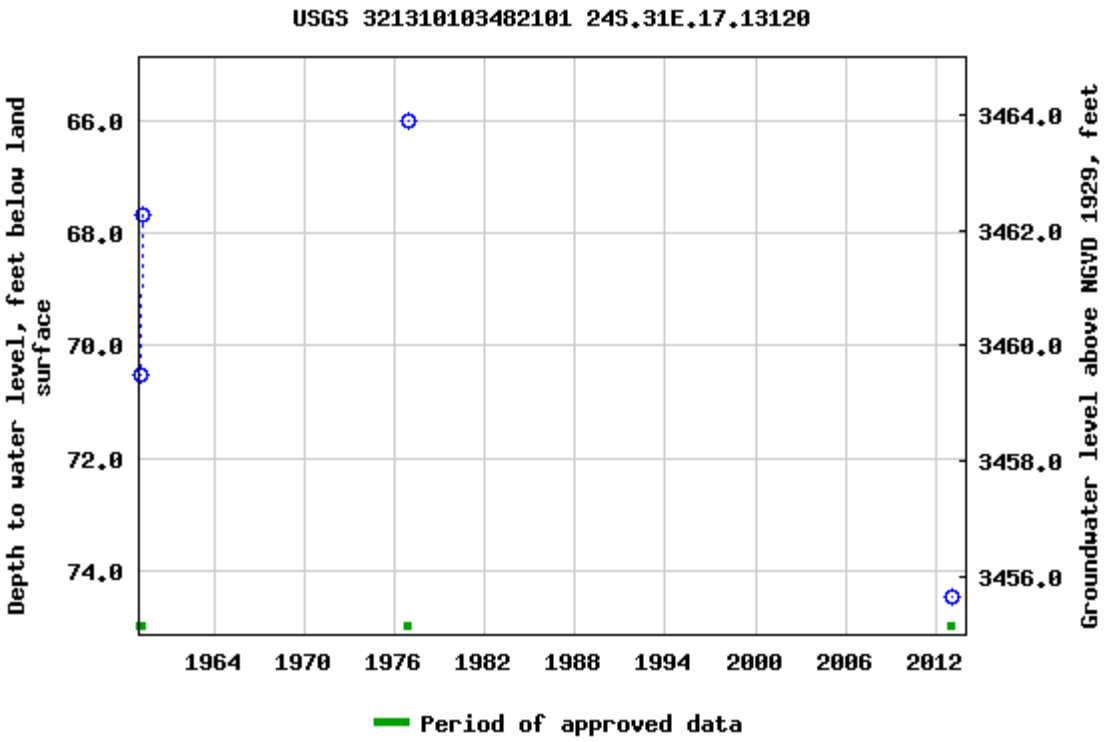
USGS 321310103482101 24S.31E.17.13120

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

Eddy County, New Mexico
Hydrologic Unit Code 13060011
Latitude 32°13'14.1", Longitude 103°48'23.4" NAD83
Land-surface elevation 3,530.00 feet above NGVD29
This well is completed in the Other aquifers (N9999OTHER) 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



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

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

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

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2022-08-08 14:10:11 EDT
0.55 0.47 nadww01

ENSOLUM

APPENDIX B

Photographic Log

ENSOLUM

Photographic Log
XTO Energy, Inc.
Poker Lake Unit 15 Twin Wells Ranch
Incident Number NAPP2205641685

Photograph 1 Date: April 18, 2022
Description: View of release extent facing southwest.

Photograph 2 Date: July 13, 2022
Description: View of liner during containment inspection facing south.

Photograph 3 Date: July 18, 2022
Description: View of final excavation extent facing southwest.

Photograph 4 Date: July 18, 2022
Description: View of final excavation extent facing west.

ENSOLUM

APPENDIX C

Lithologic Soil Sampling Logs

ENSOLUM

	Sample Name: BH01	Date: 07.18.22
	Site Name: PLU 15 TWR	
	Incident Number: NAPP2205641685 (Release date 2/11/22)	
	Job Number: 03E1558013	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Conner Shore	Method: Hand Auger
Coordinates:	Hole Diameter:	Total Depth: 4'

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
N	ND	1.1	N	BH01	0.5'	0.5'	cche	grey-brown caliche
N	ND	1.0	N	BH01	1'	1'	cche	grey-brown caliche
N	ND	0.0	N	BH01	2'	2'	cche	grey-brown caliche
N	ND	0.0	N	BH01	3'	3'	sp-sm	Red-brown sandstone
N	ND	0.0	N	BH01	4'	4'	sp-sm	Red-brown sandstone

ENSOLUM

	Sample Name: PH01	Date: 07.13.22
	Site Name: PLU 15 TWR	
	Incident Number: NAPP2205641685 (Release date 2/11/22)	
	Job Number: 03E1558013	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Conner	Method: Backhoe
Coordinates:	Hole Diameter:	Total Depth: 3 feet

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
N	ND	78	N	PH01	1'	1'	cche	grey-brown caliche with high hydrocarbon odor
N	ND	33	N	PH01	2'	2'	cche	grey-brown caliche with low hydrocarbon odor
N	ND	26.8	N	PH01	3'	3'	sp-sm	Red-brown sandstone with no hydrocarbon odor.

ENSOLUM

	Sample Name: PH02	Date: 07.13.22
	Site Name: PLU 15 TWR	
	Incident Number: NAPP2205641685 (Release date 2/11/22)	
	Job Number: 03E1558013	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Conner	Method: Backhoe
Coordinates:	Hole Diameter:	Total Depth: 3 feet

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
N	ND	41	N	PH02	1'	1'	cche	grey-brown caliche with high hydrocarbon odor
N	ND	57	N	PH02	2'	2'	cche	grey-brown caliche with low hydrocarbon odor
N	ND	16.8	N	PH02	3'	3'	sp-sm	Red-brown sandstone with no hydrocarbon odor.

ENSOLUM

	Sample Name: PH03	Date: 07.13.22
	Site Name: PLU 15 TWR	
	Incident Number: NAPP2205641685 (Release date 2/11/22)	
	Job Number: 03E1558013	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Conner Shore	Method: Backhoe
Coordinates:	Hole Diameter:	Total Depth: 4 feet

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
N	ND	550	N	PH03	1'	1'	cche	grey-brown caliche with high hydrocarbon odor
N	ND	420	N	PH03	2'	2'	cche	grey-brown caliche with low hydrocarbon odor
N	ND	189	N	PH03	3'	3'	sp-sm	Red-brown sandstone with little hydrocarbon odor.
N	ND	48	N	PH03	4'	4'	sp-sm	Red-Brown Sandstone with no hydrocarbon odor.

ENSOLUM	Sample Name: PH04	Date: 07.18.22
	Site Name: PLU 15 TWR	
	Incident Number: NAPP2205641685 (Release date 2/11/22)	
	Job Number: 03E1558013	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Conner Shore	Method: Hand Auger
Coordinates:	Hole Diameter:	Total Depth: 3 feet

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
N	168	350	N	PH04	1'	1'	cche	grey-brown caliche with high hydrocarbon odor
N	280	220	N	PH04	2'	2'	cche	grey-brown caliche with low hydrocarbon odor
N	168	14.2	N	PH04	3'	3'	sp-sm	Red-brown sandstone with little hydrocarbon odor.

ENSOLUM

	Sample Name: PH05	Date: 07.18.22
	Site Name: PLU 15 TWR	
	Incident Number: NAPP2205641685 (Release date 2/11/22)	
	Job Number: 03E1558013	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Conner Shore	Method: Backhoe
Coordinates:	Hole Diameter:	Total Depth: 3 feet

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
N	ND	0.0	N	PH05	0.5'	0.5'	cche	grey-brown caliche
N	ND	0.0	N	PH05	1'	1'	cche	grey-brown caliche
N	ND	0.0	N	PH05	2'	2'	cche	grey-brown caliche
N	ND	0.0	N	PH05	3'	3'	sp-sm	Red-brown sandstone

ENSOLUM

	Sample Name: PH06	Date: 07.18.22
	Site Name: PLU 15 TWR	
	Incident Number: NAPP2205641685 (Release date 2/11/22)	
	Job Number: 03E1558013	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Conner Shore	Method: Backhoe
Coordinates:	Hole Diameter:	Total Depth: 3 feet

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
N	ND	0	N	PH06	0.5'	0.5'	cche	grey-brown caliche
N	ND	0.0	N	PH06	1'	1'	cche	grey-brown caliche
N	ND	0.0	N	PH06	2'	2'	cche	grey-brown caliche
N	ND	0.0	N	PH06	3'	3'	sp-sm	Red-brown sandstone

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: 890-2198-1
Laboratory Sample Delivery Group: 03E1558015
Client Project/Site: PLU 15 TWR

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

Attn: Ben Belill

JKramer

Authorized for release by:
4/25/2022 3:38:33 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 15 TWR

Laboratory Job ID: 890-2198-1
SDG: 03E1558015

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2198-1
SDG: 03E1558015

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.
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 15 TWR

Job ID: 890-2198-1
SDG: 03E1558015

Job ID: 890-2198-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2198-1

Receipt
The samples were received on 4/19/2022 12:10 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 1.4°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-24111 and analytical batch 880-24110 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.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-24100 and analytical batch 880-24112 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.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (MB 880-24100/5-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.

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: SS01 (890-2198-1), SS02 (890-2198-2) and SS03 (890-2198-3). 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 15 TWR

Job ID: 890-2198-1
SDG: 03E1558015

Client Sample ID: SS01

Lab Sample ID: 890-2198-1
Matrix: Solid
Date Collected: 04/18/22 11:00
Date Received: 04/19/22 12:10
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.0554**		0.00199		mg/Kg		04/21/22 16:00	04/25/22 03:20	1
Toluene	**9.27**		0.200		mg/Kg		04/23/22 12:32	04/25/22 13:11	100
Ethylbenzene	**2.27**		0.200		mg/Kg		04/23/22 12:32	04/25/22 13:11	100
m-Xylene & p-Xylene	**42.2**		0.400		mg/Kg		04/23/22 12:32	04/25/22 13:11	100
o-Xylene	**11.7**		0.200		mg/Kg		04/23/22 12:32	04/25/22 13:11	100
Xylenes, Total	**53.9**		0.400		mg/Kg		04/23/22 12:32	04/25/22 13:11	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*444*	*S1+*	*70 - 130*	*04/21/22 16:00*	*04/25/22 03:20*	*1*
1,4-Difluorobenzene (Surr)	*29*	*S1-*	*70 - 130*	*04/21/22 16:00*	*04/25/22 03:20*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**65.4**		0.400		mg/Kg			04/25/22 12:21	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**15300**		250		mg/Kg			04/21/22 10:45	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**2810**		250		mg/Kg		04/20/22 09:58	04/21/22 07:29	5
Diesel Range Organics (Over C10-C28)	**12500**		250		mg/Kg		04/20/22 09:58	04/21/22 07:29	5
Oil Range Organics (Over C28-C36)	<250	U	250		mg/Kg		04/20/22 09:58	04/21/22 07:29	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*177*	*S1+*	*70 - 130*	*04/20/22 09:58*	*04/21/22 07:29*	*5*
o-Terphenyl	*101*		*70 - 130*	*04/20/22 09:58*	*04/21/22 07:29*	*5*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1370**		24.9		mg/Kg			04/21/22 20:51	5

Client Sample ID: SS02

Lab Sample ID: 890-2198-2
Matrix: Solid
Date Collected: 04/18/22 11:10
Date Received: 04/19/22 12:10
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0998	U	0.0998		mg/Kg		04/21/22 16:00	04/25/22 05:23	50
Toluene	**13.6**		0.0998		mg/Kg		04/21/22 16:00	04/25/22 05:23	50
Ethylbenzene	**9.62**		0.0998		mg/Kg		04/21/22 16:00	04/25/22 05:23	50
m-Xylene & p-Xylene	**67.0**		0.404		mg/Kg		04/24/22 22:21	04/25/22 11:19	100
o-Xylene	**17.1**		0.202		mg/Kg		04/24/22 22:21	04/25/22 11:19	100
Xylenes, Total	**84.1**		0.404		mg/Kg		04/24/22 22:21	04/25/22 11:19	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*400*	*S1+*	*70 - 130*	*04/21/22 16:00*	*04/25/22 05:23*	*50*

Client Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2198-1
SDG: 03E1558015

Client Sample ID: SS02

Date Collected: 04/18/22 11:10
Date Received: 04/19/22 12:10
Sample Depth: 0.5

Lab Sample ID: 890-2198-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*04/21/22 16:00*	*04/25/22 05:23*	*50*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**84.1**		0.404	mg/Kg			04/25/22 12:21	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**15400**		250	mg/Kg			04/21/22 10:45	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**2450**		250	mg/Kg		04/20/22 09:58	04/21/22 07:49	5
Diesel Range Organics (Over C10-C28)	**12900**		250	mg/Kg		04/20/22 09:58	04/21/22 07:49	5
Oil Range Organics (Over C28-C36)	<250	U	250	mg/Kg		04/20/22 09:58	04/21/22 07:49	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*165*	*S1+*	*70 - 130*	*04/20/22 09:58*	*04/21/22 07:49*	*5*
o-Terphenyl	*105*		*70 - 130*	*04/20/22 09:58*	*04/21/22 07:49*	*5*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**155**	**F1**	25.0	mg/Kg			04/21/22 21:00	5

Client Sample ID: SS03

Date Collected: 04/18/22 11:20
Date Received: 04/19/22 12:10
Sample Depth: 0.5

Lab Sample ID: 890-2198-3
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.00239**		0.00200	mg/Kg		04/21/22 16:00	04/25/22 03:41	1
Toluene	**3.27**		0.199	mg/Kg		04/23/22 12:32	04/25/22 13:38	100
Ethylbenzene	**1.51**		0.199	mg/Kg		04/23/22 12:32	04/25/22 13:38	100
m-Xylene & p-Xylene	**32.2**		0.398	mg/Kg		04/23/22 12:32	04/25/22 13:38	100
o-Xylene	**10.0**		0.199	mg/Kg		04/23/22 12:32	04/25/22 13:38	100
Xylenes, Total	**42.2**		0.398	mg/Kg		04/23/22 12:32	04/25/22 13:38	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*350*	*S1+*	*70 - 130*	*04/21/22 16:00*	*04/25/22 03:41*	*1*
1,4-Difluorobenzene (Surr)	*85*		*70 - 130*	*04/21/22 16:00*	*04/25/22 03:41*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**47.0**		0.398	mg/Kg			04/25/22 12:21	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**12700**		250	mg/Kg			04/21/22 10:45	1

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Client Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2198-1
SDG: 03E1558015

Client Sample ID: SS03
Date Collected: 04/18/22 11:20
Date Received: 04/19/22 12:10
Sample Depth: 0.5

Lab Sample ID: 890-2198-3
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	1870		250		mg/Kg		04/20/22 09:58	04/21/22 08:10	5
Diesel Range Organics (Over C10-C28)	10800		250		mg/Kg		04/20/22 09:58	04/21/22 08:10	5
Oil Range Organics (Over C28-C36)	<250	U	250		mg/Kg		04/20/22 09:58	04/21/22 08:10	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*165*	*S1+*	*70 - 130*	*04/20/22 09:58*	*04/21/22 08:10*	*5*
o-Terphenyl	*100*		*70 - 130*	*04/20/22 09:58*	*04/21/22 08:10*	*5*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1970		25.0		mg/Kg			04/21/22 21:26	5

Surrogate Summary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2198-1
SDG: 03E1558015

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)
880-13850-A-1-H MS	Matrix Spike	102	95
880-13850-A-1-I MSD	Matrix Spike Duplicate	97	99
880-13850-A-27-C MS	Matrix Spike	109	111
880-13850-A-27-D MSD	Matrix Spike Duplicate	79	82
880-13974-A-21-C MS	Matrix Spike	90	96
880-13974-A-21-D MSD	Matrix Spike Duplicate	96	95
890-2198-1	SS01	444 S1+	29 S1-
890-2198-2	SS02	400 S1+	92
890-2198-3	SS03	350 S1+	85
LCS 880-23967/1-A	Lab Control Sample	101	93
LCS 880-24100/1-A	Lab Control Sample	93	96
LCS 880-24111/1-A	Lab Control Sample	97	95
LCSD 880-23967/2-A	Lab Control Sample Dup	102	92
LCSD 880-24100/2-A	Lab Control Sample Dup	88	102
LCSD 880-24111/2-A	Lab Control Sample Dup	99	99
MB 880-23967/5-A	Method Blank	105	88
MB 880-24100/5-A	Method Blank	69 S1-	88
MB 880-24111/5-A	Method Blank	99	96

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-13895-A-1-B MS	Matrix Spike	77	81
880-13895-A-1-C MSD	Matrix Spike Duplicate	78	81
890-2198-1	SS01	177 S1+	101
890-2198-2	SS02	165 S1+	105
890-2198-3	SS03	165 S1+	100

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO2	OTPH2
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
LCS 880-23823/2-A	Lab Control Sample	92	108
LCSD 880-23823/3-A	Lab Control Sample Dup	104	125
MB 880-23823/1-A	Method Blank	84	100

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2198-1
SDG: 03E1558015

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-23967/5-A
Matrix: Solid
Analysis Batch: 24109

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23967

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/21/22 16:00	04/25/22 01:58	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/21/22 16:00	04/25/22 01:58	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/21/22 16:00	04/25/22 01:58	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/21/22 16:00	04/25/22 01:58	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/21/22 16:00	04/25/22 01:58	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/21/22 16:00	04/25/22 01:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*04/21/22 16:00*	*04/25/22 01:58*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*04/21/22 16:00*	*04/25/22 01:58*	*1*

Lab Sample ID: LCS 880-23967/1-A
Matrix: Solid
Analysis Batch: 24109

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23967

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08769		mg/Kg		88	70 - 130		
Toluene			0.100	0.09042		mg/Kg		90	70 - 130		
Ethylbenzene			0.100	0.09356		mg/Kg		94	70 - 130		
m-Xylene & p-Xylene			0.200	0.1927		mg/Kg		96	70 - 130		
o-Xylene			0.100	0.09654		mg/Kg		97	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

Lab Sample ID: LCSD 880-23967/2-A
Matrix: Solid
Analysis Batch: 24109

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 23967

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08077		mg/Kg		81	70 - 130	8	35
Toluene			0.100	0.08128		mg/Kg		81	70 - 130	11	35
Ethylbenzene			0.100	0.08200		mg/Kg		82	70 - 130	13	35
m-Xylene & p-Xylene			0.200	0.1675		mg/Kg		84	70 - 130	14	35
o-Xylene			0.100	0.08663		mg/Kg		87	70 - 130	11	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*

Lab Sample ID: 880-13850-A-27-C MS
Matrix: Solid
Analysis Batch: 24109

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 23967

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U	0.0998	0.1069		mg/Kg		107	70 - 130		
Toluene	<0.00200	U F1	0.0998	0.1327	F1	mg/Kg		133	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2198-1
SDG: 03E1558015

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

Lab Sample ID: 880-13850-A-27-C MS
Matrix: Solid
Analysis Batch: 24109

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 23967

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.0998	0.1129		mg/Kg		113	70 - 130
m-Xylene & p-Xylene	<0.00401	U	0.200	0.2220		mg/Kg		111	70 - 130
o-Xylene	<0.00200	U	0.0998	0.1165		mg/Kg		117	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*

Lab Sample ID: 880-13850-A-27-D MSD
Matrix: Solid
Analysis Batch: 24109

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 23967

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0996	0.08759		mg/Kg		88	70 - 130	20	35
Toluene	<0.00200	U F1	0.0996	0.1108		mg/Kg		111	70 - 130	18	35
Ethylbenzene	<0.00200	U	0.0996	0.09973		mg/Kg		100	70 - 130	12	35
m-Xylene & p-Xylene	<0.00401	U	0.199	0.1967		mg/Kg		99	70 - 130	12	35
o-Xylene	<0.00200	U	0.0996	0.09755		mg/Kg		98	70 - 130	18	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*79*		*70 - 130*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*

Lab Sample ID: MB 880-24100/5-A
Matrix: Solid
Analysis Batch: 24112

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24100

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/23/22 12:32	04/25/22 02:37	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/23/22 12:32	04/25/22 02:37	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/23/22 12:32	04/25/22 02:37	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/23/22 12:32	04/25/22 02:37	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/23/22 12:32	04/25/22 02:37	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/23/22 12:32	04/25/22 02:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*69*	*S1-*	*70 - 130*	*04/23/22 12:32*	*04/25/22 02:37*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*04/23/22 12:32*	*04/25/22 02:37*	*1*

Lab Sample ID: LCS 880-24100/1-A
Matrix: Solid
Analysis Batch: 24112

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24100

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.08299		mg/Kg		83	70 - 130
Toluene	0.100	0.09004		mg/Kg		90	70 - 130
Ethylbenzene	0.100	0.08858		mg/Kg		89	70 - 130
m-Xylene & p-Xylene	0.200	0.1737		mg/Kg		87	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2198-1
SDG: 03E1558015

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

Lab Sample ID: LCS 880-24100/1-A
Matrix: Solid
Analysis Batch: 24112

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24100

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
o-Xylene			0.100	0.08998		mg/Kg		90	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: LCSD 880-24100/2-A
Matrix: Solid
Analysis Batch: 24112

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 24100

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08142		mg/Kg		81	70 - 130	2	35
Toluene			0.100	0.07758		mg/Kg		78	70 - 130	15	35
Ethylbenzene			0.100	0.07712		mg/Kg		77	70 - 130	14	35
m-Xylene & p-Xylene			0.200	0.1508		mg/Kg		75	70 - 130	14	35
o-Xylene			0.100	0.07916		mg/Kg		79	70 - 130	13	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: 880-13974-A-21-C MS
Matrix: Solid
Analysis Batch: 24112

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 24100

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U F1 F2	0.100	0.06330	F1	mg/Kg		63	70 - 130		
Toluene	<0.00199	U F1 F2	0.100	0.06071	F1	mg/Kg		60	70 - 130		
Ethylbenzene	<0.00199	U F1 F2	0.100	0.06005	F1	mg/Kg		60	70 - 130		
m-Xylene & p-Xylene	<0.00398	U F1 F2	0.201	0.1189	F1	mg/Kg		59	70 - 130		
o-Xylene	<0.00199	U F1 F2	0.100	0.06406	F1	mg/Kg		64	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: 880-13974-A-21-D MSD
Matrix: Solid
Analysis Batch: 24112

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 24100

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	0.0994	0.09738	F2	mg/Kg		98	70 - 130	42	35
Toluene	<0.00199	U F1 F2	0.0994	0.09842	F2	mg/Kg		99	70 - 130	47	35
Ethylbenzene	<0.00199	U F1 F2	0.0994	0.09600	F2	mg/Kg		97	70 - 130	46	35
m-Xylene & p-Xylene	<0.00398	U F1 F2	0.199	0.1907	F2	mg/Kg		96	70 - 130	46	35
o-Xylene	<0.00199	U F1 F2	0.0994	0.1004	F2	mg/Kg		101	70 - 130	44	35

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2198-1
SDG: 03E1558015

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

Lab Sample ID: 880-13974-A-21-D MSD
Matrix: Solid
Analysis Batch: 24112

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 24100

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	96		70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

Lab Sample ID: MB 880-24111/5-A
Matrix: Solid
Analysis Batch: 24110

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24111

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/24/22 22:21	04/25/22 01:09	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/24/22 22:21	04/25/22 01:09	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/24/22 22:21	04/25/22 01:09	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/24/22 22:21	04/25/22 01:09	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/24/22 22:21	04/25/22 01:09	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/24/22 22:21	04/25/22 01:09	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130	04/24/22 22:21	04/25/22 01:09	1
1,4-Difluorobenzene (Surr)	96		70 - 130	04/24/22 22:21	04/25/22 01:09	1

Lab Sample ID: LCS 880-24111/1-A
Matrix: Solid
Analysis Batch: 24110

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24111

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.07124		mg/Kg		71	70 - 130		
Toluene			0.100	0.09089		mg/Kg		91	70 - 130		
Ethylbenzene			0.100	0.09549		mg/Kg		95	70 - 130		
m-Xylene & p-Xylene			0.200	0.1938		mg/Kg		97	70 - 130		
o-Xylene			0.100	0.09767		mg/Kg		98	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

Lab Sample ID: LCSD 880-24111/2-A
Matrix: Solid
Analysis Batch: 24110

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 24111

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.07926		mg/Kg		79	70 - 130	11	35
Toluene			0.100	0.09758		mg/Kg		98	70 - 130	7	35
Ethylbenzene			0.100	0.1017		mg/Kg		102	70 - 130	6	35
m-Xylene & p-Xylene			0.200	0.2056		mg/Kg		103	70 - 130	6	35
o-Xylene			0.100	0.1035		mg/Kg		104	70 - 130	6	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2198-1
SDG: 03E1558015

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

Lab Sample ID: LCSD 880-24111/2-A
Matrix: Solid
Analysis Batch: 24110

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 24111

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,4-Difluorobenzene (Surr)	99		70 - 130

Lab Sample ID: 880-13850-A-1-H MS
Matrix: Solid
Analysis Batch: 24110

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 24111

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U	0.100	0.09875		mg/Kg		99	70 - 130
Toluene	<0.00200	U F1	0.100	0.1308	F1	mg/Kg		131	70 - 130
Ethylbenzene	<0.00200	U	0.100	0.1271		mg/Kg		127	70 - 130
m-Xylene & p-Xylene	<0.00401	U F1	0.200	0.2702	F1	mg/Kg		135	70 - 130
o-Xylene	<0.00200	U	0.100	0.1254		mg/Kg		125	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

Lab Sample ID: 880-13850-A-1-I MSD
Matrix: Solid
Analysis Batch: 24110

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 24111

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0996	0.1096		mg/Kg		110	70 - 130	10	35
Toluene	<0.00200	U F1	0.0996	0.1232		mg/Kg		124	70 - 130	6	35
Ethylbenzene	<0.00200	U	0.0996	0.1164		mg/Kg		117	70 - 130	9	35
m-Xylene & p-Xylene	<0.00401	U F1	0.199	0.2439		mg/Kg		122	70 - 130	10	35
o-Xylene	<0.00200	U	0.0996	0.1147		mg/Kg		115	70 - 130	9	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

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

Lab Sample ID: MB 880-23823/1-A
Matrix: Solid
Analysis Batch: 23813

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23823

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		04/20/22 09:58	04/20/22 10:25	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/20/22 09:58	04/20/22 10:25	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/20/22 09:58	04/20/22 10:25	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	84		70 - 130	04/20/22 09:58	04/20/22 10:25	1
o-Terphenyl	100		70 - 130	04/20/22 09:58	04/20/22 10:25	1

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2198-1
SDG: 03E1558015

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

Lab Sample ID: LCS 880-23823/2-A
Matrix: Solid
Analysis Batch: 23813

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23823

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1021		mg/Kg		102	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	841.0		mg/Kg		84	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*92*		*70 - 130*
o-Terphenyl	*108*		*70 - 130*

Lab Sample ID: LCSD 880-23823/3-A
Matrix: Solid
Analysis Batch: 23813

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 23823

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1035		mg/Kg		104	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	904.3		mg/Kg		90	70 - 130	7	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*104*		*70 - 130*
o-Terphenyl	*125*		*70 - 130*

Lab Sample ID: 880-13895-A-1-B MS
Matrix: Solid
Analysis Batch: 23813

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 23823

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	1000	844.7		mg/Kg		83	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	1000	779.8		mg/Kg		75	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*77*		*70 - 130*
o-Terphenyl	*81*		*70 - 130*

Lab Sample ID: 880-13895-A-1-C MSD
Matrix: Solid
Analysis Batch: 23813

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 23823

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	818.6		mg/Kg		80	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<49.9	U	998	782.3		mg/Kg		76	70 - 130	0	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*78*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2198-1
SDG: 03E1558015

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

Lab Sample ID: 880-13895-A-1-C MSD
Matrix: Solid
Analysis Batch: 23813

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 23823

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl	81		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-23840/1-A
Matrix: Solid
Analysis Batch: 23965

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			04/21/22 18:29	1

Lab Sample ID: LCS 880-23840/2-A
Matrix: Solid
Analysis Batch: 23965

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	255.9		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-23840/3-A
Matrix: Solid
Analysis Batch: 23965

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	256.1		mg/Kg		102	90 - 110	0	20

Lab Sample ID: 890-2198-2 MS
Matrix: Solid
Analysis Batch: 23965

Client Sample ID: SS02
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	155	F1	1250	1543	F1	mg/Kg		111	90 - 110		

Lab Sample ID: 890-2198-2 MSD
Matrix: Solid
Analysis Batch: 23965

Client Sample ID: SS02
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	155	F1	1250	1514		mg/Kg		109	90 - 110	2	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2198-1
SDG: 03E1558015

GC VOA

Prep Batch: 23967

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2198-1	SS01	Total/NA	Solid	5035	
890-2198-2	SS02	Total/NA	Solid	5035	
890-2198-3	SS03	Total/NA	Solid	5035	
MB 880-23967/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-23967/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-23967/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-13850-A-27-C MS	Matrix Spike	Total/NA	Solid	5035	
880-13850-A-27-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 24100

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2198-1	SS01	Total/NA	Solid	5035	
890-2198-3	SS03	Total/NA	Solid	5035	
MB 880-24100/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-24100/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-24100/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-13974-A-21-C MS	Matrix Spike	Total/NA	Solid	5035	
880-13974-A-21-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 24109

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2198-1	SS01	Total/NA	Solid	8021B	23967
890-2198-2	SS02	Total/NA	Solid	8021B	23967
890-2198-3	SS03	Total/NA	Solid	8021B	23967
MB 880-23967/5-A	Method Blank	Total/NA	Solid	8021B	23967
LCS 880-23967/1-A	Lab Control Sample	Total/NA	Solid	8021B	23967
LCSD 880-23967/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	23967
880-13850-A-27-C MS	Matrix Spike	Total/NA	Solid	8021B	23967
880-13850-A-27-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	23967

Analysis Batch: 24110

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2198-2	SS02	Total/NA	Solid	8021B	24111
MB 880-24111/5-A	Method Blank	Total/NA	Solid	8021B	24111
LCS 880-24111/1-A	Lab Control Sample	Total/NA	Solid	8021B	24111
LCSD 880-24111/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	24111
880-13850-A-1-H MS	Matrix Spike	Total/NA	Solid	8021B	24111
880-13850-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	24111

Prep Batch: 24111

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2198-2	SS02	Total/NA	Solid	5035	
MB 880-24111/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-24111/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-24111/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-13850-A-1-H MS	Matrix Spike	Total/NA	Solid	5035	
880-13850-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 24112

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2198-1	SS01	Total/NA	Solid	8021B	24100

QC Association Summary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2198-1
SDG: 03E1558015

GC VOA (Continued)

Analysis Batch: 24112 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2198-3	SS03	Total/NA	Solid	8021B	24100
MB 880-24100/5-A	Method Blank	Total/NA	Solid	8021B	24100
LCS 880-24100/1-A	Lab Control Sample	Total/NA	Solid	8021B	24100
LCSD 880-24100/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	24100
880-13974-A-21-C MS	Matrix Spike	Total/NA	Solid	8021B	24100
880-13974-A-21-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	24100

Analysis Batch: 24179

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2198-1	SS01	Total/NA	Solid	Total BTEX	
890-2198-2	SS02	Total/NA	Solid	Total BTEX	
890-2198-3	SS03	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 23813

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2198-1	SS01	Total/NA	Solid	8015B NM	23823
890-2198-2	SS02	Total/NA	Solid	8015B NM	23823
890-2198-3	SS03	Total/NA	Solid	8015B NM	23823
MB 880-23823/1-A	Method Blank	Total/NA	Solid	8015B NM	23823
LCS 880-23823/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	23823
LCSD 880-23823/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	23823
880-13895-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	23823
880-13895-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	23823

Prep Batch: 23823

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2198-1	SS01	Total/NA	Solid	8015NM Prep	
890-2198-2	SS02	Total/NA	Solid	8015NM Prep	
890-2198-3	SS03	Total/NA	Solid	8015NM Prep	
MB 880-23823/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-23823/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-23823/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-13895-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-13895-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 23932

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2198-1	SS01	Total/NA	Solid	8015 NM	
890-2198-2	SS02	Total/NA	Solid	8015 NM	
890-2198-3	SS03	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 23840

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2198-1	SS01	Soluble	Solid	DI Leach	
890-2198-2	SS02	Soluble	Solid	DI Leach	
890-2198-3	SS03	Soluble	Solid	DI Leach	
MB 880-23840/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-23840/2-A	Lab Control Sample	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2198-1
SDG: 03E1558015

HPLC/IC (Continued)

Leach Batch: 23840 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-23840/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2198-2 MS	SS02	Soluble	Solid	DI Leach	
890-2198-2 MSD	SS02	Soluble	Solid	DI Leach	

Analysis Batch: 23965

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2198-1	SS01	Soluble	Solid	300.0	23840
890-2198-2	SS02	Soluble	Solid	300.0	23840
890-2198-3	SS03	Soluble	Solid	300.0	23840
MB 880-23840/1-A	Method Blank	Soluble	Solid	300.0	23840
LCS 880-23840/2-A	Lab Control Sample	Soluble	Solid	300.0	23840
LCSD 880-23840/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	23840
890-2198-2 MS	SS02	Soluble	Solid	300.0	23840
890-2198-2 MSD	SS02	Soluble	Solid	300.0	23840

Lab Chronicle

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2198-1
SDG: 03E1558015

Client Sample ID: SS01
Date Collected: 04/18/22 11:00
Date Received: 04/19/22 12:10

Lab Sample ID: 890-2198-1
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	23967	04/21/22 16:00	MR	XEN MID
Total/NA	Analysis	8021B		1			24109	04/25/22 03:20	MR	XEN MID
Total/NA	Prep	5035			5.00 g	5 mL	24100	04/23/22 12:32	MR	XEN MID
Total/NA	Analysis	8021B		100	5 mL	5 mL	24112	04/25/22 13:11	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			24179	04/25/22 12:21	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23932	04/21/22 10:45	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	23823	04/20/22 09:58	DM	XEN MID
Total/NA	Analysis	8015B NM		5			23813	04/21/22 07:29	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	23840	04/20/22 12:38	SC	XEN MID
Soluble	Analysis	300.0		5			23965	04/21/22 20:51	CH	XEN MID

Client Sample ID: SS02
Date Collected: 04/18/22 11:10
Date Received: 04/19/22 12:10

Lab Sample ID: 890-2198-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	24111	04/24/22 22:21	MR	XEN MID
Total/NA	Analysis	8021B		100	5 mL	5 mL	24110	04/25/22 11:19	MR	XEN MID
Total/NA	Prep	5035			5.01 g	5 mL	23967	04/21/22 16:00	MR	XEN MID
Total/NA	Analysis	8021B		50			24109	04/25/22 05:23	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			24179	04/25/22 12:21	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23932	04/21/22 10:45	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	23823	04/20/22 09:58	DM	XEN MID
Total/NA	Analysis	8015B NM		5			23813	04/21/22 07:49	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	23840	04/20/22 12:38	SC	XEN MID
Soluble	Analysis	300.0		5			23965	04/21/22 21:00	CH	XEN MID

Client Sample ID: SS03
Date Collected: 04/18/22 11:20
Date Received: 04/19/22 12:10

Lab Sample ID: 890-2198-3
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			5.00 g	5 mL	23967	04/21/22 16:00	MR	XEN MID
Total/NA	Analysis	8021B		1			24109	04/25/22 03:41	MR	XEN MID
Total/NA	Prep	5035			5.02 g	5 mL	24100	04/23/22 12:32	MR	XEN MID
Total/NA	Analysis	8021B		100	5 mL	5 mL	24112	04/25/22 13:38	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			24179	04/25/22 12:21	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23932	04/21/22 10:45	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	23823	04/20/22 09:58	DM	XEN MID
Total/NA	Analysis	8015B NM		5			23813	04/21/22 08:10	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	23840	04/20/22 12:38	SC	XEN MID
Soluble	Analysis	300.0		5			23965	04/21/22 21:26	CH	XEN MID

Laboratory References:

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

Eurofins Carlsbad

Accreditation/Certification Summary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2198-1
SDG: 03E1558015

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 15 TWR

Job ID: 890-2198-1
SDG: 03E1558015

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 15 TWR

Job ID: 890-2198-1
SDG: 03E1558015

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2198-1	SS01	Solid	04/18/22 11:00	04/19/22 12:10	0.5
890-2198-2	SS02	Solid	04/18/22 11:10	04/19/22 12:10	0.5
890-2198-3	SS03	Solid	04/18/22 11:20	04/19/22 12:10	0.5

Chain of Custody

eurofins

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)	Adrian Baker
Company Name:	Ensolum, LLC	Company Name:	XTO Energy, Inc.
Address:	2351 W Northwest Hwy Suite 1203A	Address:	3104 E. Green Street
City, State ZIP:	Dallas, TX 75220	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 15 TWR	Turn Around	
Project Number:	03E1558015	☒ Routine ☐ Rush	
Project Location:	EDDY COUNTY, NM	Due Date:	
Sampler's Name:	Ben Belill	TAT starts the day received by the lab, if received by 4:30pm	
PO #:	NAPP2205638843		

SAMPLE RECEIPT	Temp Blank: (Yes) No	Wet Ice: (Yes) No	
Samples Received Intact:	(Yes) No	Thermometer ID:	TWM-007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	1.6
Total Containers:		Corrected Temperature:	1.4

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021
SS01	S	4/18/22	11:00	0.5'	G	1	X	X	X
SS02	S	4/18/22	11:10	0.5'	G	1	X	X	X
SS03	S	4/18/22	11:20	0.5'	G	1	X	X	X

890-2198 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

cc: 2027711001

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	4.19.22	4/19/22 @ 12:10	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220
Phone 575-988-3199 Fax 575-988-3199

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler	Lab PM	Carrier Tracking No(s)	COC No
Client Contact: Shipping/Receiving	Phone	E-Mail: Jessica Kramer@et.eurofinsus com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-2198-1
Address: 1211 W Florida Ave	Due Date Requested: 4/25/2022			
City: Midland	TAT Requested (days):			
State Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #			
Email	WO #:			
Project Name: PLU 15 TWR	Project #: 89000093			
Site:	SSOW#:			

Preservation Codes

A	HCL	M	Hexane
B	NaOH	N	None
C	Zn Acetate	O	AsNaO2
D	Nitric Acid	P	Na2O4S
E	NaHSO4	Q	Na2SO3
F	MeOH	R	Na2S2O3
G	Amchlor	S	H2SO4
H	Ascorbic Acid	T	TSP Dodecahydrate
I	Ice	U	Acetone
J	DI Water	V	MCAA
K	EDTA	W	pH 4-5
L	EDA	Z	other (specify)

Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	8016MOD_Calc	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc (MOD) BTEX	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
SS01 (890-2198-1)	4/18/22	11 00 Mountain		Solid			X	X	X	X	X	1	
SS02 (890-2198-2)	4/18/22	11 10 Mountain		Solid			X	X	X	X	X	1	
SS03 (890-2198-3)	4/18/22	11 20 Mountain		Solid			X	X	X	X	X	1	

Note: Since laboratory accreditations are subject to change Eurofins Environment Testing South Central LLC places the ownership of method analyte & accreditation compliance upon out subcontract laboratories This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Environment Testing South Central LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Central LLC attention immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Environment Testing South Central LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested I II III IV Other (specify) Primary Deliverable Rank 2	Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
		4/19/22			4/20/22	
	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	Relinquished by	Date/Time	Company	Received by	Date/Time:	Company

Custody Seals Intact. Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks.

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2198-1
SDG Number: 03E1558015

Login Number: 2198
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: 890-2198-1
SDG Number: 03E1558015

Login Number: 2198
List Number: 2
Creator: Teel, Brianna

List Source: Eurofins Midland
List Creation: 04/20/22 10:37 AM

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-2203-1
Laboratory Sample Delivery Group: 03E1558015
Client Project/Site: PLU 15 TWR

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

Attn: Ben Belill

JKramer

Authorized for release by:
4/28/2022 11:48:27 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 15 TWR

Laboratory Job ID: 890-2203-1
SDG: 03E1558015

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2203-1
SDG: 03E1558015

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, 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 15 TWR

Job ID: 890-2203-1
SDG: 03E1558015

Job ID: 890-2203-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2203-1

Receipt
The samples were received on 4/19/2022 12:10 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 1.4°C

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

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-23841 and analytical batch 880-24343 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 15 TWR

Job ID: 890-2203-1
SDG: 03E1558015

Client Sample ID: SS04

Lab Sample ID: 890-2203-1
Matrix: Solid
Date Collected: 04/18/22 11:30
Date Received: 04/19/22 12:10
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		04/21/22 16:00	04/25/22 08:47	1
Toluene	<0.00202	U	0.00202		mg/Kg		04/21/22 16:00	04/25/22 08:47	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		04/21/22 16:00	04/25/22 08:47	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		04/21/22 16:00	04/25/22 08:47	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		04/21/22 16:00	04/25/22 08:47	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		04/21/22 16:00	04/25/22 08:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*04/21/22 16:00*	*04/25/22 08:47*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*04/21/22 16:00*	*04/25/22 08:47*	*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			04/25/22 16:29	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**56.0**		49.9		mg/Kg			04/21/22 09:38	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		04/20/22 15:27	04/20/22 22:12	1
Diesel Range Organics (Over C10-C28)	**56.0**		49.9		mg/Kg		04/20/22 15:27	04/20/22 22:12	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		04/20/22 15:27	04/20/22 22:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*139*	*S1+*	*70 - 130*	*04/20/22 15:27*	*04/20/22 22:12*	*1*
o-Terphenyl	*170*	*S1+*	*70 - 130*	*04/20/22 15:27*	*04/20/22 22:12*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**523**		25.0		mg/Kg			04/27/22 23:39	5

Client Sample ID: SS05

Lab Sample ID: 890-2203-2
Matrix: Solid
Date Collected: 04/18/22 11:40
Date Received: 04/19/22 12:10
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		04/21/22 16:00	04/25/22 09:08	1
Toluene	<0.00202	U	0.00202		mg/Kg		04/21/22 16:00	04/25/22 09:08	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		04/21/22 16:00	04/25/22 09:08	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		04/21/22 16:00	04/25/22 09:08	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		04/21/22 16:00	04/25/22 09:08	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		04/21/22 16:00	04/25/22 09:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*04/21/22 16:00*	*04/25/22 09:08*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2203-1
SDG: 03E1558015

Client Sample ID: SS05

Date Collected: 04/18/22 11:40
Date Received: 04/19/22 12:10
Sample Depth: 0.5

Lab Sample ID: 890-2203-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*04/21/22 16:00*	*04/25/22 09:08*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			04/25/22 16:29	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			04/21/22 09:38	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		04/20/22 15:27	04/20/22 23:15	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		04/20/22 15:27	04/20/22 23:15	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		04/20/22 15:27	04/20/22 23:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*118*		*70 - 130*	*04/20/22 15:27*	*04/20/22 23:15*	*1*
o-Terphenyl	*137*	*S1+*	*70 - 130*	*04/20/22 15:27*	*04/20/22 23:15*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**109**		5.00		mg/Kg			04/27/22 23:45	1

Client Sample ID: SS06

Date Collected: 04/18/22 11:50
Date Received: 04/19/22 12:10
Sample Depth: 0.5

Lab Sample ID: 890-2203-3
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/21/22 16:00	04/25/22 09:28	1
Toluene	**0.0177**		0.00200		mg/Kg		04/21/22 16:00	04/25/22 09:28	1
Ethylbenzene	**0.00724**		0.00200		mg/Kg		04/21/22 16:00	04/25/22 09:28	1
m-Xylene & p-Xylene	**0.118**		0.00399		mg/Kg		04/21/22 16:00	04/25/22 09:28	1
o-Xylene	**0.0233**		0.00200		mg/Kg		04/21/22 16:00	04/25/22 09:28	1
Xylenes, Total	**0.141**		0.00399		mg/Kg		04/21/22 16:00	04/25/22 09:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*04/21/22 16:00*	*04/25/22 09:28*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*04/21/22 16:00*	*04/25/22 09:28*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.166**		0.00399		mg/Kg			04/25/22 16:29	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			04/21/22 09:38	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2203-1
SDG: 03E1558015

Client Sample ID: SS06

Lab Sample ID: 890-2203-3
Matrix: Solid
Date Collected: 04/18/22 11:50
Date Received: 04/19/22 12:10
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		04/20/22 15:27	04/20/22 23:37	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		04/20/22 15:27	04/20/22 23:37	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		04/20/22 15:27	04/20/22 23:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*116*		*70 - 130*	*04/20/22 15:27*	*04/20/22 23:37*	*1*
o-Terphenyl	*136*	*S1+*	*70 - 130*	*04/20/22 15:27*	*04/20/22 23:37*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**213**		4.98		mg/Kg			04/27/22 23:51	1

Client Sample ID: SS07

Lab Sample ID: 890-2203-4
Matrix: Solid
Date Collected: 04/18/22 11:55
Date Received: 04/19/22 12:10
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		04/21/22 16:00	04/25/22 09:48	1
Toluene	<0.00199	U	0.00199		mg/Kg		04/21/22 16:00	04/25/22 09:48	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		04/21/22 16:00	04/25/22 09:48	1
m-Xylene & p-Xylene	**0.0294**		0.00398		mg/Kg		04/21/22 16:00	04/25/22 09:48	1
o-Xylene	**0.0106**		0.00199		mg/Kg		04/21/22 16:00	04/25/22 09:48	1
Xylenes, Total	**0.0400**		0.00398		mg/Kg		04/21/22 16:00	04/25/22 09:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*04/21/22 16:00*	*04/25/22 09:48*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*04/21/22 16:00*	*04/25/22 09:48*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0400**		0.00398		mg/Kg			04/25/22 16:29	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			04/21/22 09:38	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		04/20/22 15:27	04/20/22 23:57	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/20/22 15:27	04/20/22 23:57	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/20/22 15:27	04/20/22 23:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*115*		*70 - 130*	*04/20/22 15:27*	*04/20/22 23:57*	*1*
o-Terphenyl	*135*	*S1+*	*70 - 130*	*04/20/22 15:27*	*04/20/22 23:57*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2203-1
SDG: 03E1558015

Client Sample ID: SS07
Date Collected: 04/18/22 11:55
Date Received: 04/19/22 12:10
Sample Depth: 0.5

Lab Sample ID: 890-2203-4
Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	111		4.97		mg/Kg			04/28/22 00:10	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2203-1
SDG: 03E1558015

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)
880-13850-A-27-C MS	Matrix Spike	109	111
880-13850-A-27-D MSD	Matrix Spike Duplicate	79	82
890-2203-1	SS04	108	94
890-2203-2	SS05	105	92
890-2203-3	SS06	107	94
890-2203-4	SS07	110	92
LCS 880-23967/1-A	Lab Control Sample	101	93
LCSD 880-23967/2-A	Lab Control Sample Dup	102	92
MB 880-23967/5-A	Method Blank	105	88

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)
890-2203-1	SS04	139 S1+	170 S1+
890-2203-1 MS	SS04	122	132 S1+
890-2203-1 MSD	SS04	122	133 S1+
890-2203-2	SS05	118	137 S1+
890-2203-3	SS06	116	136 S1+
890-2203-4	SS07	115	135 S1+
LCS 880-23857/2-A	Lab Control Sample	120	131 S1+
LCSD 880-23857/3-A	Lab Control Sample Dup	145 S1+	161 S1+
MB 880-23857/1-A	Method Blank	116	146 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2203-1
SDG: 03E1558015

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-23967/5-A
Matrix: Solid
Analysis Batch: 24109

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23967

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/21/22 16:00	04/25/22 01:58	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/21/22 16:00	04/25/22 01:58	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/21/22 16:00	04/25/22 01:58	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/21/22 16:00	04/25/22 01:58	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/21/22 16:00	04/25/22 01:58	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/21/22 16:00	04/25/22 01:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*04/21/22 16:00*	*04/25/22 01:58*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*04/21/22 16:00*	*04/25/22 01:58*	*1*

Lab Sample ID: LCS 880-23967/1-A
Matrix: Solid
Analysis Batch: 24109

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23967

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08769		mg/Kg		88	70 - 130		
Toluene			0.100	0.09042		mg/Kg		90	70 - 130		
Ethylbenzene			0.100	0.09356		mg/Kg		94	70 - 130		
m-Xylene & p-Xylene			0.200	0.1927		mg/Kg		96	70 - 130		
o-Xylene			0.100	0.09654		mg/Kg		97	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

Lab Sample ID: LCSD 880-23967/2-A
Matrix: Solid
Analysis Batch: 24109

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 23967

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08077		mg/Kg		81	70 - 130	8	35
Toluene			0.100	0.08128		mg/Kg		81	70 - 130	11	35
Ethylbenzene			0.100	0.08200		mg/Kg		82	70 - 130	13	35
m-Xylene & p-Xylene			0.200	0.1675		mg/Kg		84	70 - 130	14	35
o-Xylene			0.100	0.08663		mg/Kg		87	70 - 130	11	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*

Lab Sample ID: 880-13850-A-27-C MS
Matrix: Solid
Analysis Batch: 24109

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 23967

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U	0.0998	0.1069		mg/Kg		107	70 - 130		
Toluene	<0.00200	U F1	0.0998	0.1327	F1	mg/Kg		133	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2203-1
SDG: 03E1558015

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

Lab Sample ID: 880-13850-A-27-C MS
Matrix: Solid
Analysis Batch: 24109

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 23967

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.0998	0.1129		mg/Kg		113	70 - 130
m-Xylene & p-Xylene	<0.00401	U	0.200	0.2220		mg/Kg		111	70 - 130
o-Xylene	<0.00200	U	0.0998	0.1165		mg/Kg		117	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*

Lab Sample ID: 880-13850-A-27-D MSD
Matrix: Solid
Analysis Batch: 24109

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 23967

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0996	0.08759		mg/Kg		88	70 - 130	20	35
Toluene	<0.00200	U F1	0.0996	0.1108		mg/Kg		111	70 - 130	18	35
Ethylbenzene	<0.00200	U	0.0996	0.09973		mg/Kg		100	70 - 130	12	35
m-Xylene & p-Xylene	<0.00401	U	0.199	0.1967		mg/Kg		99	70 - 130	12	35
o-Xylene	<0.00200	U	0.0996	0.09755		mg/Kg		98	70 - 130	18	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*79*		*70 - 130*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*

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

Lab Sample ID: MB 880-23857/1-A
Matrix: Solid
Analysis Batch: 23817

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23857

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		04/20/22 15:27	04/20/22 21:08	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/20/22 15:27	04/20/22 21:08	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/20/22 15:27	04/20/22 21:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*116*		*70 - 130*	*04/20/22 15:27*	*04/20/22 21:08*	*1*
o-Terphenyl	*146*	*S1+*	*70 - 130*	*04/20/22 15:27*	*04/20/22 21:08*	*1*

Lab Sample ID: LCS 880-23857/2-A
Matrix: Solid
Analysis Batch: 23817

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23857

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	848.2		mg/Kg		85	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1074		mg/Kg		107	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2203-1
SDG: 03E1558015

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

Lab Sample ID: LCS 880-23857/2-A
Matrix: Solid
Analysis Batch: 23817

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23857

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	120		70 - 130
o-Terphenyl	131	S1+	70 - 130

Lab Sample ID: LCSD 880-23857/3-A
Matrix: Solid
Analysis Batch: 23817

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 23857

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	897.9		mg/Kg		90	70 - 130	6	20
Diesel Range Organics (Over C10-C28)			1000	1231		mg/Kg		123	70 - 130	14	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	145	S1+	70 - 130
o-Terphenyl	161	S1+	70 - 130

Lab Sample ID: 890-2203-1 MS
Matrix: Solid
Analysis Batch: 23817

Client Sample ID: SS04
Prep Type: Total/NA
Prep Batch: 23857

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	1000	1012		mg/Kg		99	70 - 130
Diesel Range Organics (Over C10-C28)	56.0		1000	1019		mg/Kg		96	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	122		70 - 130
o-Terphenyl	132	S1+	70 - 130

Lab Sample ID: 890-2203-1 MSD
Matrix: Solid
Analysis Batch: 23817

Client Sample ID: SS04
Prep Type: Total/NA
Prep Batch: 23857

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	1147		mg/Kg		113	70 - 130	12	20
Diesel Range Organics (Over C10-C28)	56.0		998	1026		mg/Kg		97	70 - 130	1	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	122		70 - 130
o-Terphenyl	133	S1+	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2203-1
SDG: 03E1558015

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-23841/1-A
Matrix: Solid
Analysis Batch: 24343

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			04/27/22 22:54	1

Lab Sample ID: LCS 880-23841/2-A
Matrix: Solid
Analysis Batch: 24343

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	233.9		mg/Kg		94	90 - 110		

Lab Sample ID: LCSD 880-23841/3-A
Matrix: Solid
Analysis Batch: 24343

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	248.6		mg/Kg		99	90 - 110	6	20

Lab Sample ID: 890-2202-A-1-E MS
Matrix: Solid
Analysis Batch: 24343

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	5280	F1	2490	8546	F1	mg/Kg		131	90 - 110		

Lab Sample ID: 890-2202-A-1-F MSD
Matrix: Solid
Analysis Batch: 24343

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	5280	F1	2490	7818		mg/Kg		102	90 - 110	9	20

Lab Sample ID: 890-2204-A-5-C MS
Matrix: Solid
Analysis Batch: 24343

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	<4.97	U	249	241.6		mg/Kg		96	90 - 110		

Lab Sample ID: 890-2204-A-5-D MSD
Matrix: Solid
Analysis Batch: 24343

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	<4.97	U	249	224.8		mg/Kg		90	90 - 110	7	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2203-1
SDG: 03E1558015

GC VOA

Prep Batch: 23967

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2203-1	SS04	Total/NA	Solid	5035	
890-2203-2	SS05	Total/NA	Solid	5035	
890-2203-3	SS06	Total/NA	Solid	5035	
890-2203-4	SS07	Total/NA	Solid	5035	
MB 880-23967/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-23967/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-23967/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-13850-A-27-C MS	Matrix Spike	Total/NA	Solid	5035	
880-13850-A-27-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 24109

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2203-1	SS04	Total/NA	Solid	8021B	23967
890-2203-2	SS05	Total/NA	Solid	8021B	23967
890-2203-3	SS06	Total/NA	Solid	8021B	23967
890-2203-4	SS07	Total/NA	Solid	8021B	23967
MB 880-23967/5-A	Method Blank	Total/NA	Solid	8021B	23967
LCS 880-23967/1-A	Lab Control Sample	Total/NA	Solid	8021B	23967
LCSD 880-23967/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	23967
880-13850-A-27-C MS	Matrix Spike	Total/NA	Solid	8021B	23967
880-13850-A-27-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	23967

Analysis Batch: 24211

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2203-1	SS04	Total/NA	Solid	Total BTEX	
890-2203-2	SS05	Total/NA	Solid	Total BTEX	
890-2203-3	SS06	Total/NA	Solid	Total BTEX	
890-2203-4	SS07	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 23817

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2203-1	SS04	Total/NA	Solid	8015B NM	23857
890-2203-2	SS05	Total/NA	Solid	8015B NM	23857
890-2203-3	SS06	Total/NA	Solid	8015B NM	23857
890-2203-4	SS07	Total/NA	Solid	8015B NM	23857
MB 880-23857/1-A	Method Blank	Total/NA	Solid	8015B NM	23857
LCS 880-23857/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	23857
LCSD 880-23857/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	23857
890-2203-1 MS	SS04	Total/NA	Solid	8015B NM	23857
890-2203-1 MSD	SS04	Total/NA	Solid	8015B NM	23857

Prep Batch: 23857

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2203-1	SS04	Total/NA	Solid	8015NM Prep	
890-2203-2	SS05	Total/NA	Solid	8015NM Prep	
890-2203-3	SS06	Total/NA	Solid	8015NM Prep	
890-2203-4	SS07	Total/NA	Solid	8015NM Prep	
MB 880-23857/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-23857/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2203-1
SDG: 03E1558015

GC Semi VOA (Continued)

Prep Batch: 23857 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-23857/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2203-1 MS	SS04	Total/NA	Solid	8015NM Prep	
890-2203-1 MSD	SS04	Total/NA	Solid	8015NM Prep	

Analysis Batch: 23901

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2203-1	SS04	Total/NA	Solid	8015 NM	
890-2203-2	SS05	Total/NA	Solid	8015 NM	
890-2203-3	SS06	Total/NA	Solid	8015 NM	
890-2203-4	SS07	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 23841

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2203-1	SS04	Soluble	Solid	DI Leach	
890-2203-2	SS05	Soluble	Solid	DI Leach	
890-2203-3	SS06	Soluble	Solid	DI Leach	
890-2203-4	SS07	Soluble	Solid	DI Leach	
MB 880-23841/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-23841/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-23841/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2202-A-1-E MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2202-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
890-2204-A-5-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2204-A-5-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 24343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2203-1	SS04	Soluble	Solid	300.0	23841
890-2203-2	SS05	Soluble	Solid	300.0	23841
890-2203-3	SS06	Soluble	Solid	300.0	23841
890-2203-4	SS07	Soluble	Solid	300.0	23841
MB 880-23841/1-A	Method Blank	Soluble	Solid	300.0	23841
LCS 880-23841/2-A	Lab Control Sample	Soluble	Solid	300.0	23841
LCSD 880-23841/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	23841
890-2202-A-1-E MS	Matrix Spike	Soluble	Solid	300.0	23841
890-2202-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	23841
890-2204-A-5-C MS	Matrix Spike	Soluble	Solid	300.0	23841
890-2204-A-5-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	23841

Lab Chronicle

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2203-1
SDG: 03E1558015

Client Sample ID: SS04
Date Collected: 04/18/22 11:30
Date Received: 04/19/22 12:10

Lab Sample ID: 890-2203-1
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			4.95 g	5 mL	23967	04/21/22 16:00	MR	XEN MID
Total/NA	Analysis	8021B		1			24109	04/25/22 08:47	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			24211	04/25/22 16:29	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23901	04/21/22 09:38	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	23857	04/20/22 15:27	DM	XEN MID
Total/NA	Analysis	8015B NM		1			23817	04/20/22 22:12	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	23841	04/20/22 12:40	SC	XEN MID
Soluble	Analysis	300.0		5			24343	04/27/22 23:39	CH	XEN MID

Client Sample ID: SS05
Date Collected: 04/18/22 11:40
Date Received: 04/19/22 12:10

Lab Sample ID: 890-2203-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	23967	04/21/22 16:00	MR	XEN MID
Total/NA	Analysis	8021B		1			24109	04/25/22 09:08	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			24211	04/25/22 16:29	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23901	04/21/22 09:38	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	23857	04/20/22 15:27	DM	XEN MID
Total/NA	Analysis	8015B NM		1			23817	04/20/22 23:15	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	23841	04/20/22 12:40	SC	XEN MID
Soluble	Analysis	300.0		1			24343	04/27/22 23:45	CH	XEN MID

Client Sample ID: SS06
Date Collected: 04/18/22 11:50
Date Received: 04/19/22 12:10

Lab Sample ID: 890-2203-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	23967	04/21/22 16:00	MR	XEN MID
Total/NA	Analysis	8021B		1			24109	04/25/22 09:28	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			24211	04/25/22 16:29	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23901	04/21/22 09:38	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	23857	04/20/22 15:27	DM	XEN MID
Total/NA	Analysis	8015B NM		1			23817	04/20/22 23:37	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	23841	04/20/22 12:40	SC	XEN MID
Soluble	Analysis	300.0		1			24343	04/27/22 23:51	CH	XEN MID

Client Sample ID: SS07
Date Collected: 04/18/22 11:55
Date Received: 04/19/22 12:10

Lab Sample ID: 890-2203-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	23967	04/21/22 16:00	MR	XEN MID
Total/NA	Analysis	8021B		1			24109	04/25/22 09:48	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			24211	04/25/22 16:29	AJ	XEN MID

Lab Chronicle

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2203-1
SDG: 03E1558015

Client Sample ID: SS07

Date Collected: 04/18/22 11:55
Date Received: 04/19/22 12:10

Lab Sample ID: 890-2203-4

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			23901	04/21/22 09:38	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	23857	04/20/22 15:27	DM	XEN MID
Total/NA	Analysis	8015B NM		1			23817	04/20/22 23:57	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	23841	04/20/22 12:40	SC	XEN MID
Soluble	Analysis	300.0		1			24343	04/28/22 00:10	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 15 TWR

Job ID: 890-2203-1
SDG: 03E1558015

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 15 TWR

Job ID: 890-2203-1
SDG: 03E1558015

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 15 TWR

Job ID: 890-2203-1
SDG: 03E1558015

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2203-1	SS04	Solid	04/18/22 11:30	04/19/22 12:10	0.5
890-2203-2	SS05	Solid	04/18/22 11:40	04/19/22 12:10	0.5
890-2203-3	SS06	Solid	04/18/22 11:50	04/19/22 12:10	0.5
890-2203-4	SS07	Solid	04/18/22 11:55	04/19/22 12:10	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)	Adrian Baker
Company Name:	Ensolum, LLC	Company Name:	XTO Energy, Inc.
Address:	2351 W Northwest Hwy Suite 1203A	Address:	3104 E. Green Street
City, State ZIP:	Dallas, TX 75220	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 15 TWR	Turn Around	
Project Number:	03E1558015	☒ Routine ☐ Rush	
Project Location:	EDDY COUNTY, NM	Due Date:	
Sampler's Name:	Ben Belill	TAT starts the day received by the lab, if received by 4:30pm	
PO #:	NAPP2205638843		

SAMPLE RECEIPT	Temp Blank:	Yes No	Wet Ice: Yes No
Samples Received Intact:	Yes No	Thermometer ID:	IR007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	1.6
Total Containers:		Corrected Temperature:	1.4

ANALYSIS REQUEST

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

890-2203 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Parameters: CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)	Sample Comments
SS04	S	4/18/22	1130	0.5'	G	1	X	X	X	PC: 20277111001
SS05			1140							
SS06			1150							
SS07			1155							

SS08 4/18/22

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	4-19-22	4/19/20 @ 1210	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev: 2020.2

Eurofins Carlsbad
1089 N Canal St
Carlsbad NM 88220
Phone 575-988-3199 Fax 575-988-3199

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s)	COC No: 890-712 1
Client Contact: Shipping/Receiving	Phone	E-Mail: Jessica Kramer@et.eurofinsus com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-2203-1
Address: 1211 W Florida Ave	Due Date Requested: 4/25/2022			
City: Midland	TAT Requested (days):			
State Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: PLU 15 TWR	Project #: 89000093			
Site	SSOW#:			

Analysis Requested

Preservation Codes

A	HCL	M	Hexane
B	NaOH	N	None
C	Zn Acetate	O	AsNaO2
D	Nitric Acid	P	Na2O4S
E	NaHSO4	Q	Na2SO3
F	MeOH	R	Na2S2O3
G	Amchlor	S	H2SO4
H	Ascorbic Acid	T	TSP Dodecahydrate
I	Ice	U	Acetone
J	DI Water	V	MCAA
K	EDTA	W	pH 4-5
L	EDA	Z	other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	8015MOD_Calc	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc (MOD) BTEX	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
SS04 (890-2203-1)	4/18/22	11 30 Mountain		Solid			X	X	X	X	X	1	
SS05 (890-2203-2)	4/18/22	11 40 Mountain		Solid			X	X	X	X	X	1	
SS06 (890-2203-3)	4/18/22	11 50 Mountain		Solid			X	X	X	X	X	1	
SS07 (890-2203-4)	4/18/22	11 55 Mountain		Solid			X	X	X	X	X	1	

Note. Since laboratory accreditations are subject to change Eurofins Environment Testing South Central LLC places the ownership of method analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Central LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Environment Testing South Central LLC attention immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Environment Testing South Central LLC.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested I II III IV Other (specify) Primary Deliverable Rank 2	Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1		4/19/22			4/20/22	
2	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
3	Relinquished by	Date/Time	Company	Received by	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks.

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2203-1
SDG Number: 03E1558015

Login Number: 2203
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: 890-2203-1
SDG Number: 03E1558015

Login Number: 2203
List Number: 2
Creator: Teel, Brianna

List Source: Eurofins Midland
List Creation: 04/20/22 10:37 AM

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-2558-1
Laboratory Sample Delivery Group: 03E1558013
Client Project/Site: Poker Lake Unit 15 TWR

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

Attn: Ben Belill

JKramer

Authorized for release by:
7/21/2022 9:53:13 AM

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

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

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

Client: Ensolum
Project/Site: Poker Lake Unit 15 TWR

Laboratory Job ID: 890-2558-1
SDG: 03E1558013

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-2558-1
Project/Site: Poker Lake Unit 15 TWR SDG: 03E1558013

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

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: Poker Lake Unit 15 TWR

Job ID: 890-2558-1
SDG: 03E1558013

Job ID: 890-2558-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2558-1

Receipt
The sample was received on 7/15/2022 10:06 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.8°C

GC VOA
Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-30066 and analytical batch 880-30035 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-29891/2-A) and (MB 880-29891/1-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The method blank for preparation batch 880-29891 and analytical batch 880-30026 contained Gasoline Range Organics (GRO)-C6-C10, OII Range Organics (Over C28-C36) and Total TPH above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD_NM: The laboratory control sample (LCS) for preparation batch 880-29891 and analytical batch 880-30026 recovered outside control limits for the following analytes: <AffectedAnalytes>. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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: Poker Lake Unit 15 TWR

Job ID: 890-2558-1
SDG: 03E1558013

Client Sample ID: PH03A

Date Collected: 07/13/22 10:20
Date Received: 07/15/22 10:06
Sample Depth: 3'

Lab Sample ID: 890-2558-1

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		07/19/22 11:50	07/19/22 19:15	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/19/22 11:50	07/19/22 19:15	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/19/22 11:50	07/19/22 19:15	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/19/22 11:50	07/19/22 19:15	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/19/22 11:50	07/19/22 19:15	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/19/22 11:50	07/19/22 19:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*07/19/22 11:50*	*07/19/22 19:15*	*1*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*	*07/19/22 11:50*	*07/19/22 19:15*	*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			07/20/22 11:54	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			07/20/22 10:23	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		07/18/22 08:34	07/19/22 19:26	1
Diesel Range Organics (Over C10-C28)	<50.0	U *+	50.0		mg/Kg		07/18/22 08:34	07/19/22 19:26	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/18/22 08:34	07/19/22 19:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*82*		*70 - 130*	*07/18/22 08:34*	*07/19/22 19:26*	*1*
o-Terphenyl	*93*		*70 - 130*	*07/18/22 08:34*	*07/19/22 19:26*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5.42**		5.00		mg/Kg			07/20/22 22:14	1

Surrogate Summary

Client: Ensolum
Project/Site: Poker Lake Unit 15 TWR

Job ID: 890-2558-1
SDG: 03E1558013

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)
890-2558-1	PH03A	106	108
890-2567-A-1-F MS	Matrix Spike	123	89
890-2567-A-1-G MSD	Matrix Spike Duplicate	106	86
LCS 880-30066/1-A	Lab Control Sample	103	100
LCSD 880-30066/2-A	Lab Control Sample Dup	122	88
MB 880-30066/5-A	Method Blank	98	104

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-16985-A-1-E MS	Matrix Spike	86	85
880-16985-A-1-F MSD	Matrix Spike Duplicate	88	85
890-2558-1	PH03A	82	93
LCS 880-29891/2-A	Lab Control Sample	133 S1+	137 S1+
LCSD 880-29891/3-A	Lab Control Sample Dup	123	126
MB 880-29891/1-A	Method Blank	129	157 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Poker Lake Unit 15 TWR

Job ID: 890-2558-1
SDG: 03E1558013

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-30066/5-A
Matrix: Solid
Analysis Batch: 30035

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30066

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/19/22 11:50	07/19/22 13:45	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/19/22 11:50	07/19/22 13:45	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/19/22 11:50	07/19/22 13:45	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/19/22 11:50	07/19/22 13:45	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/19/22 11:50	07/19/22 13:45	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/19/22 11:50	07/19/22 13:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*07/19/22 11:50*	*07/19/22 13:45*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*07/19/22 11:50*	*07/19/22 13:45*	*1*

Lab Sample ID: LCS 880-30066/1-A
Matrix: Solid
Analysis Batch: 30035

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30066

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1129		mg/Kg		113	70 - 130		
Toluene			0.100	0.1061		mg/Kg		106	70 - 130		
Ethylbenzene			0.100	0.09328		mg/Kg		93	70 - 130		
m-Xylene & p-Xylene			0.200	0.1887		mg/Kg		94	70 - 130		
o-Xylene			0.100	0.09982		mg/Kg		100	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 880-30066/2-A
Matrix: Solid
Analysis Batch: 30035

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30066

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09030		mg/Kg		90	70 - 130	22	35
Toluene			0.100	0.1148		mg/Kg		115	70 - 130	8	35
Ethylbenzene			0.100	0.1146		mg/Kg		115	70 - 130	21	35
m-Xylene & p-Xylene			0.200	0.2473		mg/Kg		124	70 - 130	27	35
o-Xylene			0.100	0.1292		mg/Kg		129	70 - 130	26	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*

Lab Sample ID: 890-2567-A-1-F MS
Matrix: Solid
Analysis Batch: 30035

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 30066

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U	0.0994	0.07291		mg/Kg		73	70 - 130		
Toluene	<0.00200	U	0.0994	0.08477		mg/Kg		85	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Poker Lake Unit 15 TWR

Job ID: 890-2558-1
SDG: 03E1558013

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

Lab Sample ID: 890-2567-A-1-F MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30035 — **Prep Batch: 30066**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.0994	0.08515		mg/Kg		86	70 - 130
m-Xylene & p-Xylene	<0.00399	U	0.199	0.1614		mg/Kg		81	70 - 130
o-Xylene	<0.00200	U	0.0994	0.08458		mg/Kg		85	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*

Lab Sample ID: 890-2567-A-1-G MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30035 — **Prep Batch: 30066**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.101	0.07331		mg/Kg		73	70 - 130	1	35
Toluene	<0.00200	U	0.101	0.08756		mg/Kg		87	70 - 130	3	35
Ethylbenzene	<0.00200	U	0.101	0.08347		mg/Kg		83	70 - 130	2	35
m-Xylene & p-Xylene	<0.00399	U	0.202	0.1699		mg/Kg		84	70 - 130	5	35
o-Xylene	<0.00200	U	0.101	0.08956		mg/Kg		89	70 - 130	6	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*

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

Lab Sample ID: MB 880-29891/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30026 — **Prep Batch: 29891**

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		07/18/22 08:34	07/19/22 14:19	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		07/18/22 08:34	07/19/22 14:19	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/18/22 08:34	07/19/22 14:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*129*		*70 - 130*	*07/18/22 08:34*	*07/19/22 14:19*	*1*
o-Terphenyl	*157*	*S1+*	*70 - 130*	*07/18/22 08:34*	*07/19/22 14:19*	*1*

Lab Sample ID: LCS 880-29891/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30026 — **Prep Batch: 29891**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1227		mg/Kg		123	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1345	*+	mg/Kg		135	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: Poker Lake Unit 15 TWR

Job ID: 890-2558-1
SDG: 03E1558013

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

Lab Sample ID: LCS 880-29891/2-A
Matrix: Solid
Analysis Batch: 30026

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 29891

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	133	S1+	70 - 130
o-Terphenyl	137	S1+	70 - 130

Lab Sample ID: LCSD 880-29891/3-A
Matrix: Solid
Analysis Batch: 30026

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 29891

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1141		mg/Kg		114	70 - 130	7	20
Diesel Range Organics (Over C10-C28)			1000	1241		mg/Kg		124	70 - 130	8	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	123		70 - 130
o-Terphenyl	126		70 - 130

Lab Sample ID: 880-16985-A-1-E MS
Matrix: Solid
Analysis Batch: 30026

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 29891

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	1013		mg/Kg		99	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U *+	1000	875.1		mg/Kg		88	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	86		70 - 130
o-Terphenyl	85		70 - 130

Lab Sample ID: 880-16985-A-1-F MSD
Matrix: Solid
Analysis Batch: 30026

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 29891

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	1034		mg/Kg		101	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<50.0	U *+	999	865.2		mg/Kg		87	70 - 130	1	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	88		70 - 130
o-Terphenyl	85		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Poker Lake Unit 15 TWR

Job ID: 890-2558-1
SDG: 03E1558013

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-29896/1-A
Matrix: Solid
Analysis Batch: 29940

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			07/20/22 19:46	1

Lab Sample ID: LCS 880-29896/2-A
Matrix: Solid
Analysis Batch: 29940

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	259.2		mg/Kg		104	90 - 110		

Lab Sample ID: LCSD 880-29896/3-A
Matrix: Solid
Analysis Batch: 29940

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	259.0		mg/Kg		104	90 - 110	0	20

Lab Sample ID: 880-16985-A-1-B MS
Matrix: Solid
Analysis Batch: 29940

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	11.4		252	277.1		mg/Kg		105	90 - 110		

Lab Sample ID: 880-16985-A-1-C MSD
Matrix: Solid
Analysis Batch: 29940

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	11.4		252	276.4		mg/Kg		105	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Poker Lake Unit 15 TWR

Job ID: 890-2558-1
SDG: 03E1558013

GC VOA

Analysis Batch: 30035

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2558-1	PH03A	Total/NA	Solid	8021B	30066
MB 880-30066/5-A	Method Blank	Total/NA	Solid	8021B	30066
LCS 880-30066/1-A	Lab Control Sample	Total/NA	Solid	8021B	30066
LCSD 880-30066/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30066
890-2567-A-1-F MS	Matrix Spike	Total/NA	Solid	8021B	30066
890-2567-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30066

Prep Batch: 30066

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2558-1	PH03A	Total/NA	Solid	5035	
MB 880-30066/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30066/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30066/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2567-A-1-F MS	Matrix Spike	Total/NA	Solid	5035	
890-2567-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 30123

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2558-1	PH03A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 29891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2558-1	PH03A	Total/NA	Solid	8015NM Prep	
MB 880-29891/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-29891/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-29891/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-16985-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-16985-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 30026

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2558-1	PH03A	Total/NA	Solid	8015B NM	29891
MB 880-29891/1-A	Method Blank	Total/NA	Solid	8015B NM	29891
LCS 880-29891/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	29891
LCSD 880-29891/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	29891
880-16985-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	29891
880-16985-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	29891

Analysis Batch: 30107

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2558-1	PH03A	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 29896

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2558-1	PH03A	Soluble	Solid	DI Leach	
MB 880-29896/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-29896/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-29896/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: Poker Lake Unit 15 TWR

Job ID: 890-2558-1
SDG: 03E1558013

HPLC/IC (Continued)

Leach Batch: 29896 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-16985-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-16985-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 29940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2558-1	PH03A	Soluble	Solid	300.0	29896
MB 880-29896/1-A	Method Blank	Soluble	Solid	300.0	29896
LCS 880-29896/2-A	Lab Control Sample	Soluble	Solid	300.0	29896
LCSD 880-29896/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	29896
880-16985-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	29896
880-16985-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	29896

Lab Chronicle

Client: Ensolum
Project/Site: Poker Lake Unit 15 TWR

Job ID: 890-2558-1
SDG: 03E1558013

Client Sample ID: PH03A
Date Collected: 07/13/22 10:20
Date Received: 07/15/22 10:06

Lab Sample ID: 890-2558-1
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	30066	07/19/22 11:50	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30035	07/19/22 19:15	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30123	07/20/22 11:54	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30107	07/20/22 10:23	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	29891	07/18/22 08:34	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30026	07/19/22 19:26	SM	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	29896	07/18/22 08:45	KS	XEN MID
Soluble	Analysis	300.0		1			29940	07/20/22 22:14	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: Poker Lake Unit 15 TWR

Job ID: 890-2558-1
SDG: 03E1558013

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: Poker Lake Unit 15 TWR

Job ID: 890-2558-1
SDG: 03E1558013

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: Poker Lake Unit 15 TWR

Job ID: 890-2558-1
SDG: 03E1558013

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2558-1	PH03A	Solid	07/13/22 10:20	07/15/22 10:06	3'

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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
Address:		Address:	3104 E GREEN ST.
City, State ZIP:		City, State ZIP:	Carlsbad, NM
Phone:	989854 0857	Email:	Bbelill @ ensolum

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:	POKER LAKE UNIT 15 TNR	Turn Around	
Project Number:	03E1SS 8013	☒ Routine ☐ Rush	
Project Location:		Due Date:	
Sampler's Name:	Conner Shaw	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:	IAM-007	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	5.0	
Total Containers:		Corrected Temperature:	4.8	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: Chloride	TPH	BTEX
PH03 A	S	07.12.22	1020	3'	G	1		X	X	X

ANALYSIS REQUEST

Preservative Codes

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

Sample Comments

CC:2027711001

INC ID:
nAPP2205641685

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		7/15/22 1006	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2558-1
SDG Number: 03E1558013

Login Number: 2558
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: 890-2558-1
SDG Number: 03E1558013

Login Number: 2558
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 07/18/22 08:47 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: 890-2560-1
Laboratory Sample Delivery Group: 03E1558013
Client Project/Site: Poker LakeUnit 15 TWR

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

Attn: Ben Belill

JKramer

Authorized for release by:
7/25/2022 10:38:42 AM

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

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

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

Client: Ensolum
Project/Site: Poker LakeUnit 15 TWR

Laboratory Job ID: 890-2560-1
SDG: 03E1558013

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Poker LakeUnit 15 TWR

Job ID: 890-2560-1
SDG: 03E1558013

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

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: Poker LakeUnit 15 TWR

Job ID: 890-2560-1
SDG: 03E1558013

Job ID: 890-2560-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2560-1

Receipt
The samples were received on 7/15/2022 10:06 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.8°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 880-30180 and analytical batch 880-30181 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: PH02 (890-2560-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: PH03 (890-2560-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: PH03 (890-2560-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-29891/2-A) and (MB 880-29891/1-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The method blank for preparation batch 880-29891 and analytical batch 880-30026 contained Gasoline Range Organics (GRO)-C6-C10, OII Range Organics (Over C28-C36) and Total TPH above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD_NM: The laboratory control sample (LCS) for preparation batch 880-29891 and analytical batch 880-30026 recovered outside control limits for the following analytes: <AffectedAnalytes>. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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: Poker LakeUnit 15 TWR

Job ID: 890-2560-1
SDG: 03E1558013

Client Sample ID: PH01

Lab Sample ID: 890-2560-1
Matrix: Solid
Date Collected: 07/13/22 09:30
Date Received: 07/15/22 10:06
Sample Depth: 1'

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		07/20/22 16:33	07/20/22 19:44	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/20/22 16:33	07/20/22 19:44	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/20/22 16:33	07/20/22 19:44	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/20/22 16:33	07/20/22 19:44	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/20/22 16:33	07/20/22 19:44	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/20/22 16:33	07/20/22 19:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*07/20/22 16:33*	*07/20/22 19:44*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*07/20/22 16:33*	*07/20/22 19:44*	*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			07/21/22 10:26	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			07/20/22 10:23	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		07/18/22 08:34	07/19/22 21:42	1
Diesel Range Organics (Over C10-C28)	<50.0	U *+	50.0		mg/Kg		07/18/22 08:34	07/19/22 21:42	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/18/22 08:34	07/19/22 21:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*90*		*70 - 130*	*07/18/22 08:34*	*07/19/22 21:42*	*1*
o-Terphenyl	*105*		*70 - 130*	*07/18/22 08:34*	*07/19/22 21:42*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**304**		5.01		mg/Kg			07/20/22 23:37	1

Client Sample ID: PH01A

Lab Sample ID: 890-2560-2
Matrix: Solid
Date Collected: 07/13/22 09:40
Date Received: 07/15/22 10:06
Sample Depth: 3'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/20/22 16:33	07/20/22 20:05	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/20/22 16:33	07/20/22 20:05	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/20/22 16:33	07/20/22 20:05	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/20/22 16:33	07/20/22 20:05	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/20/22 16:33	07/20/22 20:05	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/20/22 16:33	07/20/22 20:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*07/20/22 16:33*	*07/20/22 20:05*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: Poker LakeUnit 15 TWR

Job ID: 890-2560-1
SDG: 03E1558013

Client Sample ID: PH01A

Lab Sample ID: 890-2560-2
Matrix: Solid

Date Collected: 07/13/22 09:40
Date Received: 07/15/22 10:06
Sample Depth: 3'

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*07/20/22 16:33*	*07/20/22 20:05*	*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			07/21/22 10:26	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			07/20/22 10:23	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		07/18/22 08:34	07/19/22 22:04	1
Diesel Range Organics (Over C10-C28)	<50.0	U *+	50.0		mg/Kg		07/18/22 08:34	07/19/22 22:04	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/18/22 08:34	07/19/22 22:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*07/18/22 08:34*	*07/19/22 22:04*	*1*
o-Terphenyl	*108*		*70 - 130*	*07/18/22 08:34*	*07/19/22 22:04*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**46.4**		4.97		mg/Kg			07/20/22 23:46	1

Client Sample ID: PH02

Lab Sample ID: 890-2560-3
Matrix: Solid

Date Collected: 07/13/22 09:45
Date Received: 07/15/22 10:06
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		07/20/22 16:33	07/20/22 20:26	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/20/22 16:33	07/20/22 20:26	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/20/22 16:33	07/20/22 20:26	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/20/22 16:33	07/20/22 20:26	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/20/22 16:33	07/20/22 20:26	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/20/22 16:33	07/20/22 20:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*65*	*S1-*	*70 - 130*	*07/20/22 16:33*	*07/20/22 20:26*	*1*
1,4-Difluorobenzene (Surr)	*118*		*70 - 130*	*07/20/22 16:33*	*07/20/22 20:26*	*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			07/21/22 10:26	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**109**		50.0		mg/Kg			07/20/22 10:23	1

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Client Sample Results

Client: Ensolum
Project/Site: Poker LakeUnit 15 TWR

Job ID: 890-2560-1
SDG: 03E1558013

Client Sample ID: PH02

Date Collected: 07/13/22 09:45
Date Received: 07/15/22 10:06
Sample Depth: 1'

Lab Sample ID: 890-2560-3

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		07/18/22 08:34	07/20/22 12:37	1
Diesel Range Organics (Over C10-C28)	**109**	***+**	50.0		mg/Kg		07/18/22 08:34	07/20/22 12:37	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/18/22 08:34	07/20/22 12:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*107*		*70 - 130*	*07/18/22 08:34*	*07/20/22 12:37*	*1*
o-Terphenyl	*122*		*70 - 130*	*07/18/22 08:34*	*07/20/22 12:37*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**75.7**		4.95		mg/Kg			07/20/22 23:55	1

Client Sample ID: PH02A

Date Collected: 07/13/22 09:55
Date Received: 07/15/22 10:06
Sample Depth: 3'

Lab Sample ID: 890-2560-4

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		07/20/22 16:33	07/20/22 20:47	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/20/22 16:33	07/20/22 20:47	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/20/22 16:33	07/20/22 20:47	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/20/22 16:33	07/20/22 20:47	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/20/22 16:33	07/20/22 20:47	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/20/22 16:33	07/20/22 20:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*07/20/22 16:33*	*07/20/22 20:47*	*1*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*	*07/20/22 16:33*	*07/20/22 20:47*	*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			07/21/22 10:26	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			07/20/22 10:23	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		07/18/22 08:34	07/19/22 22:50	1
Diesel Range Organics (Over C10-C28)	<49.9	U *+	49.9		mg/Kg		07/18/22 08:34	07/19/22 22:50	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/18/22 08:34	07/19/22 22:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*07/18/22 08:34*	*07/19/22 22:50*	*1*
o-Terphenyl	*110*		*70 - 130*	*07/18/22 08:34*	*07/19/22 22:50*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Poker LakeUnit 15 TWR

Job ID: 890-2560-1
SDG: 03E1558013

Client Sample ID: PH02A

Lab Sample ID: 890-2560-4
Matrix: Solid
Date Collected: 07/13/22 09:55
Date Received: 07/15/22 10:06
Sample Depth: 3'

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9.02**		4.98		mg/Kg			07/21/22 00:04	1

Client Sample ID: PH03

Lab Sample ID: 890-2560-5
Matrix: Solid
Date Collected: 07/13/22 10:10
Date Received: 07/15/22 10:06
Sample Depth: 1'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.200	U	0.200		mg/Kg		07/21/22 09:27	07/21/22 14:48	100
Toluene	**4.76**		0.200		mg/Kg		07/21/22 09:27	07/21/22 14:48	100
Ethylbenzene	**5.91**		0.200		mg/Kg		07/21/22 09:27	07/21/22 14:48	100
m-Xylene & p-Xylene	**58.5**		2.00		mg/Kg		07/22/22 10:12	07/22/22 14:41	500
o-Xylene	**33.8**		0.200		mg/Kg		07/21/22 09:27	07/21/22 14:48	100
Xylenes, Total	**76.2**		2.00		mg/Kg		07/22/22 10:12	07/22/22 14:41	500

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*253*	*S1+*	*70 - 130*	*07/21/22 09:27*	*07/21/22 14:48*	*100*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*	*07/21/22 09:27*	*07/21/22 14:48*	*100*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**103**		2.00		mg/Kg			07/21/22 10:26	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**6910**		50.0		mg/Kg			07/20/22 10:23	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	**1890**		50.0		mg/Kg		07/18/22 08:34	07/20/22 12:59	1
Diesel Range Organics (Over C10-C28)	**4200**	***+**	50.0		mg/Kg		07/18/22 08:34	07/20/22 12:59	1
Oil Range Organics (Over C28-C36)	**822**		50.0		mg/Kg		07/18/22 08:34	07/20/22 12:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*125*		*70 - 130*	*07/18/22 08:34*	*07/20/22 12:59*	*1*
o-Terphenyl	*106*		*70 - 130*	*07/18/22 08:34*	*07/20/22 12:59*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**23.5**		4.95		mg/Kg			07/21/22 00:13	1

Surrogate Summary

Client: Ensolum
Project/Site: Poker LakeUnit 15 TWR

Job ID: 890-2560-1
SDG: 03E1558013

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-16985-A-1-H MS	Matrix Spike	107	87
880-16985-A-1-I MSD	Matrix Spike Duplicate	118	94
880-17242-A-1-C MS	Matrix Spike	104	98
880-17242-A-1-D MSD	Matrix Spike Duplicate	106	97
890-2560-1	PH01	104	112
890-2560-1 MS	PH01	104	91
890-2560-1 MSD	PH01	99	86
890-2560-2	PH01A	108	112
890-2560-3	PH02	65 S1-	118
890-2560-4	PH02A	110	115
890-2560-5	PH03	253 S1+	82
LCS 880-30180/1-A	Lab Control Sample	93	100
LCS 880-30209/1-A	Lab Control Sample	116	93
LCS 880-30328/1-A	Lab Control Sample	105	95
LCSD 880-30180/2-A	Lab Control Sample Dup	91	104
LCSD 880-30209/2-A	Lab Control Sample Dup	96	104
LCSD 880-30328/2-A	Lab Control Sample Dup	103	96
MB 880-30180/5-A	Method Blank	96	108
MB 880-30209/5-A	Method Blank	101	104
MB 880-30328/5-A	Method Blank	97	86

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)
880-16985-A-1-E MS	Matrix Spike	86	85
880-16985-A-1-F MSD	Matrix Spike Duplicate	88	85
890-2560-1	PH01	90	105
890-2560-2	PH01A	92	108
890-2560-3	PH02	107	122
890-2560-4	PH02A	93	110
890-2560-5	PH03	125	106
LCS 880-29891/2-A	Lab Control Sample	133 S1+	137 S1+
LCSD 880-29891/3-A	Lab Control Sample Dup	123	126
MB 880-29891/1-A	Method Blank	129	157 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Poker LakeUnit 15 TWR

Job ID: 890-2560-1
SDG: 03E1558013

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-30180/5-A
Matrix: Solid
Analysis Batch: 30181

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30180

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/20/22 16:33	07/20/22 19:22	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/20/22 16:33	07/20/22 19:22	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/20/22 16:33	07/20/22 19:22	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/20/22 16:33	07/20/22 19:22	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/20/22 16:33	07/20/22 19:22	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/20/22 16:33	07/20/22 19:22	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*07/20/22 16:33*	*07/20/22 19:22*	*1*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*	*07/20/22 16:33*	*07/20/22 19:22*	*1*

Lab Sample ID: LCS 880-30180/1-A
Matrix: Solid
Analysis Batch: 30181

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30180

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1074		mg/Kg		107	70 - 130		
Toluene			0.100	0.09479		mg/Kg		95	70 - 130		
Ethylbenzene			0.100	0.09485		mg/Kg		95	70 - 130		
m-Xylene & p-Xylene			0.200	0.1867		mg/Kg		93	70 - 130		
o-Xylene			0.100	0.1020		mg/Kg		102	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 880-30180/2-A
Matrix: Solid
Analysis Batch: 30181

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30180

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1103		mg/Kg		110	70 - 130	3	35
Toluene			0.100	0.09454		mg/Kg		95	70 - 130	0	35
Ethylbenzene			0.100	0.09283		mg/Kg		93	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.1816		mg/Kg		91	70 - 130	3	35
o-Xylene			0.100	0.09927		mg/Kg		99	70 - 130	3	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: 890-2560-1 MS
Matrix: Solid
Analysis Batch: 30181

Client Sample ID: PH01
Prep Type: Total/NA
Prep Batch: 30180

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U F1	0.0998	0.08133		mg/Kg		81	70 - 130		
Toluene	<0.00201	U	0.0998	0.08680		mg/Kg		86	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Poker LakeUnit 15 TWR

Job ID: 890-2560-1
SDG: 03E1558013

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

Lab Sample ID: 890-2560-1 MS
Matrix: Solid
Analysis Batch: 30181

Client Sample ID: PH01
Prep Type: Total/NA
Prep Batch: 30180

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U	0.0998	0.08779		mg/Kg		88	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.200	0.1753		mg/Kg		87	70 - 130
o-Xylene	<0.00201	U	0.0998	0.09524		mg/Kg		95	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*

Lab Sample ID: 890-2560-1 MSD
Matrix: Solid
Analysis Batch: 30181

Client Sample ID: PH01
Prep Type: Total/NA
Prep Batch: 30180

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U F1	0.100	0.06414	F1	mg/Kg		64	70 - 130	24	35
Toluene	<0.00201	U	0.100	0.07224		mg/Kg		71	70 - 130	18	35
Ethylbenzene	<0.00201	U	0.100	0.07426		mg/Kg		74	70 - 130	17	35
m-Xylene & p-Xylene	<0.00402	U	0.200	0.1438		mg/Kg		71	70 - 130	20	35
o-Xylene	<0.00201	U	0.100	0.07880		mg/Kg		79	70 - 130	19	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*

Lab Sample ID: MB 880-30209/5-A
Matrix: Solid
Analysis Batch: 30192

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30209

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:27	07/21/22 11:20	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:27	07/21/22 11:20	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:27	07/21/22 11:20	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/21/22 09:27	07/21/22 11:20	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:27	07/21/22 11:20	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/21/22 09:27	07/21/22 11:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*07/21/22 09:27*	*07/21/22 11:20*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*07/21/22 09:27*	*07/21/22 11:20*	*1*

Lab Sample ID: LCS 880-30209/1-A
Matrix: Solid
Analysis Batch: 30192

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30209

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene			0.100	0.08401		mg/Kg		84	70 - 130
Toluene			0.100	0.09906		mg/Kg		99	70 - 130
Ethylbenzene			0.100	0.1113		mg/Kg		111	70 - 130
m-Xylene & p-Xylene			0.200	0.2318		mg/Kg		116	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Poker LakeUnit 15 TWR

Job ID: 890-2560-1
SDG: 03E1558013

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

Lab Sample ID: LCS 880-30209/1-A
Matrix: Solid
Analysis Batch: 30192

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30209

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
o-Xylene			0.100	0.1269		mg/Kg		127	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

Lab Sample ID: LCSD 880-30209/2-A
Matrix: Solid
Analysis Batch: 30192

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30209

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1030		mg/Kg		103	70 - 130	20	35
Toluene			0.100	0.09343		mg/Kg		93	70 - 130	6	35
Ethylbenzene			0.100	0.09535		mg/Kg		95	70 - 130	15	35
m-Xylene & p-Xylene			0.200	0.1889		mg/Kg		94	70 - 130	20	35
o-Xylene			0.100	0.1032		mg/Kg		103	70 - 130	21	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: 880-16985-A-1-H MS
Matrix: Solid
Analysis Batch: 30192

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 30209

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U	0.0998	0.07821		mg/Kg		78	70 - 130		
Toluene	<0.00201	U	0.0998	0.09070		mg/Kg		91	70 - 130		
Ethylbenzene	<0.00201	U	0.0998	0.09555		mg/Kg		96	70 - 130		
m-Xylene & p-Xylene	<0.00402	U	0.200	0.1898		mg/Kg		95	70 - 130		
o-Xylene	<0.00201	U	0.0998	0.1013		mg/Kg		102	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*

Lab Sample ID: 880-16985-A-1-I MSD
Matrix: Solid
Analysis Batch: 30192

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 30209

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.100	0.08560		mg/Kg		85	70 - 130	9	35
Toluene	<0.00201	U	0.100	0.09653		mg/Kg		96	70 - 130	6	35
Ethylbenzene	<0.00201	U	0.100	0.1057		mg/Kg		105	70 - 130	10	35
m-Xylene & p-Xylene	<0.00402	U	0.200	0.2190		mg/Kg		109	70 - 130	14	35
o-Xylene	<0.00201	U	0.100	0.1191		mg/Kg		119	70 - 130	16	35

QC Sample Results

Client: Ensolum
Project/Site: Poker LakeUnit 15 TWR

Job ID: 890-2560-1
SDG: 03E1558013

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

Lab Sample ID: 880-16985-A-1-I MSD
Matrix: Solid
Analysis Batch: 30192

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 30209

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	118		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

Lab Sample ID: MB 880-30328/5-A
Matrix: Solid
Analysis Batch: 30325

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30328

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/22/22 08:50	07/22/22 11:14	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/22/22 08:50	07/22/22 11:14	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/22/22 08:50	07/22/22 11:14	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/22/22 08:50	07/22/22 11:14	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/22/22 08:50	07/22/22 11:14	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/22/22 08:50	07/22/22 11:14	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130	07/22/22 08:50	07/22/22 11:14	1
1,4-Difluorobenzene (Surr)	86		70 - 130	07/22/22 08:50	07/22/22 11:14	1

Lab Sample ID: LCS 880-30328/1-A
Matrix: Solid
Analysis Batch: 30325

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30328

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09966		mg/Kg		100	70 - 130		
Toluene			0.100	0.1016		mg/Kg		102	70 - 130		
Ethylbenzene			0.100	0.1075		mg/Kg		108	70 - 130		
m-Xylene & p-Xylene			0.200	0.2149		mg/Kg		107	70 - 130		
o-Xylene			0.100	0.1165		mg/Kg		116	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

Lab Sample ID: LCSD 880-30328/2-A
Matrix: Solid
Analysis Batch: 30325

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30328

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09516		mg/Kg		95	70 - 130	5	35
Toluene			0.100	0.09392		mg/Kg		94	70 - 130	8	35
Ethylbenzene			0.100	0.09809		mg/Kg		98	70 - 130	9	35
m-Xylene & p-Xylene			0.200	0.1951		mg/Kg		98	70 - 130	10	35
o-Xylene			0.100	0.1064		mg/Kg		106	70 - 130	9	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Poker LakeUnit 15 TWR

Job ID: 890-2560-1
SDG: 03E1558013

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

Lab Sample ID: LCSD 880-30328/2-A
Matrix: Solid
Analysis Batch: 30325

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30328

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,4-Difluorobenzene (Surr)	96		70 - 130

Lab Sample ID: 880-17242-A-1-C MS
Matrix: Solid
Analysis Batch: 30325

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 30328

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U	0.0994	0.08938		mg/Kg		90	70 - 130
Toluene	<0.00201	U	0.0994	0.08827		mg/Kg		89	70 - 130
Ethylbenzene	<0.00201	U	0.0994	0.09139		mg/Kg		92	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.199	0.1822		mg/Kg		92	70 - 130
o-Xylene	<0.00201	U	0.0994	0.09904		mg/Kg		100	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

Lab Sample ID: 880-17242-A-1-D MSD
Matrix: Solid
Analysis Batch: 30325

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 30328

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0998	0.09495		mg/Kg		95	70 - 130	6	35
Toluene	<0.00201	U	0.0998	0.09224		mg/Kg		92	70 - 130	4	35
Ethylbenzene	<0.00201	U	0.0998	0.09556		mg/Kg		96	70 - 130	4	35
m-Xylene & p-Xylene	<0.00402	U	0.200	0.1905		mg/Kg		95	70 - 130	4	35
o-Xylene	<0.00201	U	0.0998	0.1037		mg/Kg		104	70 - 130	5	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

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

Lab Sample ID: MB 880-29891/1-A
Matrix: Solid
Analysis Batch: 30026

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 29891

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		07/18/22 08:34	07/19/22 14:19	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		07/18/22 08:34	07/19/22 14:19	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/18/22 08:34	07/19/22 14:19	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	129		70 - 130	07/18/22 08:34	07/19/22 14:19	1
o-Terphenyl	157	S1+	70 - 130	07/18/22 08:34	07/19/22 14:19	1

QC Sample Results

Client: Ensolum
Project/Site: Poker LakeUnit 15 TWR

Job ID: 890-2560-1
SDG: 03E1558013

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

Lab Sample ID: LCS 880-29891/2-A
Matrix: Solid
Analysis Batch: 30026

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 29891

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1227		mg/Kg		123	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1345	*+	mg/Kg		135	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*133*	*S1+*	*70 - 130*
o-Terphenyl	*137*	*S1+*	*70 - 130*

Lab Sample ID: LCSD 880-29891/3-A
Matrix: Solid
Analysis Batch: 30026

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 29891

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1141		mg/Kg		114	70 - 130	7	20
Diesel Range Organics (Over C10-C28)			1000	1241		mg/Kg		124	70 - 130	8	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*123*		*70 - 130*
o-Terphenyl	*126*		*70 - 130*

Lab Sample ID: 880-16985-A-1-E MS
Matrix: Solid
Analysis Batch: 30026

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 29891

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	1013		mg/Kg		99	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U *+	1000	875.1		mg/Kg		88	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*86*		*70 - 130*
o-Terphenyl	*85*		*70 - 130*

Lab Sample ID: 880-16985-A-1-F MSD
Matrix: Solid
Analysis Batch: 30026

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 29891

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	1034		mg/Kg		101	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<50.0	U *+	999	865.2		mg/Kg		87	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*88*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Poker LakeUnit 15 TWR

Job ID: 890-2560-1
SDG: 03E1558013

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

Lab Sample ID: 880-16985-A-1-F MSD
Matrix: Solid
Analysis Batch: 30026

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 29891

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

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-29896/1-A
Matrix: Solid
Analysis Batch: 29940

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			07/20/22 19:46	1

Lab Sample ID: LCS 880-29896/2-A
Matrix: Solid
Analysis Batch: 29940

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	259.2		mg/Kg		104	90 - 110		

Lab Sample ID: LCSD 880-29896/3-A
Matrix: Solid
Analysis Batch: 29940

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	259.0		mg/Kg		104	90 - 110	0	20

Lab Sample ID: 890-2559-A-1-E MS
Matrix: Solid
Analysis Batch: 29940

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	57.7		250	315.3		mg/Kg		103	90 - 110		

Lab Sample ID: 890-2559-A-1-F MSD
Matrix: Solid
Analysis Batch: 29940

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	57.7		250	315.5		mg/Kg		103	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Poker LakeUnit 15 TWR

Job ID: 890-2560-1
SDG: 03E1558013

GC VOA

Prep Batch: 30180

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2560-1	PH01	Total/NA	Solid	5035	
890-2560-2	PH01A	Total/NA	Solid	5035	
890-2560-3	PH02	Total/NA	Solid	5035	
890-2560-4	PH02A	Total/NA	Solid	5035	
MB 880-30180/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30180/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30180/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2560-1 MS	PH01	Total/NA	Solid	5035	
890-2560-1 MSD	PH01	Total/NA	Solid	5035	

Analysis Batch: 30181

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2560-1	PH01	Total/NA	Solid	8021B	30180
890-2560-2	PH01A	Total/NA	Solid	8021B	30180
890-2560-3	PH02	Total/NA	Solid	8021B	30180
890-2560-4	PH02A	Total/NA	Solid	8021B	30180
MB 880-30180/5-A	Method Blank	Total/NA	Solid	8021B	30180
LCS 880-30180/1-A	Lab Control Sample	Total/NA	Solid	8021B	30180
LCSD 880-30180/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30180
890-2560-1 MS	PH01	Total/NA	Solid	8021B	30180
890-2560-1 MSD	PH01	Total/NA	Solid	8021B	30180

Analysis Batch: 30192

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2560-5	PH03	Total/NA	Solid	8021B	30209
MB 880-30209/5-A	Method Blank	Total/NA	Solid	8021B	30209
LCS 880-30209/1-A	Lab Control Sample	Total/NA	Solid	8021B	30209
LCSD 880-30209/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30209
880-16985-A-1-H MS	Matrix Spike	Total/NA	Solid	8021B	30209
880-16985-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30209

Prep Batch: 30209

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2560-5	PH03	Total/NA	Solid	5035	
MB 880-30209/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30209/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30209/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-16985-A-1-H MS	Matrix Spike	Total/NA	Solid	5035	
880-16985-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 30222

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2560-1	PH01	Total/NA	Solid	Total BTEX	
890-2560-2	PH01A	Total/NA	Solid	Total BTEX	
890-2560-3	PH02	Total/NA	Solid	Total BTEX	
890-2560-4	PH02A	Total/NA	Solid	Total BTEX	
890-2560-5	PH03	Total/NA	Solid	Total BTEX	

Analysis Batch: 30325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2560-5	PH03	Total/NA	Solid	8021B	30328

QC Association Summary

Client: Ensolum
Project/Site: Poker LakeUnit 15 TWR

Job ID: 890-2560-1
SDG: 03E1558013

GC VOA (Continued)

Analysis Batch: 30325 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-30328/5-A	Method Blank	Total/NA	Solid	8021B	30328
LCS 880-30328/1-A	Lab Control Sample	Total/NA	Solid	8021B	30328
LCSD 880-30328/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30328
880-17242-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	30328
880-17242-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30328

Prep Batch: 30328

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2560-5	PH03	Total/NA	Solid	5035	
MB 880-30328/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30328/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30328/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17242-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
880-17242-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

GC Semi VOA

Prep Batch: 29891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2560-1	PH01	Total/NA	Solid	8015NM Prep	
890-2560-2	PH01A	Total/NA	Solid	8015NM Prep	
890-2560-3	PH02	Total/NA	Solid	8015NM Prep	
890-2560-4	PH02A	Total/NA	Solid	8015NM Prep	
890-2560-5	PH03	Total/NA	Solid	8015NM Prep	
MB 880-29891/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-29891/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-29891/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-16985-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-16985-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 30026

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2560-1	PH01	Total/NA	Solid	8015B NM	29891
890-2560-2	PH01A	Total/NA	Solid	8015B NM	29891
890-2560-3	PH02	Total/NA	Solid	8015B NM	29891
890-2560-4	PH02A	Total/NA	Solid	8015B NM	29891
890-2560-5	PH03	Total/NA	Solid	8015B NM	29891
MB 880-29891/1-A	Method Blank	Total/NA	Solid	8015B NM	29891
LCS 880-29891/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	29891
LCSD 880-29891/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	29891
880-16985-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	29891
880-16985-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	29891

Analysis Batch: 30109

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2560-1	PH01	Total/NA	Solid	8015 NM	
890-2560-2	PH01A	Total/NA	Solid	8015 NM	
890-2560-3	PH02	Total/NA	Solid	8015 NM	
890-2560-4	PH02A	Total/NA	Solid	8015 NM	
890-2560-5	PH03	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: Poker LakeUnit 15 TWR

Job ID: 890-2560-1
SDG: 03E1558013

HPLC/IC

Leach Batch: 29896

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2560-1	PH01	Soluble	Solid	DI Leach	
890-2560-2	PH01A	Soluble	Solid	DI Leach	
890-2560-3	PH02	Soluble	Solid	DI Leach	
890-2560-4	PH02A	Soluble	Solid	DI Leach	
890-2560-5	PH03	Soluble	Solid	DI Leach	
MB 880-29896/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-29896/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-29896/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2559-A-1-E MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2559-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 29940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2560-1	PH01	Soluble	Solid	300.0	29896
890-2560-2	PH01A	Soluble	Solid	300.0	29896
890-2560-3	PH02	Soluble	Solid	300.0	29896
890-2560-4	PH02A	Soluble	Solid	300.0	29896
890-2560-5	PH03	Soluble	Solid	300.0	29896
MB 880-29896/1-A	Method Blank	Soluble	Solid	300.0	29896
LCS 880-29896/2-A	Lab Control Sample	Soluble	Solid	300.0	29896
LCSD 880-29896/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	29896
890-2559-A-1-E MS	Matrix Spike	Soluble	Solid	300.0	29896
890-2559-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	29896

Lab Chronicle

Client: Ensolum
Project/Site: Poker LakeUnit 15 TWR

Job ID: 890-2560-1
SDG: 03E1558013

Client Sample ID: PH01

Date Collected: 07/13/22 09:30
Date Received: 07/15/22 10:06

Lab Sample ID: 890-2560-1
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	30180	07/20/22 16:33	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30181	07/20/22 19:44	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30222	07/21/22 10:26	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30109	07/20/22 10:23	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	29891	07/18/22 08:34	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30026	07/19/22 21:42	SM	XEN MID
Soluble	Leach	DI Leach			4.99 g	50 mL	29896	07/18/22 08:45	KS	XEN MID
Soluble	Analysis	300.0		1			29940	07/20/22 23:37	CH	XEN MID

Client Sample ID: PH01A

Date Collected: 07/13/22 09:40
Date Received: 07/15/22 10:06

Lab Sample ID: 890-2560-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	30180	07/20/22 16:33	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30181	07/20/22 20:05	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30222	07/21/22 10:26	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30109	07/20/22 10:23	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	29891	07/18/22 08:34	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30026	07/19/22 22:04	SM	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	29896	07/18/22 08:45	KS	XEN MID
Soluble	Analysis	300.0		1			29940	07/20/22 23:46	CH	XEN MID

Client Sample ID: PH02

Date Collected: 07/13/22 09:45
Date Received: 07/15/22 10:06

Lab Sample ID: 890-2560-3
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			5.03 g	5 mL	30180	07/20/22 16:33	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30181	07/20/22 20:26	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30222	07/21/22 10:26	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30109	07/20/22 10:23	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	29891	07/18/22 08:34	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30026	07/20/22 12:37	SM	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	29896	07/18/22 08:45	KS	XEN MID
Soluble	Analysis	300.0		1			29940	07/20/22 23:55	CH	XEN MID

Client Sample ID: PH02A

Date Collected: 07/13/22 09:55
Date Received: 07/15/22 10:06

Lab Sample ID: 890-2560-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	30180	07/20/22 16:33	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30181	07/20/22 20:47	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30222	07/21/22 10:26	SM	XEN MID

Lab Chronicle

Client: Ensolum
Project/Site: Poker LakeUnit 15 TWR

Job ID: 890-2560-1
SDG: 03E1558013

Client Sample ID: PH02A

Date Collected: 07/13/22 09:55
Date Received: 07/15/22 10:06

Lab Sample ID: 890-2560-4

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			30109	07/20/22 10:23	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	29891	07/18/22 08:34	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30026	07/19/22 22:50	SM	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	29896	07/18/22 08:45	KS	XEN MID
Soluble	Analysis	300.0		1			29940	07/21/22 00:04	CH	XEN MID

Client Sample ID: PH03

Date Collected: 07/13/22 10:10
Date Received: 07/15/22 10:06

Lab Sample ID: 890-2560-5

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			4.99 g	5 mL	30209	07/21/22 09:27	MR	XEN MID
Total/NA	Analysis	8021B		100	5 mL	5 mL	30192	07/21/22 14:48	MR	XEN MID
Total/NA	Prep	5035			5.01 g	5 mL	30328	07/22/22 10:12	MR	XEN MID
Total/NA	Analysis	8021B		500	5 mL	5 mL	30325	07/22/22 14:41	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30222	07/21/22 10:26	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30109	07/20/22 10:23	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	29891	07/18/22 08:34	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30026	07/20/22 12:59	SM	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	29896	07/18/22 08:45	KS	XEN MID
Soluble	Analysis	300.0		1			29940	07/21/22 00:13	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: Poker LakeUnit 15 TWR

Job ID: 890-2560-1
SDG: 03E1558013

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: Poker LakeUnit 15 TWR

Job ID: 890-2560-1
SDG: 03E1558013

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: Poker LakeUnit 15 TWR

Job ID: 890-2560-1
SDG: 03E1558013

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2560-1	PH01	Solid	07/13/22 09:30	07/15/22 10:06	1'
890-2560-2	PH01A	Solid	07/13/22 09:40	07/15/22 10:06	3'
890-2560-3	PH02	Solid	07/13/22 09:45	07/15/22 10:06	1'
890-2560-4	PH02A	Solid	07/13/22 09:55	07/15/22 10:06	3'
890-2560-5	PH03	Solid	07/13/22 10:10	07/15/22 10:06	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: _____

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:		Address:	3104 E. Green Street
City, State ZIP:		City, State ZIP:	Carlsbad NM
Phone:	989 854 0252	Email:	BBelill@ensolum

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:	POKER LAKE UNIT 15 TNR	Turn Around	
Project Number:	03E1558013	☑ Routine ☐ Rush	
Project Location:		Due Date:	
Sampler's Name:	Conner Shore	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:	5.0
Total Containers:		Corrected Temperature:	4.8

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: Chlorides	TPH	BTEX
PH01	S	07.13.22	930	1'	G	1		x	x	x
PH01A	↓	07.13.22	940	3'	↓	↓		x	x	x
PH02		07.13.22	945	1'				x	x	x
PH02A		07.13.22	955	3'				x	x	x
PH03		07.13.22	1010	1'				x	x	x

890-2560 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

CC:2027711001

INC ID:
nAPP2205641685

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 Steif	7/15/22 1006	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2560-1
SDG Number: 03E1558013

Login Number: 2560
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: 890-2560-1
SDG Number: 03E1558013

Login Number: 2560
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 07/18/22 08:47 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: 890-2577-1
Laboratory Sample Delivery Group: 03E1558013
Client Project/Site: PLU 15 TWR

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

Attn: Ben Belill

JKramer

Authorized for release by:
7/25/2022 8:08:32 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 15 TWR

Laboratory Job ID: 890-2577-1
SDG: 03E1558013

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2577-1
SDG: 03E1558013

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
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 15 TWR

Job ID: 890-2577-1
SDG: 03E1558013

Job ID: 890-2577-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2577-1

Receipt
The sample was received on 7/18/2022 12:12 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.8°C

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (LCS 880-30080/2-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-30080 and analytical batch 880-30146 was outside the upper control limits.

Method 8015MOD_NM: The laboratory control sample (LCS) associated with preparation batch 880-30080 and analytical batch 880-30146 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-30060 and analytical batch 880-30227 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 15 TWR

Job ID: 890-2577-1
SDG: 03E1558013

Client Sample ID: FS07

Date Collected: 07/15/22 12:05
Date Received: 07/18/22 12:12
Sample Depth: 4'

Lab Sample ID: 890-2577-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:38	07/21/22 19:17	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:38	07/21/22 19:17	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:38	07/21/22 19:17	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		07/21/22 09:38	07/21/22 19:17	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:38	07/21/22 19:17	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		07/21/22 09:38	07/21/22 19:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*07/21/22 09:38*	*07/21/22 19:17*	*1*
1,4-Difluorobenzene (Surr)	*79*		*70 - 130*	*07/21/22 09:38*	*07/21/22 19:17*	*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			07/22/22 10:12	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**195**		50.0		mg/Kg			07/21/22 12:58	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	**195**	***1 *+**	50.0		mg/Kg		07/19/22 16:15	07/21/22 00:45	1
Diesel Range Organics (Over C10-C28)	<50.0	U *1 *+	50.0		mg/Kg		07/19/22 16:15	07/21/22 00:45	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/19/22 16:15	07/21/22 00:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*07/19/22 16:15*	*07/21/22 00:45*	*1*
o-Terphenyl	*109*		*70 - 130*	*07/19/22 16:15*	*07/21/22 00:45*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10.9**		5.05		mg/Kg			07/22/22 19:26	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2577-1
SDG: 03E1558013

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)
880-17129-A-12-E MS	Matrix Spike	122	89
880-17129-A-12-F MSD	Matrix Spike Duplicate	112	96
890-2577-1	FS07	100	79
LCS 880-30210/1-A	Lab Control Sample	106	95
LCSD 880-30210/2-A	Lab Control Sample Dup	111	95
MB 880-30210/5-A	Method Blank	96	85

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-17086-A-11-C MS	Matrix Spike	87	85
880-17086-A-11-D MSD	Matrix Spike Duplicate	88	87
890-2577-1	FS07	97	109
LCS 880-30080/2-A	Lab Control Sample	150 S1+	149 S1+
LCSD 880-30080/3-A	Lab Control Sample Dup	114	115
MB 880-30080/1-A	Method Blank	141 S1+	168 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2577-1
SDG: 03E1558013

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-30210/5-A
Matrix: Solid
Analysis Batch: 30194

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30210

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:38	07/21/22 11:25	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:38	07/21/22 11:25	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:38	07/21/22 11:25	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/21/22 09:38	07/21/22 11:25	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:38	07/21/22 11:25	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/21/22 09:38	07/21/22 11:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*07/21/22 09:38*	*07/21/22 11:25*	*1*
1,4-Difluorobenzene (Surr)	*85*		*70 - 130*	*07/21/22 09:38*	*07/21/22 11:25*	*1*

Lab Sample ID: LCS 880-30210/1-A
Matrix: Solid
Analysis Batch: 30194

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30210

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09742		mg/Kg		97	70 - 130		
Toluene			0.100	0.09907		mg/Kg		99	70 - 130		
Ethylbenzene			0.100	0.1036		mg/Kg		104	70 - 130		
m-Xylene & p-Xylene			0.200	0.2101		mg/Kg		105	70 - 130		
o-Xylene			0.100	0.1150		mg/Kg		115	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: LCSD 880-30210/2-A
Matrix: Solid
Analysis Batch: 30194

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30210

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1021		mg/Kg		102	70 - 130	5	35
Toluene			0.100	0.1030		mg/Kg		103	70 - 130	4	35
Ethylbenzene			0.100	0.1119		mg/Kg		112	70 - 130	8	35
m-Xylene & p-Xylene			0.200	0.2241		mg/Kg		112	70 - 130	6	35
o-Xylene			0.100	0.1231		mg/Kg		123	70 - 130	7	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: 880-17129-A-12-E MS
Matrix: Solid
Analysis Batch: 30194

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 30210

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U	0.100	0.07628		mg/Kg		76	70 - 130		
Toluene	<0.00200	U	0.100	0.09150		mg/Kg		91	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2577-1
SDG: 03E1558013

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

Lab Sample ID: 880-17129-A-12-E MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30194 — **Prep Batch: 30210**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.100	0.1027		mg/Kg		102	70 - 130
m-Xylene & p-Xylene	0.0221		0.201	0.2128		mg/Kg		95	70 - 130
o-Xylene	0.00981		0.100	0.1154		mg/Kg		105	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*

Lab Sample ID: 880-17129-A-12-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30194 — **Prep Batch: 30210**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0998	0.09120		mg/Kg		91	70 - 130	18	35
Toluene	<0.00200	U	0.0998	0.09287		mg/Kg		93	70 - 130	1	35
Ethylbenzene	<0.00200	U	0.0998	0.09823		mg/Kg		98	70 - 130	4	35
m-Xylene & p-Xylene	0.0221		0.200	0.1979		mg/Kg		88	70 - 130	7	35
o-Xylene	0.00981		0.0998	0.1073		mg/Kg		98	70 - 130	7	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

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

Lab Sample ID: MB 880-30080/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30146 — **Prep Batch: 30080**

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		07/19/22 16:15	07/20/22 15:46	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/19/22 16:15	07/20/22 15:46	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/19/22 16:15	07/20/22 15:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*141*	*S1+*	*70 - 130*	*07/19/22 16:15*	*07/20/22 15:46*	*1*
o-Terphenyl	*168*	*S1+*	*70 - 130*	*07/19/22 16:15*	*07/20/22 15:46*	*1*

Lab Sample ID: LCS 880-30080/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30146 — **Prep Batch: 30080**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1334	*+	mg/Kg		133	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1530	*+	mg/Kg		153	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2577-1
SDG: 03E1558013

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

Lab Sample ID: LCS 880-30080/2-A
Matrix: Solid
Analysis Batch: 30146

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30080

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	150	S1+	70 - 130
o-Terphenyl	149	S1+	70 - 130

Lab Sample ID: LCSD 880-30080/3-A
Matrix: Solid
Analysis Batch: 30146

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30080

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1032	*1	mg/Kg		103	70 - 130	26	20
Diesel Range Organics (Over C10-C28)			1000	1144	*1	mg/Kg		114	70 - 130	29	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	114		70 - 130
o-Terphenyl	115		70 - 130

Lab Sample ID: 880-17086-A-11-C MS
Matrix: Solid
Analysis Batch: 30146

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 30080

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1 *+	1000	983.6		mg/Kg		96	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U *1 *+	1000	843.1		mg/Kg		84	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	87		70 - 130
o-Terphenyl	85		70 - 130

Lab Sample ID: 880-17086-A-11-D MSD
Matrix: Solid
Analysis Batch: 30146

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 30080

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1 *+	999	989.4		mg/Kg		97	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<50.0	U *1 *+	999	863.0		mg/Kg		86	70 - 130	2	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	88		70 - 130
o-Terphenyl	87		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2577-1
SDG: 03E1558013

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-30060/1-A
Matrix: Solid
Analysis Batch: 30227

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			07/22/22 15:17	1

Lab Sample ID: LCS 880-30060/2-A
Matrix: Solid
Analysis Batch: 30227

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	271.8		mg/Kg		109	90 - 110		

Lab Sample ID: LCSD 880-30060/3-A
Matrix: Solid
Analysis Batch: 30227

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	273.7		mg/Kg		109	90 - 110	1	20

Lab Sample ID: 880-17068-A-33-D MS
Matrix: Solid
Analysis Batch: 30227

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	1910	F1	2520	4812	F1	mg/Kg		115	90 - 110		

Lab Sample ID: 880-17068-A-33-E MSD
Matrix: Solid
Analysis Batch: 30227

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	1910	F1	2520	4816	F1	mg/Kg		115	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2577-1
SDG: 03E1558013

GC VOA

Analysis Batch: 30194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2577-1	FS07	Total/NA	Solid	8021B	30210
MB 880-30210/5-A	Method Blank	Total/NA	Solid	8021B	30210
LCS 880-30210/1-A	Lab Control Sample	Total/NA	Solid	8021B	30210
LCSD 880-30210/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30210
880-17129-A-12-E MS	Matrix Spike	Total/NA	Solid	8021B	30210
880-17129-A-12-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30210

Prep Batch: 30210

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2577-1	FS07	Total/NA	Solid	5035	
MB 880-30210/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30210/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30210/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17129-A-12-E MS	Matrix Spike	Total/NA	Solid	5035	
880-17129-A-12-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 30354

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2577-1	FS07	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 30080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2577-1	FS07	Total/NA	Solid	8015NM Prep	
MB 880-30080/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30080/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30080/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-17086-A-11-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-17086-A-11-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 30146

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2577-1	FS07	Total/NA	Solid	8015B NM	30080
MB 880-30080/1-A	Method Blank	Total/NA	Solid	8015B NM	30080
LCS 880-30080/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30080
LCSD 880-30080/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30080
880-17086-A-11-C MS	Matrix Spike	Total/NA	Solid	8015B NM	30080
880-17086-A-11-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30080

Analysis Batch: 30257

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2577-1	FS07	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 30060

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2577-1	FS07	Soluble	Solid	DI Leach	
MB 880-30060/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-30060/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-30060/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2577-1
SDG: 03E1558013

HPLC/IC (Continued)

Leach Batch: 30060 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17068-A-33-D MS	Matrix Spike	Soluble	Solid	DI Leach	
880-17068-A-33-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 30227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2577-1	FS07	Soluble	Solid	300.0	30060
MB 880-30060/1-A	Method Blank	Soluble	Solid	300.0	30060
LCS 880-30060/2-A	Lab Control Sample	Soluble	Solid	300.0	30060
LCSD 880-30060/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30060
880-17068-A-33-D MS	Matrix Spike	Soluble	Solid	300.0	30060
880-17068-A-33-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30060

Lab Chronicle

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2577-1
SDG: 03E1558013

Client Sample ID: FS07

Date Collected: 07/15/22 12:05
Date Received: 07/18/22 12:12

Lab Sample ID: 890-2577-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	30210	07/21/22 09:38	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30194	07/21/22 19:17	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30354	07/22/22 10:12	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30257	07/21/22 12:58	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	30080	07/19/22 16:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30146	07/21/22 00:45	SM	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	30060	07/19/22 11:18	CH	XEN MID
Soluble	Analysis	300.0		1			30227	07/22/22 19:26	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 15 TWR

Job ID: 890-2577-1
SDG: 03E1558013

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 15 TWR

Job ID: 890-2577-1
SDG: 03E1558013

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 15 TWR

Job ID: 890-2577-1
SDG: 03E1558013

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2577-1	FS07	Solid	07/15/22 12:05	07/18/22 12:12	4'

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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 15 TWR	Turn Around	
Project Number:	03E1558013	☑ Routine ☐ Rush	
Project Location:	EDDY COUNTY, NM	Due Date:	
Sampler's Name:	Conner Shore	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-80
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	6.0
Total Containers:		Corrected Temperature:	5.8

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021
FS07	S	7/15/2022	1205	4'	Comp	1		X	X	X

890-2577 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: 2027711001

Incident Number: nAPP2205641685

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	7/15/22 1317	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2577-1
SDG Number: 03E1558013

Login Number: 2577
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: 890-2577-1
SDG Number: 03E1558013

Login Number: 2577
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 07/19/22 11:13 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: 890-2582-1
Laboratory Sample Delivery Group: 03E1558013, 03E1558015
Client Project/Site: PLU 15 TWR

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

Attn: Ben Belill

JKramer

Authorized for release by:
7/25/2022 8:08:35 AM

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

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

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

Client: Ensolum
Project/Site: PLU 15 TWR

Laboratory Job ID: 890-2582-1
SDG: 03E1558013, 03E1558015

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-2582-1
Project/Site: PLU 15 TWR SDG: 03E1558013, 03E1558015

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
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 15 TWR

Job ID: 890-2582-1
SDG: 03E1558013, 03E1558015

Job ID: 890-2582-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2582-1

Receipt
The samples were received on 7/19/2022 10:57 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 5.0°C

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

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-30312 and analytical batch 880-30251 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (LCS 880-30312/2-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: BH01A (890-2582-2). 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 15 TWR

Job ID: 890-2582-1
SDG: 03E1558013, 03E1558015

Client Sample ID: BH01
Date Collected: 07/18/22 10:40
Date Received: 07/19/22 10:57
Sample Depth: 0.5

Lab Sample ID: 890-2582-1
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:38	07/21/22 17:14	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:38	07/21/22 17:14	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:38	07/21/22 17:14	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		07/21/22 09:38	07/21/22 17:14	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:38	07/21/22 17:14	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		07/21/22 09:38	07/21/22 17:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*07/21/22 09:38*	*07/21/22 17:14*	*1*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*	*07/21/22 09:38*	*07/21/22 17:14*	*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			07/22/22 10:12	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			07/22/22 11:07	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		07/21/22 17:20	07/22/22 08:27	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/21/22 17:20	07/22/22 08:27	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/21/22 17:20	07/22/22 08:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*82*		*70 - 130*	*07/21/22 17:20*	*07/22/22 08:27*	*1*
o-Terphenyl	*86*		*70 - 130*	*07/21/22 17:20*	*07/22/22 08:27*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**179**		4.98		mg/Kg			07/22/22 11:21	1

Client Sample ID: BH01A
Date Collected: 07/18/22 10:55
Date Received: 07/19/22 10:57
Sample Depth: 3

Lab Sample ID: 890-2582-2
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:38	07/21/22 17:35	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:38	07/21/22 17:35	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:38	07/21/22 17:35	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/21/22 09:38	07/21/22 17:35	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:38	07/21/22 17:35	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/21/22 09:38	07/21/22 17:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*07/21/22 09:38*	*07/21/22 17:35*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2582-1
SDG: 03E1558013, 03E1558015

Client Sample ID: BH01A
Date Collected: 07/18/22 10:55
Date Received: 07/19/22 10:57
Sample Depth: 3

Lab Sample ID: 890-2582-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*07/21/22 09:38*	*07/21/22 17:35*	*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			07/22/22 10:12	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			07/22/22 11:07	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		07/21/22 17:20	07/22/22 08:48	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		07/21/22 17:20	07/22/22 08:48	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/21/22 17:20	07/22/22 08:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*66*	*S1-*	*70 - 130*	*07/21/22 17:20*	*07/22/22 08:48*	*1*
o-Terphenyl	*67*	*S1-*	*70 - 130*	*07/21/22 17:20*	*07/22/22 08:48*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**36.5**		5.00		mg/Kg			07/22/22 11:29	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2582-1
SDG: 03E1558013, 03E1558015

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)
880-17129-A-12-E MS	Matrix Spike	122	89
880-17129-A-12-F MSD	Matrix Spike Duplicate	112	96
890-2582-1	BH01	99	81
890-2582-2	BH01A	110	90
LCS 880-30210/1-A	Lab Control Sample	106	95
LCSD 880-30210/2-A	Lab Control Sample Dup	111	95
MB 880-30210/5-A	Method Blank	96	85

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-17068-A-41-D MS	Matrix Spike	84	83
880-17068-A-41-E MSD	Matrix Spike Duplicate	85	84
890-2582-1	BH01	82	86
890-2582-2	BH01A	66 S1-	67 S1-
LCS 880-30312/2-A	Lab Control Sample	135 S1+	142 S1+
LCSD 880-30312/3-A	Lab Control Sample Dup	116	127
MB 880-30312/1-A	Method Blank	128	146 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2582-1
SDG: 03E1558013, 03E1558015

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-30210/5-A
Matrix: Solid
Analysis Batch: 30194

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30210

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:38	07/21/22 11:25	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:38	07/21/22 11:25	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:38	07/21/22 11:25	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/21/22 09:38	07/21/22 11:25	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:38	07/21/22 11:25	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/21/22 09:38	07/21/22 11:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*07/21/22 09:38*	*07/21/22 11:25*	*1*
1,4-Difluorobenzene (Surr)	*85*		*70 - 130*	*07/21/22 09:38*	*07/21/22 11:25*	*1*

Lab Sample ID: LCS 880-30210/1-A
Matrix: Solid
Analysis Batch: 30194

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30210

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09742		mg/Kg		97	70 - 130		
Toluene			0.100	0.09907		mg/Kg		99	70 - 130		
Ethylbenzene			0.100	0.1036		mg/Kg		104	70 - 130		
m-Xylene & p-Xylene			0.200	0.2101		mg/Kg		105	70 - 130		
o-Xylene			0.100	0.1150		mg/Kg		115	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: LCSD 880-30210/2-A
Matrix: Solid
Analysis Batch: 30194

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30210

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1021		mg/Kg		102	70 - 130	5	35
Toluene			0.100	0.1030		mg/Kg		103	70 - 130	4	35
Ethylbenzene			0.100	0.1119		mg/Kg		112	70 - 130	8	35
m-Xylene & p-Xylene			0.200	0.2241		mg/Kg		112	70 - 130	6	35
o-Xylene			0.100	0.1231		mg/Kg		123	70 - 130	7	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: 880-17129-A-12-E MS
Matrix: Solid
Analysis Batch: 30194

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 30210

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U	0.100	0.07628		mg/Kg		76	70 - 130		
Toluene	<0.00200	U	0.100	0.09150		mg/Kg		91	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2582-1
SDG: 03E1558013, 03E1558015

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

Lab Sample ID: 880-17129-A-12-E MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30194 — **Prep Batch: 30210**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.100	0.1027		mg/Kg		102	70 - 130
m-Xylene & p-Xylene	0.0221		0.201	0.2128		mg/Kg		95	70 - 130
o-Xylene	0.00981		0.100	0.1154		mg/Kg		105	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*

Lab Sample ID: 880-17129-A-12-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30194 — **Prep Batch: 30210**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0998	0.09120		mg/Kg		91	70 - 130	18	35
Toluene	<0.00200	U	0.0998	0.09287		mg/Kg		93	70 - 130	1	35
Ethylbenzene	<0.00200	U	0.0998	0.09823		mg/Kg		98	70 - 130	4	35
m-Xylene & p-Xylene	0.0221		0.200	0.1979		mg/Kg		88	70 - 130	7	35
o-Xylene	0.00981		0.0998	0.1073		mg/Kg		98	70 - 130	7	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

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

Lab Sample ID: MB 880-30312/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30251 — **Prep Batch: 30312**

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		07/21/22 17:20	07/22/22 00:07	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		07/21/22 17:20	07/22/22 00:07	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/21/22 17:20	07/22/22 00:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*128*		*70 - 130*	*07/21/22 17:20*	*07/22/22 00:07*	*1*
o-Terphenyl	*146*	*S1+*	*70 - 130*	*07/21/22 17:20*	*07/22/22 00:07*	*1*

Lab Sample ID: LCS 880-30312/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30251 — **Prep Batch: 30312**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	880.1		mg/Kg		88	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1131		mg/Kg		113	70 - 130

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2582-1
SDG: 03E1558013, 03E1558015

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

Lab Sample ID: LCS 880-30312/2-A
Matrix: Solid
Analysis Batch: 30251

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30312

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	135	S1+	70 - 130
o-Terphenyl	142	S1+	70 - 130

Lab Sample ID: LCSD 880-30312/3-A
Matrix: Solid
Analysis Batch: 30251

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30312

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	807.8		mg/Kg		81	70 - 130	9	20
Diesel Range Organics (Over C10-C28)			1000	996.6		mg/Kg		100	70 - 130	13	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	116		70 - 130
o-Terphenyl	127		70 - 130

Lab Sample ID: 880-17068-A-41-D MS
Matrix: Solid
Analysis Batch: 30251

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 30312

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	907.6		mg/Kg		88	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	796.3		mg/Kg		80	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	84		70 - 130
o-Terphenyl	83		70 - 130

Lab Sample ID: 880-17068-A-41-E MSD
Matrix: Solid
Analysis Batch: 30251

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 30312

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	917.2		mg/Kg		89	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<50.0	U	999	807.5		mg/Kg		81	70 - 130	1	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	85		70 - 130
o-Terphenyl	84		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2582-1
SDG: 03E1558013, 03E1558015

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-30121/1-A
Matrix: Solid
Analysis Batch: 30315

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			07/22/22 10:34	1

Lab Sample ID: LCS 880-30121/2-A
Matrix: Solid
Analysis Batch: 30315

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	273.9		mg/Kg		110	90 - 110		

Lab Sample ID: LCSD 880-30121/3-A
Matrix: Solid
Analysis Batch: 30315

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	274.9		mg/Kg		110	90 - 110	0	20

Lab Sample ID: 880-17088-A-1-B MS
Matrix: Solid
Analysis Batch: 30315

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	526		249	790.9		mg/Kg		107	90 - 110		

Lab Sample ID: 880-17088-A-1-C MSD
Matrix: Solid
Analysis Batch: 30315

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	526		249	795.1		mg/Kg		108	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2582-1
SDG: 03E1558013, 03E1558015

GC VOA

Analysis Batch: 30194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2582-1	BH01	Total/NA	Solid	8021B	30210
890-2582-2	BH01A	Total/NA	Solid	8021B	30210
MB 880-30210/5-A	Method Blank	Total/NA	Solid	8021B	30210
LCS 880-30210/1-A	Lab Control Sample	Total/NA	Solid	8021B	30210
LCSD 880-30210/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30210
880-17129-A-12-E MS	Matrix Spike	Total/NA	Solid	8021B	30210
880-17129-A-12-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30210

Prep Batch: 30210

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2582-1	BH01	Total/NA	Solid	5035	
890-2582-2	BH01A	Total/NA	Solid	5035	
MB 880-30210/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30210/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30210/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17129-A-12-E MS	Matrix Spike	Total/NA	Solid	5035	
880-17129-A-12-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 30351

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2582-1	BH01	Total/NA	Solid	Total BTEX	
890-2582-2	BH01A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 30251

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2582-1	BH01	Total/NA	Solid	8015B NM	30312
890-2582-2	BH01A	Total/NA	Solid	8015B NM	30312
MB 880-30312/1-A	Method Blank	Total/NA	Solid	8015B NM	30312
LCS 880-30312/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30312
LCSD 880-30312/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30312
880-17068-A-41-D MS	Matrix Spike	Total/NA	Solid	8015B NM	30312
880-17068-A-41-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30312

Prep Batch: 30312

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2582-1	BH01	Total/NA	Solid	8015NM Prep	
890-2582-2	BH01A	Total/NA	Solid	8015NM Prep	
MB 880-30312/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30312/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30312/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-17068-A-41-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-17068-A-41-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 30385

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2582-1	BH01	Total/NA	Solid	8015 NM	
890-2582-2	BH01A	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2582-1
SDG: 03E1558013, 03E1558015

HPLC/IC

Leach Batch: 30121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2582-1	BH01	Soluble	Solid	DI Leach	
890-2582-2	BH01A	Soluble	Solid	DI Leach	
MB 880-30121/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-30121/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-30121/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-17088-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-17088-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 30315

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2582-1	BH01	Soluble	Solid	300.0	30121
890-2582-2	BH01A	Soluble	Solid	300.0	30121
MB 880-30121/1-A	Method Blank	Soluble	Solid	300.0	30121
LCS 880-30121/2-A	Lab Control Sample	Soluble	Solid	300.0	30121
LCSD 880-30121/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30121
880-17088-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30121
880-17088-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30121

Lab Chronicle

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2582-1
SDG: 03E1558013, 03E1558015

Client Sample ID: BH01

Date Collected: 07/18/22 10:40
Date Received: 07/19/22 10:57

Lab Sample ID: 890-2582-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	30210	07/21/22 09:38	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30194	07/21/22 17:14	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30351	07/22/22 10:12	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30385	07/22/22 11:07	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	30312	07/21/22 17:20	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30251	07/22/22 08:27	SM	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	30121	07/20/22 11:51	SMC	XEN MID
Soluble	Analysis	300.0		1			30315	07/22/22 11:21	CH	XEN MID

Client Sample ID: BH01A

Date Collected: 07/18/22 10:55
Date Received: 07/19/22 10:57

Lab Sample ID: 890-2582-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	30210	07/21/22 09:38	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30194	07/21/22 17:35	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30351	07/22/22 10:12	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30385	07/22/22 11:07	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	30312	07/21/22 17:20	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30251	07/22/22 08:48	SM	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	30121	07/20/22 11:51	SMC	XEN MID
Soluble	Analysis	300.0		1			30315	07/22/22 11:29	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 15 TWR

Job ID: 890-2582-1
SDG: 03E1558013, 03E1558015

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 15 TWR

Job ID: 890-2582-1
SDG: 03E1558013, 03E1558015

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 15 TWR

Job ID: 890-2582-1
SDG: 03E1558013, 03E1558015

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2582-1	BH01	Solid	07/18/22 10:40	07/19/22 10:57	0.5
890-2582-2	BH01A	Solid	07/18/22 10:55	07/19/22 10:57	3

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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 15 TWR	Turn Around	
Project Number:	03E1558013, 03E1558015	☑ Routine ☐ Rush	
Project Location:	EDDY COUNTY, NM	Due Date:	
Sampler's Name:	Conner Shore	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:	NM-0007	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	5.2	
Total Containers:		Corrected Temperature:	5.0	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)	Sample Comments
BH01	S	7/18/2022	1040	0.5'	G	1		X	X	X	
BH01A	S	7/18/2022	1055	3'	G	1		X	X	X	
* BH01B	S	7/18/2022	1100	4'	G	1		X	X	X	* Hold pending 3' sample

890-2582 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

Cost Center: 2027711001

Incident Number:
nAPP2205641685
nAPP2207746719
nAPP2205638843

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		7.19.22 1057			
3			4		
5			6		

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2582-1
SDG Number: 03E1558013, 03E1558015

Login Number: 2582
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: 890-2582-1
SDG Number: 03E1558013, 03E1558015

Login Number: 2582
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 07/20/22 10:53 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: 890-2583-1
Laboratory Sample Delivery Group: 03E1558013
Client Project/Site: PLU 15 TWR

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

Attn: Ben Belill

JKramer

Authorized for release by:
7/25/2022 10:48:10 AM

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

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

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

Client: Ensolum
Project/Site: PLU 15 TWR

Laboratory Job ID: 890-2583-1
SDG: 03E1558013

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2583-1
SDG: 03E1558013

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1+	Surrogate recovery exceeds control limits, 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 15 TWR

Job ID: 890-2583-1
SDG: 03E1558013

Job ID: 890-2583-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2583-1

Receipt
The samples were received on 7/19/2022 10:57 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 5.0°C

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

GC Semi VOA
Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-30460 and analytical batch 880-30464 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.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (MB 880-30460/1-A). Evidence of matrix interferences is not obvious.

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

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

Client Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2583-1
SDG: 03E1558013

Client Sample ID: PH06

Date Collected: 07/18/22 13:25
Date Received: 07/19/22 10:57
Sample Depth: 0.5

Lab Sample ID: 890-2583-1
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		07/21/22 09:38	07/21/22 17:55	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/21/22 09:38	07/21/22 17:55	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/21/22 09:38	07/21/22 17:55	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/21/22 09:38	07/21/22 17:55	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/21/22 09:38	07/21/22 17:55	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/21/22 09:38	07/21/22 17:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*07/21/22 09:38*	*07/21/22 17:55*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*07/21/22 09:38*	*07/21/22 17:55*	*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			07/22/22 10:12	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			07/25/22 09:55	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		07/23/22 10:54	07/23/22 18:07	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/23/22 10:54	07/23/22 18:07	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/23/22 10:54	07/23/22 18:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 130*	*07/23/22 10:54*	*07/23/22 18:07*	*1*
o-Terphenyl	*111*		*70 - 130*	*07/23/22 10:54*	*07/23/22 18:07*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**49.7**		4.95		mg/Kg			07/22/22 11:37	1

Client Sample ID: PH06A

Date Collected: 07/18/22 13:40
Date Received: 07/19/22 10:57
Sample Depth: 3

Lab Sample ID: 890-2583-2
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		07/21/22 09:38	07/21/22 18:16	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/21/22 09:38	07/21/22 18:16	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/21/22 09:38	07/21/22 18:16	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/21/22 09:38	07/21/22 18:16	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/21/22 09:38	07/21/22 18:16	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/21/22 09:38	07/21/22 18:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*07/21/22 09:38*	*07/21/22 18:16*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2583-1
SDG: 03E1558013

Client Sample ID: PH06A
Date Collected: 07/18/22 13:40
Date Received: 07/19/22 10:57
Sample Depth: 3

Lab Sample ID: 890-2583-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*07/21/22 09:38*	*07/21/22 18:16*	*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			07/22/22 10:12	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			07/25/22 09:55	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		07/23/22 10:54	07/23/22 18:28	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/23/22 10:54	07/23/22 18:28	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/23/22 10:54	07/23/22 18:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*99*		*70 - 130*	*07/23/22 10:54*	*07/23/22 18:28*	*1*
o-Terphenyl	*108*		*70 - 130*	*07/23/22 10:54*	*07/23/22 18:28*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8.83**		5.04		mg/Kg			07/22/22 11:45	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2583-1
SDG: 03E1558013

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-17129-A-12-E MS	Matrix Spike	122	89
880-17129-A-12-F MSD	Matrix Spike Duplicate	112	96
890-2583-1	PH06	111	87
890-2583-2	PH06A	110	90
LCS 880-30210/1-A	Lab Control Sample	106	95
LCSD 880-30210/2-A	Lab Control Sample Dup	111	95
MB 880-30210/5-A	Method Blank	96	85

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)
890-2583-1	PH06	101	111
890-2583-2	PH06A	99	108
890-2608-A-1-E MS	Matrix Spike	82	88
890-2608-A-1-F MSD	Matrix Spike Duplicate	79	85
LCS 880-30460/2-A	Lab Control Sample	119	124
LCSD 880-30460/3-A	Lab Control Sample Dup	112	113
MB 880-30460/1-A	Method Blank	161 S1+	189 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2583-1
SDG: 03E1558013

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-30210/5-A
Matrix: Solid
Analysis Batch: 30194

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30210

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:38	07/21/22 11:25	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:38	07/21/22 11:25	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:38	07/21/22 11:25	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/21/22 09:38	07/21/22 11:25	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:38	07/21/22 11:25	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/21/22 09:38	07/21/22 11:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*07/21/22 09:38*	*07/21/22 11:25*	*1*
1,4-Difluorobenzene (Surr)	*85*		*70 - 130*	*07/21/22 09:38*	*07/21/22 11:25*	*1*

Lab Sample ID: LCS 880-30210/1-A
Matrix: Solid
Analysis Batch: 30194

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30210

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09742		mg/Kg		97	70 - 130		
Toluene			0.100	0.09907		mg/Kg		99	70 - 130		
Ethylbenzene			0.100	0.1036		mg/Kg		104	70 - 130		
m-Xylene & p-Xylene			0.200	0.2101		mg/Kg		105	70 - 130		
o-Xylene			0.100	0.1150		mg/Kg		115	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: LCSD 880-30210/2-A
Matrix: Solid
Analysis Batch: 30194

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30210

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1021		mg/Kg		102	70 - 130	5	35
Toluene			0.100	0.1030		mg/Kg		103	70 - 130	4	35
Ethylbenzene			0.100	0.1119		mg/Kg		112	70 - 130	8	35
m-Xylene & p-Xylene			0.200	0.2241		mg/Kg		112	70 - 130	6	35
o-Xylene			0.100	0.1231		mg/Kg		123	70 - 130	7	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: 880-17129-A-12-E MS
Matrix: Solid
Analysis Batch: 30194

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 30210

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U	0.100	0.07628		mg/Kg		76	70 - 130		
Toluene	<0.00200	U	0.100	0.09150		mg/Kg		91	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2583-1
SDG: 03E1558013

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

Lab Sample ID: 880-17129-A-12-E MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30194 — **Prep Batch: 30210**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.100	0.1027		mg/Kg		102	70 - 130
m-Xylene & p-Xylene	0.0221		0.201	0.2128		mg/Kg		95	70 - 130
o-Xylene	0.00981		0.100	0.1154		mg/Kg		105	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*

Lab Sample ID: 880-17129-A-12-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30194 — **Prep Batch: 30210**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0998	0.09120		mg/Kg		91	70 - 130	18	35
Toluene	<0.00200	U	0.0998	0.09287		mg/Kg		93	70 - 130	1	35
Ethylbenzene	<0.00200	U	0.0998	0.09823		mg/Kg		98	70 - 130	4	35
m-Xylene & p-Xylene	0.0221		0.200	0.1979		mg/Kg		88	70 - 130	7	35
o-Xylene	0.00981		0.0998	0.1073		mg/Kg		98	70 - 130	7	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

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

Lab Sample ID: MB 880-30460/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30464 — **Prep Batch: 30460**

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		07/23/22 10:54	07/23/22 12:33	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/23/22 10:54	07/23/22 12:33	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/23/22 10:54	07/23/22 12:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*161*	*S1+*	*70 - 130*	*07/23/22 10:54*	*07/23/22 12:33*	*1*
o-Terphenyl	*189*	*S1+*	*70 - 130*	*07/23/22 10:54*	*07/23/22 12:33*	*1*

Lab Sample ID: LCS 880-30460/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30464 — **Prep Batch: 30460**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1129		mg/Kg		113	70 - 130
Diesel Range Organics (Over C10-C28)			1000	965.7		mg/Kg		97	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2583-1
SDG: 03E1558013

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

Lab Sample ID: LCS 880-30460/2-A
Matrix: Solid
Analysis Batch: 30464

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30460

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	119		70 - 130
o-Terphenyl	124		70 - 130

Lab Sample ID: LCSD 880-30460/3-A
Matrix: Solid
Analysis Batch: 30464

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30460

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1091		mg/Kg		109	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	925.1		mg/Kg		93	70 - 130	4	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	112		70 - 130
o-Terphenyl	113		70 - 130

Lab Sample ID: 890-2608-A-1-E MS
Matrix: Solid
Analysis Batch: 30464

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 30460

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1 F2	1000	1074		mg/Kg		107	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	781.8		mg/Kg		78	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	82		70 - 130
o-Terphenyl	88		70 - 130

Lab Sample ID: 890-2608-A-1-F MSD
Matrix: Solid
Analysis Batch: 30464

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 30460

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1 F2	999	1368	F1 F2	mg/Kg		137	70 - 130	24	20
Diesel Range Organics (Over C10-C28)	<50.0	U	999	714.9		mg/Kg		72	70 - 130	9	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	79		70 - 130
o-Terphenyl	85		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2583-1
SDG: 03E1558013

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-30121/1-A
Matrix: Solid
Analysis Batch: 30315

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			07/22/22 10:34	1

Lab Sample ID: LCS 880-30121/2-A
Matrix: Solid
Analysis Batch: 30315

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	273.9		mg/Kg		110	90 - 110		

Lab Sample ID: LCSD 880-30121/3-A
Matrix: Solid
Analysis Batch: 30315

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	274.9		mg/Kg		110	90 - 110	0	20

Lab Sample ID: 880-17088-A-1-B MS
Matrix: Solid
Analysis Batch: 30315

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	526		249	790.9		mg/Kg		107	90 - 110		

Lab Sample ID: 880-17088-A-1-C MSD
Matrix: Solid
Analysis Batch: 30315

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	526		249	795.1		mg/Kg		108	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2583-1
SDG: 03E1558013

GC VOA

Analysis Batch: 30194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2583-1	PH06	Total/NA	Solid	8021B	30210
890-2583-2	PH06A	Total/NA	Solid	8021B	30210
MB 880-30210/5-A	Method Blank	Total/NA	Solid	8021B	30210
LCS 880-30210/1-A	Lab Control Sample	Total/NA	Solid	8021B	30210
LCSD 880-30210/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30210
880-17129-A-12-E MS	Matrix Spike	Total/NA	Solid	8021B	30210
880-17129-A-12-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30210

Prep Batch: 30210

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2583-1	PH06	Total/NA	Solid	5035	
890-2583-2	PH06A	Total/NA	Solid	5035	
MB 880-30210/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30210/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30210/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17129-A-12-E MS	Matrix Spike	Total/NA	Solid	5035	
880-17129-A-12-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 30352

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2583-1	PH06	Total/NA	Solid	Total BTEX	
890-2583-2	PH06A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 30460

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2583-1	PH06	Total/NA	Solid	8015NM Prep	
890-2583-2	PH06A	Total/NA	Solid	8015NM Prep	
MB 880-30460/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30460/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30460/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2608-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2608-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 30464

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2583-1	PH06	Total/NA	Solid	8015B NM	30460
890-2583-2	PH06A	Total/NA	Solid	8015B NM	30460
MB 880-30460/1-A	Method Blank	Total/NA	Solid	8015B NM	30460
LCS 880-30460/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30460
LCSD 880-30460/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30460
890-2608-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	30460
890-2608-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30460

Analysis Batch: 30538

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2583-1	PH06	Total/NA	Solid	8015 NM	
890-2583-2	PH06A	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2583-1
SDG: 03E1558013

HPLC/IC

Leach Batch: 30121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2583-1	PH06	Soluble	Solid	DI Leach	
890-2583-2	PH06A	Soluble	Solid	DI Leach	
MB 880-30121/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-30121/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-30121/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-17088-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-17088-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 30315

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2583-1	PH06	Soluble	Solid	300.0	30121
890-2583-2	PH06A	Soluble	Solid	300.0	30121
MB 880-30121/1-A	Method Blank	Soluble	Solid	300.0	30121
LCS 880-30121/2-A	Lab Control Sample	Soluble	Solid	300.0	30121
LCSD 880-30121/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30121
880-17088-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30121
880-17088-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30121

Lab Chronicle

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2583-1
SDG: 03E1558013

Client Sample ID: PH06

Date Collected: 07/18/22 13:25
Date Received: 07/19/22 10:57

Lab Sample ID: 890-2583-1

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	30210	07/21/22 09:38	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30194	07/21/22 17:55	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30352	07/22/22 10:12	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30538	07/25/22 09:55	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	30460	07/23/22 10:54	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30464	07/23/22 18:07	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	30121	07/20/22 11:51	SMC	XEN MID
Soluble	Analysis	300.0		1			30315	07/22/22 11:37	CH	XEN MID

Client Sample ID: PH06A

Date Collected: 07/18/22 13:40
Date Received: 07/19/22 10:57

Lab Sample ID: 890-2583-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	30210	07/21/22 09:38	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30194	07/21/22 18:16	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30352	07/22/22 10:12	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30538	07/25/22 09:55	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	30460	07/23/22 10:54	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30464	07/23/22 18:28	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	30121	07/20/22 11:51	SMC	XEN MID
Soluble	Analysis	300.0		1			30315	07/22/22 11:45	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 15 TWR

Job ID: 890-2583-1
SDG: 03E1558013

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 15 TWR

Job ID: 890-2583-1
SDG: 03E1558013

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 15 TWR

Job ID: 890-2583-1
SDG: 03E1558013

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2583-1	PH06	Solid	07/18/22 13:25	07/19/22 10:57	0.5
890-2583-2	PH06A	Solid	07/18/22 13:40	07/19/22 10:57	3

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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 15 TWR	Turn Around	☑ Routine ☐ Rush
Project Number:	03E1558013	Due Date:	
Project Location:	EDDY COUNTY, NM	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Conner Shore		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	TWM-007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	5.2
Total Containers:		Corrected Temperature:	5.0

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
PH06	S	7/18/2022	1325	0.5'	G	1		X	X	X
PH06A	S	7/18/2022	1340	3'	G	1		X	X	X

890-2583 Chain of Custody

Sample Comments

Cost Center: 2027711001

Incident Number: nAPP2205641685

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		7.19.22 1057			
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2583-1
SDG Number: 03E1558013

Login Number: 2583
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: 890-2583-1
SDG Number: 03E1558013

Login Number: 2583
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 07/20/22 10:53 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: 890-2584-1
Laboratory Sample Delivery Group: 03E1558013
Client Project/Site: PLU 15 TWR

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

Attn: Ben Belill

JKramer

Authorized for release by:
7/25/2022 10:48:14 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 15 TWR

Laboratory Job ID: 890-2584-1
SDG: 03E1558013

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2584-1
SDG: 03E1558013

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
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.

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 15 TWR

Job ID: 890-2584-1
SDG: 03E1558013

Job ID: 890-2584-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2584-1

Receipt
The samples were received on 7/19/2022 10:57 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 5.0°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 880-30208 and analytical batch 880-30191 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-30460 and analytical batch 880-30464 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.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (MB 880-30460/1-A). Evidence of matrix interferences is not obvious.

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

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

Client Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2584-1
SDG: 03E1558013

Client Sample ID: PH05

Date Collected: 07/18/22 13:05
Date Received: 07/19/22 10:57
Sample Depth: 0.5

Lab Sample ID: 890-2584-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:25	07/21/22 22:04	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:25	07/21/22 22:04	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:25	07/21/22 22:04	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/21/22 09:25	07/21/22 22:04	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:25	07/21/22 22:04	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/21/22 09:25	07/21/22 22:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*	*07/21/22 09:25*	*07/21/22 22:04*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*07/21/22 09:25*	*07/21/22 22:04*	*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			07/22/22 16:06	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			07/25/22 09:55	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		07/23/22 10:54	07/23/22 18:50	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/23/22 10:54	07/23/22 18:50	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/23/22 10:54	07/23/22 18:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*07/23/22 10:54*	*07/23/22 18:50*	*1*
o-Terphenyl	*107*		*70 - 130*	*07/23/22 10:54*	*07/23/22 18:50*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**106**		4.98		mg/Kg			07/22/22 12:08	1

Client Sample ID: PH05A

Date Collected: 07/18/22 13:20
Date Received: 07/19/22 10:57
Sample Depth: 3

Lab Sample ID: 890-2584-2

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		07/21/22 09:25	07/21/22 22:30	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/21/22 09:25	07/21/22 22:30	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/21/22 09:25	07/21/22 22:30	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		07/21/22 09:25	07/21/22 22:30	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/21/22 09:25	07/21/22 22:30	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		07/21/22 09:25	07/21/22 22:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*07/21/22 09:25*	*07/21/22 22:30*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2584-1
SDG: 03E1558013

Client Sample ID: PH05A
Date Collected: 07/18/22 13:20
Date Received: 07/19/22 10:57
Sample Depth: 3

Lab Sample ID: 890-2584-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*07/21/22 09:25*	*07/21/22 22:30*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			07/22/22 16:06	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			07/25/22 09:55	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		07/23/22 10:54	07/23/22 19:11	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/23/22 10:54	07/23/22 19:11	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/23/22 10:54	07/23/22 19:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*114*		*70 - 130*	*07/23/22 10:54*	*07/23/22 19:11*	*1*
o-Terphenyl	*124*		*70 - 130*	*07/23/22 10:54*	*07/23/22 19:11*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			07/22/22 12:16	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2584-1
SDG: 03E1558013

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)
890-2566-A-1-G MS	Matrix Spike	83	100
890-2566-A-1-H MSD	Matrix Spike Duplicate	109	99
890-2584-1	PH05	120	95
890-2584-2	PH05A	119	91
LCS 880-30208/1-A	Lab Control Sample	96	97
LCSD 880-30208/2-A	Lab Control Sample Dup	109	92
MB 880-30208/5-A	Method Blank	79	95

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-2584-1	PH05	98	107
890-2584-2	PH05A	114	124
890-2608-A-1-E MS	Matrix Spike	82	88
890-2608-A-1-F MSD	Matrix Spike Duplicate	79	85
LCS 880-30460/2-A	Lab Control Sample	119	124
LCSD 880-30460/3-A	Lab Control Sample Dup	112	113
MB 880-30460/1-A	Method Blank	161 S1+	189 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2584-1
SDG: 03E1558013

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-30208/5-A
Matrix: Solid
Analysis Batch: 30191

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30208

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:25	07/21/22 12:04	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:25	07/21/22 12:04	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:25	07/21/22 12:04	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/21/22 09:25	07/21/22 12:04	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:25	07/21/22 12:04	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/21/22 09:25	07/21/22 12:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*79*		*70 - 130*	*07/21/22 09:25*	*07/21/22 12:04*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*07/21/22 09:25*	*07/21/22 12:04*	*1*

Lab Sample ID: LCS 880-30208/1-A
Matrix: Solid
Analysis Batch: 30191

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30208

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09280		mg/Kg		93	70 - 130		
Toluene			0.100	0.09172		mg/Kg		92	70 - 130		
Ethylbenzene			0.100	0.09500		mg/Kg		95	70 - 130		
m-Xylene & p-Xylene			0.200	0.1827		mg/Kg		91	70 - 130		
o-Xylene			0.100	0.09784		mg/Kg		98	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: LCSD 880-30208/2-A
Matrix: Solid
Analysis Batch: 30191

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30208

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09320		mg/Kg		93	70 - 130	0	35
Toluene			0.100	0.09504		mg/Kg		95	70 - 130	4	35
Ethylbenzene			0.100	0.09691		mg/Kg		97	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.1873		mg/Kg		94	70 - 130	2	35
o-Xylene			0.100	0.1033		mg/Kg		103	70 - 130	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*

Lab Sample ID: 890-2566-A-1-G MS
Matrix: Solid
Analysis Batch: 30191

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 30208

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	0.0535		0.0998	0.07076	F1	mg/Kg		17	70 - 130		
Toluene	0.0607		0.0998	0.06762	F1	mg/Kg		7	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2584-1
SDG: 03E1558013

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

Lab Sample ID: 890-2566-A-1-G MS
Matrix: Solid
Analysis Batch: 30191

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 30208

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	0.191		0.0998	0.07426	F1	mg/Kg		-117	70 - 130
m-Xylene & p-Xylene	0.0103		0.200	0.1436	F1	mg/Kg		67	70 - 130
o-Xylene	0.0397		0.0998	0.07377	F1	mg/Kg		34	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 890-2566-A-1-H MSD
Matrix: Solid
Analysis Batch: 30191

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 30208

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.0535		0.0994	0.08725	F1	mg/Kg		34	70 - 130	21	35
Toluene	0.0607		0.0994	0.08422	F1	mg/Kg		24	70 - 130	22	35
Ethylbenzene	0.191		0.0994	0.08803	F1	mg/Kg		-104	70 - 130	17	35
m-Xylene & p-Xylene	0.0103		0.199	0.1708		mg/Kg		81	70 - 130	17	35
o-Xylene	0.0397		0.0994	0.09152	F1	mg/Kg		52	70 - 130	21	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

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

Lab Sample ID: MB 880-30460/1-A
Matrix: Solid
Analysis Batch: 30464

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30460

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		07/23/22 10:54	07/23/22 12:33	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/23/22 10:54	07/23/22 12:33	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/23/22 10:54	07/23/22 12:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*161*	*S1+*	*70 - 130*	*07/23/22 10:54*	*07/23/22 12:33*	*1*
o-Terphenyl	*189*	*S1+*	*70 - 130*	*07/23/22 10:54*	*07/23/22 12:33*	*1*

Lab Sample ID: LCS 880-30460/2-A
Matrix: Solid
Analysis Batch: 30464

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30460

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1129		mg/Kg		113	70 - 130
Diesel Range Organics (Over C10-C28)			1000	965.7		mg/Kg		97	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2584-1
SDG: 03E1558013

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

Lab Sample ID: LCS 880-30460/2-A
Matrix: Solid
Analysis Batch: 30464

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30460

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	119		70 - 130
o-Terphenyl	124		70 - 130

Lab Sample ID: LCSD 880-30460/3-A
Matrix: Solid
Analysis Batch: 30464

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30460

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1091		mg/Kg		109	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	925.1		mg/Kg		93	70 - 130	4	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	112		70 - 130
o-Terphenyl	113		70 - 130

Lab Sample ID: 890-2608-A-1-E MS
Matrix: Solid
Analysis Batch: 30464

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 30460

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1 F2	1000	1074		mg/Kg		107	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	781.8		mg/Kg		78	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	82		70 - 130
o-Terphenyl	88		70 - 130

Lab Sample ID: 890-2608-A-1-F MSD
Matrix: Solid
Analysis Batch: 30464

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 30460

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1 F2	999	1368	F1 F2	mg/Kg		137	70 - 130	24	20
Diesel Range Organics (Over C10-C28)	<50.0	U	999	714.9		mg/Kg		72	70 - 130	9	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	79		70 - 130
o-Terphenyl	85		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2584-1
SDG: 03E1558013

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-30121/1-A
Matrix: Solid
Analysis Batch: 30315

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			07/22/22 10:34	1

Lab Sample ID: LCS 880-30121/2-A
Matrix: Solid
Analysis Batch: 30315

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	273.9		mg/Kg		110	90 - 110		

Lab Sample ID: LCSD 880-30121/3-A
Matrix: Solid
Analysis Batch: 30315

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	274.9		mg/Kg		110	90 - 110	0	20

Lab Sample ID: 880-17088-A-1-B MS
Matrix: Solid
Analysis Batch: 30315

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	526		249	790.9		mg/Kg		107	90 - 110		

Lab Sample ID: 880-17088-A-1-C MSD
Matrix: Solid
Analysis Batch: 30315

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	526		249	795.1		mg/Kg		108	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2584-1
SDG: 03E1558013

GC VOA

Analysis Batch: 30191

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2584-1	PH05	Total/NA	Solid	8021B	30208
890-2584-2	PH05A	Total/NA	Solid	8021B	30208
MB 880-30208/5-A	Method Blank	Total/NA	Solid	8021B	30208
LCS 880-30208/1-A	Lab Control Sample	Total/NA	Solid	8021B	30208
LCSD 880-30208/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30208
890-2566-A-1-G MS	Matrix Spike	Total/NA	Solid	8021B	30208
890-2566-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30208

Prep Batch: 30208

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2584-1	PH05	Total/NA	Solid	5035	
890-2584-2	PH05A	Total/NA	Solid	5035	
MB 880-30208/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30208/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30208/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2566-A-1-G MS	Matrix Spike	Total/NA	Solid	5035	
890-2566-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 30444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2584-1	PH05	Total/NA	Solid	Total BTEX	
890-2584-2	PH05A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 30460

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2584-1	PH05	Total/NA	Solid	8015NM Prep	
890-2584-2	PH05A	Total/NA	Solid	8015NM Prep	
MB 880-30460/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30460/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30460/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2608-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2608-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 30464

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2584-1	PH05	Total/NA	Solid	8015B NM	30460
890-2584-2	PH05A	Total/NA	Solid	8015B NM	30460
MB 880-30460/1-A	Method Blank	Total/NA	Solid	8015B NM	30460
LCS 880-30460/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30460
LCSD 880-30460/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30460
890-2608-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	30460
890-2608-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30460

Analysis Batch: 30539

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2584-1	PH05	Total/NA	Solid	8015 NM	
890-2584-2	PH05A	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2584-1
SDG: 03E1558013

HPLC/IC

Leach Batch: 30121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2584-1	PH05	Soluble	Solid	DI Leach	
890-2584-2	PH05A	Soluble	Solid	DI Leach	
MB 880-30121/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-30121/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-30121/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-17088-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-17088-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 30315

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2584-1	PH05	Soluble	Solid	300.0	30121
890-2584-2	PH05A	Soluble	Solid	300.0	30121
MB 880-30121/1-A	Method Blank	Soluble	Solid	300.0	30121
LCS 880-30121/2-A	Lab Control Sample	Soluble	Solid	300.0	30121
LCSD 880-30121/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30121
880-17088-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30121
880-17088-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30121

Lab Chronicle

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2584-1
SDG: 03E1558013

Client Sample ID: PH05

Date Collected: 07/18/22 13:05
Date Received: 07/19/22 10:57

Lab Sample ID: 890-2584-1

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	30208	07/21/22 09:25	MR	XEN MID
Total/NA	Analysis	8021B		1			30191	07/21/22 22:04	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30444	07/22/22 16:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30539	07/25/22 09:55	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	30460	07/23/22 10:54	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30464	07/23/22 18:50	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	30121	07/20/22 11:51	SMC	XEN MID
Soluble	Analysis	300.0		1			30315	07/22/22 12:08	CH	XEN MID

Client Sample ID: PH05A

Date Collected: 07/18/22 13:20
Date Received: 07/19/22 10:57

Lab Sample ID: 890-2584-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	30208	07/21/22 09:25	MR	XEN MID
Total/NA	Analysis	8021B		1			30191	07/21/22 22:30	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30444	07/22/22 16:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30539	07/25/22 09:55	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	30460	07/23/22 10:54	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30464	07/23/22 19:11	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	30121	07/20/22 11:51	SMC	XEN MID
Soluble	Analysis	300.0		1			30315	07/22/22 12:16	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 15 TWR

Job ID: 890-2584-1
SDG: 03E1558013

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 15 TWR

Job ID: 890-2584-1
SDG: 03E1558013

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 15 TWR

Job ID: 890-2584-1
SDG: 03E1558013

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2584-1	PH05	Solid	07/18/22 13:05	07/19/22 10:57	0.5
890-2584-2	PH05A	Solid	07/18/22 13:20	07/19/22 10:57	3

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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 15 TWR	Turn Around	
Project Number:	03E1558013	☑ Routine ☐ Rush	
Project Location:	EDDY COUNTY, NM	Due Date:	
Sampler's Name:	Conner Shore	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	TNM-007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	5.2
Total Containers:		Corrected Temperature:	5.0

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021
PH05	S	7/18/2022	1305	0.5'	G	1		X	X	X
PH05A	S	7/18/2022	1320	3'	G	1		X	X	X

ANALYSIS REQUEST

Parameters

890-2584 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: 2027711001

Incident Number: nAPP2205641685

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		7.19.22 1057			
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2584-1
SDG Number: 03E1558013

Login Number: 2584
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: 890-2584-1
SDG Number: 03E1558013

Login Number: 2584
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 07/20/22 10:53 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: 890-2585-1
Laboratory Sample Delivery Group: 03E1558013
Client Project/Site: PLU 15 TWR

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

Attn: Ben Belill

JKramer

Authorized for release by:
7/27/2022 8:18:15 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 15 TWR

Laboratory Job ID: 890-2585-1
SDG: 03E1558013

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2585-1
SDG: 03E1558013

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2585-1
SDG: 03E1558013

Job ID: 890-2585-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2585-1

Receipt
The samples were received on 7/19/2022 10:57 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 5.0°C

GC VOA
Method 8021B: Surrogate recovery for the following sample was outside control limits: PH04 (890-2585-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA
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 15 TWR

Job ID: 890-2585-1
SDG: 03E1558013

Client Sample ID: PH04

Date Collected: 07/18/22 09:50
Date Received: 07/19/22 10:57
Sample Depth: 1

Lab Sample ID: 890-2585-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:38	07/21/22 18:36	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:38	07/21/22 18:36	1
Ethylbenzene	**0.0121**		0.00200		mg/Kg		07/21/22 09:38	07/21/22 18:36	1
m-Xylene & p-Xylene	**0.0216**		0.00399		mg/Kg		07/21/22 09:38	07/21/22 18:36	1
o-Xylene	**0.00712**		0.00200		mg/Kg		07/21/22 09:38	07/21/22 18:36	1
Xylenes, Total	**0.0287**		0.00399		mg/Kg		07/21/22 09:38	07/21/22 18:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*184*	*S1+*	*70 - 130*	*07/21/22 09:38*	*07/21/22 18:36*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*07/21/22 09:38*	*07/21/22 18:36*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0408**		0.00399		mg/Kg			07/22/22 10:12	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**948**		50.0		mg/Kg			07/27/22 08:23	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	**80.0**		50.0		mg/Kg		07/25/22 16:23	07/26/22 12:39	1
Diesel Range Organics (Over C10-C28)	**868**		50.0		mg/Kg		07/25/22 16:23	07/26/22 12:39	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/25/22 16:23	07/26/22 12:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*07/25/22 16:23*	*07/26/22 12:39*	*1*
o-Terphenyl	*116*		*70 - 130*	*07/25/22 16:23*	*07/26/22 12:39*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**143**		4.99		mg/Kg			07/22/22 12:24	1

Client Sample ID: PH04A

Date Collected: 07/18/22 10:00
Date Received: 07/19/22 10:57
Sample Depth: 3

Lab Sample ID: 890-2585-2

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		07/21/22 09:38	07/21/22 18:57	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/21/22 09:38	07/21/22 18:57	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/21/22 09:38	07/21/22 18:57	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/21/22 09:38	07/21/22 18:57	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/21/22 09:38	07/21/22 18:57	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/21/22 09:38	07/21/22 18:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*07/21/22 09:38*	*07/21/22 18:57*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2585-1
SDG: 03E1558013

Client Sample ID: PH04A
Date Collected: 07/18/22 10:00
Date Received: 07/19/22 10:57
Sample Depth: 3

Lab Sample ID: 890-2585-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*07/21/22 09:38*	*07/21/22 18:57*	*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			07/22/22 10:12	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			07/27/22 08:23	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		07/25/22 16:23	07/26/22 13:01	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/25/22 16:23	07/26/22 13:01	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/25/22 16:23	07/26/22 13:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*07/25/22 16:23*	*07/26/22 13:01*	*1*
o-Terphenyl	*113*		*70 - 130*	*07/25/22 16:23*	*07/26/22 13:01*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**130**		4.98		mg/Kg			07/22/22 12:32	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2585-1
SDG: 03E1558013

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)
880-17129-A-12-E MS	Matrix Spike	122	89
880-17129-A-12-F MSD	Matrix Spike Duplicate	112	96
890-2585-1	PH04	184 S1+	94
890-2585-2	PH04A	114	91
LCS 880-30210/1-A	Lab Control Sample	106	95
LCSD 880-30210/2-A	Lab Control Sample Dup	111	95
MB 880-30210/5-A	Method Blank	96	85

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-17280-A-18-D MS	Matrix Spike	88	94
880-17280-A-18-E MSD	Matrix Spike Duplicate	85	92
890-2585-1	PH04	97	116
890-2585-2	PH04A	104	113
LCS 880-30622/2-A	Lab Control Sample	102	114
LCSD 880-30622/3-A	Lab Control Sample Dup	91	104
MB 880-30622/1-A	Method Blank	98	110

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2585-1
SDG: 03E1558013

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-30210/5-A
Matrix: Solid
Analysis Batch: 30194

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30210

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:38	07/21/22 11:25	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:38	07/21/22 11:25	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:38	07/21/22 11:25	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/21/22 09:38	07/21/22 11:25	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/21/22 09:38	07/21/22 11:25	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/21/22 09:38	07/21/22 11:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*07/21/22 09:38*	*07/21/22 11:25*	*1*
1,4-Difluorobenzene (Surr)	*85*		*70 - 130*	*07/21/22 09:38*	*07/21/22 11:25*	*1*

Lab Sample ID: LCS 880-30210/1-A
Matrix: Solid
Analysis Batch: 30194

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30210

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09742		mg/Kg		97	70 - 130		
Toluene			0.100	0.09907		mg/Kg		99	70 - 130		
Ethylbenzene			0.100	0.1036		mg/Kg		104	70 - 130		
m-Xylene & p-Xylene			0.200	0.2101		mg/Kg		105	70 - 130		
o-Xylene			0.100	0.1150		mg/Kg		115	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: LCSD 880-30210/2-A
Matrix: Solid
Analysis Batch: 30194

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30210

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1021		mg/Kg		102	70 - 130	5	35
Toluene			0.100	0.1030		mg/Kg		103	70 - 130	4	35
Ethylbenzene			0.100	0.1119		mg/Kg		112	70 - 130	8	35
m-Xylene & p-Xylene			0.200	0.2241		mg/Kg		112	70 - 130	6	35
o-Xylene			0.100	0.1231		mg/Kg		123	70 - 130	7	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: 880-17129-A-12-E MS
Matrix: Solid
Analysis Batch: 30194

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 30210

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U	0.100	0.07628		mg/Kg		76	70 - 130		
Toluene	<0.00200	U	0.100	0.09150		mg/Kg		91	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2585-1
SDG: 03E1558013

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

Lab Sample ID: 880-17129-A-12-E MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30194 — **Prep Batch: 30210**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.100	0.1027		mg/Kg		102	70 - 130
m-Xylene & p-Xylene	0.0221		0.201	0.2128		mg/Kg		95	70 - 130
o-Xylene	0.00981		0.100	0.1154		mg/Kg		105	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*

Lab Sample ID: 880-17129-A-12-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30194 — **Prep Batch: 30210**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0998	0.09120		mg/Kg		91	70 - 130	18	35
Toluene	<0.00200	U	0.0998	0.09287		mg/Kg		93	70 - 130	1	35
Ethylbenzene	<0.00200	U	0.0998	0.09823		mg/Kg		98	70 - 130	4	35
m-Xylene & p-Xylene	0.0221		0.200	0.1979		mg/Kg		88	70 - 130	7	35
o-Xylene	0.00981		0.0998	0.1073		mg/Kg		98	70 - 130	7	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

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

Lab Sample ID: MB 880-30622/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30645 — **Prep Batch: 30622**

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		07/25/22 16:23	07/26/22 09:44	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/25/22 16:23	07/26/22 09:44	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/25/22 16:23	07/26/22 09:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*07/25/22 16:23*	*07/26/22 09:44*	*1*
o-Terphenyl	*110*		*70 - 130*	*07/25/22 16:23*	*07/26/22 09:44*	*1*

Lab Sample ID: LCS 880-30622/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30645 — **Prep Batch: 30622**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	957.4		mg/Kg		96	70 - 130
Diesel Range Organics (Over C10-C28)			1000	926.5		mg/Kg		93	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2585-1
SDG: 03E1558013

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

Lab Sample ID: LCS 880-30622/2-A
Matrix: Solid
Analysis Batch: 30645

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30622

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	102		70 - 130
o-Terphenyl	114		70 - 130

Lab Sample ID: LCSD 880-30622/3-A
Matrix: Solid
Analysis Batch: 30645

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30622

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	988.4		mg/Kg		99	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	863.8		mg/Kg		86	70 - 130	7	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	91		70 - 130
o-Terphenyl	104		70 - 130

Lab Sample ID: 880-17280-A-18-D MS
Matrix: Solid
Analysis Batch: 30645

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 30622

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	1163		mg/Kg		116	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	789.8		mg/Kg		79	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	88		70 - 130
o-Terphenyl	94		70 - 130

Lab Sample ID: 880-17280-A-18-E MSD
Matrix: Solid
Analysis Batch: 30645

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 30622

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	1054		mg/Kg		106	70 - 130	10	20
Diesel Range Organics (Over C10-C28)	<50.0	U	999	773.5		mg/Kg		77	70 - 130	2	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	85		70 - 130
o-Terphenyl	92		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2585-1
SDG: 03E1558013

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-30121/1-A
Matrix: Solid
Analysis Batch: 30315

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			07/22/22 10:34	1

Lab Sample ID: LCS 880-30121/2-A
Matrix: Solid
Analysis Batch: 30315

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	273.9		mg/Kg		110	90 - 110		

Lab Sample ID: LCSD 880-30121/3-A
Matrix: Solid
Analysis Batch: 30315

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	274.9		mg/Kg		110	90 - 110	0	20

Lab Sample ID: 880-17088-A-1-B MS
Matrix: Solid
Analysis Batch: 30315

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	526		249	790.9		mg/Kg		107	90 - 110		

Lab Sample ID: 880-17088-A-1-C MSD
Matrix: Solid
Analysis Batch: 30315

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	526		249	795.1		mg/Kg		108	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2585-1
SDG: 03E1558013

GC VOA

Analysis Batch: 30194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2585-1	PH04	Total/NA	Solid	8021B	30210
890-2585-2	PH04A	Total/NA	Solid	8021B	30210
MB 880-30210/5-A	Method Blank	Total/NA	Solid	8021B	30210
LCS 880-30210/1-A	Lab Control Sample	Total/NA	Solid	8021B	30210
LCSD 880-30210/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30210
880-17129-A-12-E MS	Matrix Spike	Total/NA	Solid	8021B	30210
880-17129-A-12-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30210

Prep Batch: 30210

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2585-1	PH04	Total/NA	Solid	5035	
890-2585-2	PH04A	Total/NA	Solid	5035	
MB 880-30210/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30210/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30210/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17129-A-12-E MS	Matrix Spike	Total/NA	Solid	5035	
880-17129-A-12-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 30353

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2585-1	PH04	Total/NA	Solid	Total BTEX	
890-2585-2	PH04A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 30622

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2585-1	PH04	Total/NA	Solid	8015NM Prep	
890-2585-2	PH04A	Total/NA	Solid	8015NM Prep	
MB 880-30622/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30622/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30622/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-17280-A-18-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-17280-A-18-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 30645

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2585-1	PH04	Total/NA	Solid	8015B NM	30622
890-2585-2	PH04A	Total/NA	Solid	8015B NM	30622
MB 880-30622/1-A	Method Blank	Total/NA	Solid	8015B NM	30622
LCS 880-30622/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30622
LCSD 880-30622/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30622
880-17280-A-18-D MS	Matrix Spike	Total/NA	Solid	8015B NM	30622
880-17280-A-18-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30622

Analysis Batch: 30751

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2585-1	PH04	Total/NA	Solid	8015 NM	
890-2585-2	PH04A	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2585-1
SDG: 03E1558013

HPLC/IC

Leach Batch: 30121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2585-1	PH04	Soluble	Solid	DI Leach	
890-2585-2	PH04A	Soluble	Solid	DI Leach	
MB 880-30121/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-30121/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-30121/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-17088-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-17088-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 30315

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2585-1	PH04	Soluble	Solid	300.0	30121
890-2585-2	PH04A	Soluble	Solid	300.0	30121
MB 880-30121/1-A	Method Blank	Soluble	Solid	300.0	30121
LCS 880-30121/2-A	Lab Control Sample	Soluble	Solid	300.0	30121
LCSD 880-30121/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30121
880-17088-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30121
880-17088-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30121

Lab Chronicle

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2585-1
SDG: 03E1558013

Client Sample ID: PH04

Date Collected: 07/18/22 09:50
Date Received: 07/19/22 10:57

Lab Sample ID: 890-2585-1

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	30210	07/21/22 09:38	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30194	07/21/22 18:36	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30353	07/22/22 10:12	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30751	07/27/22 08:23	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	30622	07/25/22 16:23	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30645	07/26/22 12:39	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	30121	07/20/22 11:51	SMC	XEN MID
Soluble	Analysis	300.0		1			30315	07/22/22 12:24	CH	XEN MID

Client Sample ID: PH04A

Date Collected: 07/18/22 10:00
Date Received: 07/19/22 10:57

Lab Sample ID: 890-2585-2

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			5.03 g	5 mL	30210	07/21/22 09:38	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30194	07/21/22 18:57	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30353	07/22/22 10:12	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30751	07/27/22 08:23	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	30622	07/25/22 16:23	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30645	07/26/22 13:01	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	30121	07/20/22 11:51	SMC	XEN MID
Soluble	Analysis	300.0		1			30315	07/22/22 12:32	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 15 TWR

Job ID: 890-2585-1
SDG: 03E1558013

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 15 TWR

Job ID: 890-2585-1
SDG: 03E1558013

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 15 TWR

Job ID: 890-2585-1
SDG: 03E1558013

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2585-1	PH04	Solid	07/18/22 09:50	07/19/22 10:57	1
890-2585-2	PH04A	Solid	07/18/22 10:00	07/19/22 10:57	3

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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

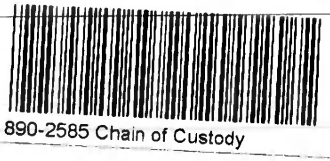
Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	PLU 15 TWR	Turn Around	☑ Routine ☐ Rush
Project Number:	03E1558013	Due Date:	
Project Location:	EDDY COUNTY, NM	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Conner Shore		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	TCM-001
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	5.2
Total Containers:		Corrected Temperature:	5.0

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
PH04	S	7/18/2022	950	1'	G	1		X	X	X
PH04A	s	7/18/2022	1000	3'	G	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: 2027711001

Incident Number: nAPP2205641685

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		7.19.22 1057	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2585-1
SDG Number: 03E1558013

Login Number: 2585
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: 890-2585-1
SDG Number: 03E1558013

Login Number: 2585
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 07/20/22 10:53 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: 890-2586-1
Laboratory Sample Delivery Group: 03E1558013
Client Project/Site: PLU 15 TWR

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

Attn: Ben Belill

JKramer

Authorized for release by:
8/1/2022 9:58:07 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 15 TWR

Laboratory Job ID: 890-2586-1
SDG: 03E1558013

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

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

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1+	Surrogate recovery exceeds control limits, 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 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

Job ID: 890-2586-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2586-1

Receipt
The samples were received on 7/19/2022 10:57 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 5.0°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-30518 and analytical batch 880-30501 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.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-30296 and analytical batch 880-30501 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.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-30562 and analytical batch 880-30657 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.

Method 8021B: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 880-30589 and analytical batch 880-30859 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-30669 and analytical batch 880-30859 was outside the upper control limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: (LCSD 880-30589/2-A) and (880-17202-A-1-D MS). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-30589 and analytical batch 880-30859 was outside the upper control limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (880-17202-A-1-F). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-30164 and analytical batch 880-30098 was outside the upper control limits.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 880-30164 and analytical batch 880-30098 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-30460 and analytical batch 880-30464 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.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (MB 880-30460/1-A). Evidence of matrix

Case Narrative

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

Job ID: 890-2586-1 (Continued)

Laboratory: Eurofins Carlsbad (Continued)

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 880-30121 and analytical batch 880-30315 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 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

Client Sample ID: FS01
Date Collected: 07/18/22 13:55
Date Received: 07/19/22 10:57
Sample Depth: 4

Lab Sample ID: 890-2586-1
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		07/25/22 09:31	07/25/22 18:46	1
Toluene	**0.00272**		0.00201		mg/Kg		07/25/22 09:31	07/25/22 18:46	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/25/22 09:31	07/25/22 18:46	1
m-Xylene & p-Xylene	**0.00593**		0.00402		mg/Kg		07/25/22 09:31	07/25/22 18:46	1
o-Xylene	**0.00283**		0.00201		mg/Kg		07/25/22 09:31	07/25/22 18:46	1
Xylenes, Total	**0.00876**		0.00402		mg/Kg		07/25/22 09:31	07/25/22 18:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*07/25/22 09:31*	*07/25/22 18:46*	*1*
1,4-Difluorobenzene (Surr)	*118*		*70 - 130*	*07/25/22 09:31*	*07/25/22 18:46*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0115**		0.00402		mg/Kg			07/26/22 11:03	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			07/21/22 13:53	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		07/23/22 10:54	07/23/22 19:32	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/23/22 10:54	07/23/22 19:32	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/23/22 10:54	07/23/22 19:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*105*		*70 - 130*	*07/23/22 10:54*	*07/23/22 19:32*	*1*
o-Terphenyl	*114*		*70 - 130*	*07/23/22 10:54*	*07/23/22 19:32*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8.81**		4.95		mg/Kg			07/22/22 12:40	1

Client Sample ID: FS02
Date Collected: 07/18/22 12:15
Date Received: 07/19/22 10:57
Sample Depth: 3

Lab Sample ID: 890-2586-2
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/26/22 09:25	07/26/22 18:12	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/26/22 09:25	07/26/22 18:12	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/26/22 09:25	07/26/22 18:12	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		07/26/22 09:25	07/26/22 18:12	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/26/22 09:25	07/26/22 18:12	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		07/26/22 09:25	07/26/22 18:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*07/26/22 09:25*	*07/26/22 18:12*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

Client Sample ID: FS02

Lab Sample ID: 890-2586-2
Matrix: Solid
Date Collected: 07/18/22 12:15
Date Received: 07/19/22 10:57
Sample Depth: 3

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*07/26/22 09:25*	*07/26/22 18:12*	*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			07/26/22 11:03	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			07/21/22 13:53	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		07/23/22 10:54	07/23/22 19:54	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/23/22 10:54	07/23/22 19:54	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/23/22 10:54	07/23/22 19:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*111*		*70 - 130*	*07/23/22 10:54*	*07/23/22 19:54*	*1*
o-Terphenyl	*117*		*70 - 130*	*07/23/22 10:54*	*07/23/22 19:54*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**15.6**	**F1**	4.95		mg/Kg			07/22/22 12:48	1

Client Sample ID: FS03

Lab Sample ID: 890-2586-3
Matrix: Solid
Date Collected: 07/18/22 12:20
Date Received: 07/19/22 10:57
Sample Depth: 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		07/25/22 09:31	07/25/22 19:27	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/25/22 09:31	07/25/22 19:27	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/25/22 09:31	07/25/22 19:27	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/25/22 09:31	07/25/22 19:27	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/25/22 09:31	07/25/22 19:27	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/25/22 09:31	07/25/22 19:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*07/25/22 09:31*	*07/25/22 19:27*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*07/25/22 09:31*	*07/25/22 19:27*	*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			07/26/22 11:03	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			07/21/22 13:53	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

Client Sample ID: FS03

Lab Sample ID: 890-2586-3
Matrix: Solid
Date Collected: 07/18/22 12:20
Date Received: 07/19/22 10:57
Sample Depth: 3

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		07/23/22 10:54	07/23/22 20:36	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/23/22 10:54	07/23/22 20:36	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/23/22 10:54	07/23/22 20:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*07/23/22 10:54*	*07/23/22 20:36*	*1*
o-Terphenyl	*103*		*70 - 130*	*07/23/22 10:54*	*07/23/22 20:36*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**11.1**		4.98		mg/Kg			07/22/22 15:50	1

Client Sample ID: FS04

Lab Sample ID: 890-2586-4
Matrix: Solid
Date Collected: 07/14/22 15:00
Date Received: 07/19/22 10:57
Sample Depth: 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/25/22 09:31	07/25/22 19:47	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/25/22 09:31	07/25/22 19:47	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/25/22 09:31	07/25/22 19:47	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		07/25/22 09:31	07/25/22 19:47	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/25/22 09:31	07/25/22 19:47	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		07/25/22 09:31	07/25/22 19:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*07/25/22 09:31*	*07/25/22 19:47*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*07/25/22 09:31*	*07/25/22 19:47*	*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			07/26/22 11:03	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			07/21/22 13:53	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		07/20/22 15:31	07/21/22 05:49	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/20/22 15:31	07/21/22 05:49	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/20/22 15:31	07/21/22 05:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*108*		*70 - 130*	*07/20/22 15:31*	*07/21/22 05:49*	*1*
o-Terphenyl	*118*		*70 - 130*	*07/20/22 15:31*	*07/21/22 05:49*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

Client Sample ID: FS04

Lab Sample ID: 890-2586-4
Matrix: Solid
Date Collected: 07/14/22 15:00
Date Received: 07/19/22 10:57
Sample Depth: 2

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	50.6		5.04		mg/Kg			07/22/22 15:58	1

Client Sample ID: FS05

Lab Sample ID: 890-2586-5
Matrix: Solid
Date Collected: 07/18/22 12:25
Date Received: 07/19/22 10:57
Sample Depth: 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/25/22 09:31	07/25/22 20:08	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/25/22 09:31	07/25/22 20:08	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/25/22 09:31	07/25/22 20:08	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/25/22 09:31	07/25/22 20:08	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/25/22 09:31	07/25/22 20:08	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/25/22 09:31	07/25/22 20:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*07/25/22 09:31*	*07/25/22 20:08*	*1*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*	*07/25/22 09:31*	*07/25/22 20:08*	*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			07/26/22 11:03	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			07/21/22 13:53	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		07/23/22 10:54	07/23/22 21:19	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/23/22 10:54	07/23/22 21:19	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/23/22 10:54	07/23/22 21:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*07/23/22 10:54*	*07/23/22 21:19*	*1*
o-Terphenyl	*106*		*70 - 130*	*07/23/22 10:54*	*07/23/22 21:19*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.78		4.99		mg/Kg			07/22/22 16:21	1

Client Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

Client Sample ID: FS06

Lab Sample ID: 890-2586-6
Matrix: Solid
Date Collected: 07/14/22 15:05
Date Received: 07/19/22 10:57
Sample Depth: 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		07/25/22 09:31	07/25/22 20:28	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/25/22 09:31	07/25/22 20:28	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/25/22 09:31	07/25/22 20:28	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		07/25/22 09:31	07/25/22 20:28	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/25/22 09:31	07/25/22 20:28	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		07/25/22 09:31	07/25/22 20:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*07/25/22 09:31*	*07/25/22 20:28*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*07/25/22 09:31*	*07/25/22 20:28*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			07/26/22 11:03	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			07/21/22 13:53	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		07/20/22 15:31	07/21/22 06:10	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		07/20/22 15:31	07/21/22 06:10	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/20/22 15:31	07/21/22 06:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*07/20/22 15:31*	*07/21/22 06:10*	*1*
o-Terphenyl	*104*		*70 - 130*	*07/20/22 15:31*	*07/21/22 06:10*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**65.9**		5.02		mg/Kg			07/22/22 16:29	1

Client Sample ID: SW01

Lab Sample ID: 890-2586-7
Matrix: Solid
Date Collected: 07/18/22 12:30
Date Received: 07/19/22 10:57
Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/25/22 09:31	07/25/22 20:49	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/25/22 09:31	07/25/22 20:49	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/25/22 09:31	07/25/22 20:49	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/25/22 09:31	07/25/22 20:49	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/25/22 09:31	07/25/22 20:49	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/25/22 09:31	07/25/22 20:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*07/25/22 09:31*	*07/25/22 20:49*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

Client Sample ID: SW01

Date Collected: 07/18/22 12:30
Date Received: 07/19/22 10:57
Sample Depth: 0 - 4

Lab Sample ID: 890-2586-7
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*07/25/22 09:31*	*07/25/22 20:49*	*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			07/26/22 11:03	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			07/21/22 13:53	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		07/23/22 10:54	07/23/22 22:01	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		07/23/22 10:54	07/23/22 22:01	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/23/22 10:54	07/23/22 22:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*07/23/22 10:54*	*07/23/22 22:01*	*1*
o-Terphenyl	*106*		*70 - 130*	*07/23/22 10:54*	*07/23/22 22:01*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**771**		4.98	mg/Kg			07/22/22 16:37	1

Client Sample ID: SW02

Date Collected: 07/18/22 12:35
Date Received: 07/19/22 10:57
Sample Depth: 0 - 3

Lab Sample ID: 890-2586-8
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		07/25/22 12:06	07/29/22 05:08	1
Toluene	<0.00198	U	0.00198	mg/Kg		07/25/22 12:06	07/29/22 05:08	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		07/25/22 12:06	07/29/22 05:08	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		07/25/22 12:06	07/29/22 05:08	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		07/25/22 12:06	07/29/22 05:08	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		07/25/22 12:06	07/29/22 05:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*	*07/25/22 12:06*	*07/29/22 05:08*	*1*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*07/25/22 12:06*	*07/29/22 05:08*	*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			07/26/22 11:03	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**68.1**		50.0	mg/Kg			07/21/22 13:53	1

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Client Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

Client Sample ID: SW02

Lab Sample ID: 890-2586-8
Matrix: Solid
Date Collected: 07/18/22 12:35
Date Received: 07/19/22 10:57
Sample Depth: 0 - 3

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		07/23/22 10:54	07/23/22 22:23	1
Diesel Range Organics (Over C10-C28)	**68.1**		50.0		mg/Kg		07/23/22 10:54	07/23/22 22:23	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/23/22 10:54	07/23/22 22:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*07/23/22 10:54*	*07/23/22 22:23*	*1*
o-Terphenyl	*112*		*70 - 130*	*07/23/22 10:54*	*07/23/22 22:23*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**326**		4.99		mg/Kg			07/22/22 17:08	1

Client Sample ID: SW03

Lab Sample ID: 890-2586-9
Matrix: Solid
Date Collected: 07/18/22 12:40
Date Received: 07/19/22 10:57
Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0401	U	0.0401		mg/Kg		07/29/22 12:56	07/31/22 18:09	20
Toluene	**0.0579**		0.0401		mg/Kg		07/29/22 12:56	07/31/22 18:09	20
Ethylbenzene	<0.0401	U	0.0401		mg/Kg		07/29/22 12:56	07/31/22 18:09	20
m-Xylene & p-Xylene	<0.0802	U	0.0802		mg/Kg		07/29/22 12:56	07/31/22 18:09	20
o-Xylene	<0.0401	U	0.0401		mg/Kg		07/29/22 12:56	07/31/22 18:09	20
Xylenes, Total	<0.0802	U	0.0802		mg/Kg		07/29/22 12:56	07/31/22 18:09	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*07/29/22 12:56*	*07/31/22 18:09*	*20*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*07/29/22 12:56*	*07/31/22 18:09*	*20*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.0802	U	0.0802		mg/Kg			07/26/22 11:03	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			07/21/22 13:53	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		07/23/22 10:54	07/23/22 22:44	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/23/22 10:54	07/23/22 22:44	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/23/22 10:54	07/23/22 22:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*07/23/22 10:54*	*07/23/22 22:44*	*1*
o-Terphenyl	*102*		*70 - 130*	*07/23/22 10:54*	*07/23/22 22:44*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

Client Sample ID: SW03

Lab Sample ID: 890-2586-9
Matrix: Solid
Date Collected: 07/18/22 12:40
Date Received: 07/19/22 10:57
Sample Depth: 0 - 4

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	53.8		4.97		mg/Kg			07/22/22 17:16	1

Client Sample ID: SW04

Lab Sample ID: 890-2586-10
Matrix: Solid
Date Collected: 07/18/22 12:45
Date Received: 07/19/22 10:57
Sample Depth: 0 - 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0402	U	0.0402		mg/Kg		07/29/22 12:56	07/31/22 18:29	20
Toluene	<0.0402	U	0.0402		mg/Kg		07/29/22 12:56	07/31/22 18:29	20
Ethylbenzene	<0.0402	U	0.0402		mg/Kg		07/29/22 12:56	07/31/22 18:29	20
m-Xylene & p-Xylene	<0.0803	U	0.0803		mg/Kg		07/29/22 12:56	07/31/22 18:29	20
o-Xylene	<0.0402	U	0.0402		mg/Kg		07/29/22 12:56	07/31/22 18:29	20
Xylenes, Total	<0.0803	U	0.0803		mg/Kg		07/29/22 12:56	07/31/22 18:29	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*07/29/22 12:56*	*07/31/22 18:29*	*20*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*07/29/22 12:56*	*07/31/22 18:29*	*20*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.0803	U	0.0803		mg/Kg			07/26/22 11:03	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			07/21/22 13:53	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		07/23/22 10:54	07/23/22 23:05	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		07/23/22 10:54	07/23/22 23:05	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/23/22 10:54	07/23/22 23:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*07/23/22 10:54*	*07/23/22 23:05*	*1*
o-Terphenyl	*121*		*70 - 130*	*07/23/22 10:54*	*07/23/22 23:05*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	141		4.97		mg/Kg			07/22/22 17:24	1

Client Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

Client Sample ID: SW05

Date Collected: 07/18/22 14:30
Date Received: 07/19/22 10:57
Sample Depth: 0 - 2

Lab Sample ID: 890-2586-11

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		07/21/22 15:56	07/26/22 08:24	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/21/22 15:56	07/26/22 08:24	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/21/22 15:56	07/26/22 08:24	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/21/22 15:56	07/26/22 08:24	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/21/22 15:56	07/26/22 08:24	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/21/22 15:56	07/26/22 08:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*07/21/22 15:56*	*07/26/22 08:24*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*07/21/22 15:56*	*07/26/22 08:24*	*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			07/26/22 11:03	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			07/21/22 13:53	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		07/23/22 10:54	07/23/22 23:26	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/23/22 10:54	07/23/22 23:26	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/23/22 10:54	07/23/22 23:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*07/23/22 10:54*	*07/23/22 23:26*	*1*
o-Terphenyl	*102*		*70 - 130*	*07/23/22 10:54*	*07/23/22 23:26*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**155**		5.00		mg/Kg			07/22/22 17:32	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

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)										
880-17068-A-41-F MS	Matrix Spike	104	96										
880-17068-A-41-G MSD	Matrix Spike Duplicate	102	94										
880-17132-A-4-F MS	Matrix Spike	103	95										
880-17132-A-4-G MSD	Matrix Spike Duplicate	110	96										
880-17202-A-1-D MS	Matrix Spike	352 S1+	298 S1+										
880-17202-A-1-E MSD	Matrix Spike Duplicate	129	107										
880-17291-A-1-D MS	Matrix Spike	96	99										
880-17291-A-1-E MSD	Matrix Spike Duplicate	92	104										
890-2586-1	FS01	102	118										
890-2586-2	FS02	114	94										
890-2586-3	FS03	108	106										
890-2586-4	FS04	101	102										
890-2586-5	FS05	94	109										
890-2586-6	FS06	95	94										
890-2586-7	SW01	101	99										
890-2586-8	SW02	121	111										
890-2586-9	SW03	107	94										
890-2586-10	SW04	111	92										
890-2586-11	SW05	106	99										
890-2603-A-1-D MS	Matrix Spike	103	85										
890-2603-A-1-E MSD	Matrix Spike Duplicate	107	92										
890-2666-A-3-D MS	Matrix Spike	108	99										
890-2666-A-3-E MSD	Matrix Spike Duplicate	99	93										
890-2674-A-2-D MS	Matrix Spike	109	101										
890-2674-A-2-E MSD	Matrix Spike Duplicate	105	98										
LCS 880-30296/1-A	Lab Control Sample	98	100										
LCS 880-30518/1-A	Lab Control Sample	97	102										
LCS 880-30562/1-A	Lab Control Sample	106	94										
LCS 880-30589/1-A	Lab Control Sample	123	101										
LCS 880-30664/1-A	Lab Control Sample	105	95										
LCS 880-31008/1-A	Lab Control Sample	100	98										
LCS 880-31012/1-A	Lab Control Sample	105	101										
LCSD 880-30296/2-A	Lab Control Sample Dup	99	128										
LCSD 880-30518/2-A	Lab Control Sample Dup	101	96										
LCSD 880-30562/2-A	Lab Control Sample Dup	104	94										
LCSD 880-30589/2-A	Lab Control Sample Dup	131 S1+	113										
LCSD 880-30664/2-A	Lab Control Sample Dup	108	98										
LCSD 880-31008/2-A	Lab Control Sample Dup	103	98										
LCSD 880-31012/2-A	Lab Control Sample Dup	111	97										
MB 880-30296/5-A	Method Blank	94	98										
MB 880-30518/5-A	Method Blank	96	101										
MB 880-30562/5-A	Method Blank	90	84										
MB 880-30589/5-A	Method Blank	107	62 S1-										
MB 880-30664/5-A	Method Blank	100	87										
MB 880-30669/5-A	Method Blank	91	63 S1-										
MB 880-31008/5-A	Method Blank	100	87										
MB 880-31012/5-A	Method Blank	100	86										

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Surrogate Summary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

DFBZ = 1,4-Difluorobenzene (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)									
		1CO1	OTPH1								
Lab Sample ID	Client Sample ID	(70-130)	(70-130)								
880-17129-A-13-E MS	Matrix Spike	82	85								
880-17129-A-13-F MSD	Matrix Spike Duplicate	81	85								
890-2586-1	FS01	105	114								
890-2586-2	FS02	111	117								
890-2586-3	FS03	97	103								
890-2586-4	FS04	108	118								
890-2586-5	FS05	100	106								
890-2586-6	FS06	94	104								
890-2586-7	SW01	98	106								
890-2586-8	SW02	102	112								
890-2586-9	SW03	97	102								
890-2586-10	SW04	113	121								
890-2586-11	SW05	96	102								
890-2608-A-1-E MS	Matrix Spike	82	88								
890-2608-A-1-F MSD	Matrix Spike Duplicate	79	85								
LCS 880-30164/2-A	Lab Control Sample	102	114								
LCS 880-30460/2-A	Lab Control Sample	119	124								
LCSD 880-30460/3-A	Lab Control Sample Dup	112	113								
MB 880-30164/1-A	Method Blank	137 S1+	153 S1+								
MB 880-30460/1-A	Method Blank	161 S1+	189 S1+								

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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										
LCSD 880-30164/3-A	Lab Control Sample Dup										

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-30296/5-A
Matrix: Solid
Analysis Batch: 30501

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30296

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/21/22 15:56	07/26/22 00:59	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/21/22 15:56	07/26/22 00:59	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/21/22 15:56	07/26/22 00:59	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/21/22 15:56	07/26/22 00:59	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/21/22 15:56	07/26/22 00:59	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/21/22 15:56	07/26/22 00:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*07/21/22 15:56*	*07/26/22 00:59*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*07/21/22 15:56*	*07/26/22 00:59*	*1*

Lab Sample ID: LCS 880-30296/1-A
Matrix: Solid
Analysis Batch: 30501

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30296

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08741		mg/Kg		87	70 - 130		
Toluene			0.100	0.09930		mg/Kg		99	70 - 130		
Ethylbenzene			0.100	0.08723		mg/Kg		87	70 - 130		
m-Xylene & p-Xylene			0.200	0.1773		mg/Kg		89	70 - 130		
o-Xylene			0.100	0.1036		mg/Kg		104	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 880-30296/2-A
Matrix: Solid
Analysis Batch: 30501

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30296

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08421		mg/Kg		84	70 - 130	4	35
Toluene			0.100	0.08424		mg/Kg		84	70 - 130	16	35
Ethylbenzene			0.100	0.07183		mg/Kg		72	70 - 130	19	35
m-Xylene & p-Xylene			0.200	0.1416		mg/Kg		71	70 - 130	22	35
o-Xylene			0.100	0.09129		mg/Kg		91	70 - 130	13	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*128*		*70 - 130*

Lab Sample ID: 880-17068-A-41-F MS
Matrix: Solid
Analysis Batch: 30501

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 30296

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U F2 F1	0.0998	0.05472	F1	mg/Kg		55	70 - 130		
Toluene	<0.00200	U F1	0.0998	0.06737	F1	mg/Kg		68	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

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

Lab Sample ID: 880-17068-A-41-F MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30501 — **Prep Batch: 30296**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U F1	0.0998	0.06057	F1	mg/Kg		60	70 - 130
m-Xylene & p-Xylene	<0.00399	U F1	0.200	0.1246	F1	mg/Kg		62	70 - 130
o-Xylene	<0.00200	U F1	0.0998	0.07585		mg/Kg		76	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: 880-17068-A-41-G MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30501 — **Prep Batch: 30296**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U F2 F1	0.100	0.03749	F2 F1	mg/Kg		37	70 - 130	37	35
Toluene	<0.00200	U F1	0.100	0.04858	F1	mg/Kg		48	70 - 130	32	35
Ethylbenzene	<0.00200	U F1	0.100	0.04345	F1	mg/Kg		43	70 - 130	33	35
m-Xylene & p-Xylene	<0.00399	U F1	0.201	0.08941	F1	mg/Kg		45	70 - 130	33	35
o-Xylene	<0.00200	U F1	0.100	0.05549	F1	mg/Kg		55	70 - 130	31	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*

Lab Sample ID: MB 880-30518/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30501 — **Prep Batch: 30518**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/25/22 09:31	07/25/22 11:27	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/25/22 09:31	07/25/22 11:27	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/25/22 09:31	07/25/22 11:27	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/25/22 09:31	07/25/22 11:27	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/25/22 09:31	07/25/22 11:27	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/25/22 09:31	07/25/22 11:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*07/25/22 09:31*	*07/25/22 11:27*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*07/25/22 09:31*	*07/25/22 11:27*	*1*

Lab Sample ID: LCS 880-30518/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30501 — **Prep Batch: 30518**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09704		mg/Kg		97	70 - 130
Toluene	0.100	0.1029		mg/Kg		103	70 - 130
Ethylbenzene	0.100	0.08919		mg/Kg		89	70 - 130
m-Xylene & p-Xylene	0.200	0.1817		mg/Kg		91	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

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

Lab Sample ID: LCS 880-30518/1-A
Matrix: Solid
Analysis Batch: 30501

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30518

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
o-Xylene			0.100	0.1051		mg/Kg		105	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: LCSD 880-30518/2-A
Matrix: Solid
Analysis Batch: 30501

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30518

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09242		mg/Kg		92	70 - 130	5	35
Toluene			0.100	0.1076		mg/Kg		108	70 - 130	4	35
Ethylbenzene			0.100	0.09524		mg/Kg		95	70 - 130	7	35
m-Xylene & p-Xylene			0.200	0.1950		mg/Kg		98	70 - 130	7	35
o-Xylene			0.100	0.1121		mg/Kg		112	70 - 130	6	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: 880-17291-A-1-D MS
Matrix: Solid
Analysis Batch: 30501

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 30518

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U F1	0.0998	0.06616	F1	mg/Kg		66	70 - 130		
Toluene	<0.00201	U F2 F1	0.0998	0.05990	F1	mg/Kg		60	70 - 130		
Ethylbenzene	<0.00201	U F2 F1	0.0998	0.04126	F1	mg/Kg		41	70 - 130		
m-Xylene & p-Xylene	<0.00402	U F2 F1	0.200	0.08208	F1	mg/Kg		41	70 - 130		
o-Xylene	<0.00201	U F2 F1	0.0998	0.04570	F1	mg/Kg		46	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 880-17291-A-1-E MSD
Matrix: Solid
Analysis Batch: 30501

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 30518

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U F1	0.100	0.05001	F1	mg/Kg		50	70 - 130	28	35
Toluene	<0.00201	U F2 F1	0.100	0.03624	F2 F1	mg/Kg		36	70 - 130	49	35
Ethylbenzene	<0.00201	U F2 F1	0.100	0.02194	F2 F1	mg/Kg		22	70 - 130	61	35
m-Xylene & p-Xylene	<0.00402	U F2 F1	0.200	0.04266	F2 F1	mg/Kg		21	70 - 130	63	35
o-Xylene	<0.00201	U F2 F1	0.100	0.02244	F2 F1	mg/Kg		22	70 - 130	68	35

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

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

Lab Sample ID: 880-17291-A-1-E MSD
Matrix: Solid
Analysis Batch: 30501

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 30518

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

Lab Sample ID: MB 880-30562/5-A
Matrix: Solid
Analysis Batch: 30657

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30562

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/25/22 10:57	07/26/22 22:37	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/25/22 10:57	07/26/22 22:37	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/25/22 10:57	07/26/22 22:37	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/25/22 10:57	07/26/22 22:37	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/25/22 10:57	07/26/22 22:37	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/25/22 10:57	07/26/22 22:37	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		70 - 130	07/25/22 10:57	07/26/22 22:37	1
1,4-Difluorobenzene (Surr)	84		70 - 130	07/25/22 10:57	07/26/22 22:37	1

Lab Sample ID: LCS 880-30562/1-A
Matrix: Solid
Analysis Batch: 30657

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30562

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09490		mg/Kg		95	70 - 130		
Toluene			0.100	0.09745		mg/Kg		97	70 - 130		
Ethylbenzene			0.100	0.1000		mg/Kg		100	70 - 130		
m-Xylene & p-Xylene			0.200	0.2002		mg/Kg		100	70 - 130		
o-Xylene			0.100	0.1107		mg/Kg		111	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

Lab Sample ID: LCSD 880-30562/2-A
Matrix: Solid
Analysis Batch: 30657

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30562

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1003		mg/Kg		100	70 - 130	6	35
Toluene			0.100	0.1020		mg/Kg		102	70 - 130	5	35
Ethylbenzene			0.100	0.1039		mg/Kg		104	70 - 130	4	35
m-Xylene & p-Xylene			0.200	0.2077		mg/Kg		104	70 - 130	4	35
o-Xylene			0.100	0.1145		mg/Kg		114	70 - 130	3	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

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

Lab Sample ID: LCSD 880-30562/2-A
Matrix: Solid
Analysis Batch: 30657

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30562

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

Lab Sample ID: 890-2603-A-1-D MS
Matrix: Solid
Analysis Batch: 30657

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 30562

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U F1 F2	0.101	0.03049	F1	mg/Kg		30	70 - 130
Toluene	<0.00201	U F1 F2	0.101	0.03834	F1	mg/Kg		37	70 - 130
Ethylbenzene	<0.00201	U F1 F2	0.101	0.01617	F1	mg/Kg		16	70 - 130
m-Xylene & p-Xylene	<0.00402	U F1 F2	0.202	0.08284	F1	mg/Kg		40	70 - 130
o-Xylene	<0.00201	U F1 F2	0.101	0.04972	F1	mg/Kg		49	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,4-Difluorobenzene (Surr)	85		70 - 130

Lab Sample ID: 890-2603-A-1-E MSD
Matrix: Solid
Analysis Batch: 30657

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 30562

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U F1 F2	0.100	0.07677	F2	mg/Kg		77	70 - 130	86	35
Toluene	<0.00201	U F1 F2	0.100	0.08242	F2	mg/Kg		81	70 - 130	73	35
Ethylbenzene	<0.00201	U F1 F2	0.100	0.08472	F2	mg/Kg		85	70 - 130	136	35
m-Xylene & p-Xylene	<0.00402	U F1 F2	0.200	0.1719	F2	mg/Kg		85	70 - 130	70	35
o-Xylene	<0.00201	U F1 F2	0.100	0.09434	F2	mg/Kg		94	70 - 130	62	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	107		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

Lab Sample ID: MB 880-30589/5-A
Matrix: Solid
Analysis Batch: 30859

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30589

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000400	U	0.000400	mg/Kg		07/25/22 12:06	07/29/22 02:31	1
Toluene	<0.000400	U	0.000400	mg/Kg		07/25/22 12:06	07/29/22 02:31	1
Ethylbenzene	<0.000400	U	0.000400	mg/Kg		07/25/22 12:06	07/29/22 02:31	1
m-Xylene & p-Xylene	<0.000800	U	0.000800	mg/Kg		07/25/22 12:06	07/29/22 02:31	1
o-Xylene	<0.000400	U	0.000400	mg/Kg		07/25/22 12:06	07/29/22 02:31	1
Xylenes, Total	<0.000800	U	0.000800	mg/Kg		07/25/22 12:06	07/29/22 02:31	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130	07/25/22 12:06	07/29/22 02:31	1
1,4-Difluorobenzene (Surr)	62	S1-	70 - 130	07/25/22 12:06	07/29/22 02:31	1

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

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

Lab Sample ID: LCS 880-30589/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30859 — **Prep Batch: 30589**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1106		mg/Kg		111	70 - 130		
Toluene			0.100	0.1060		mg/Kg		106	70 - 130		
Ethylbenzene			0.100	0.1050		mg/Kg		105	70 - 130		
m-Xylene & p-Xylene			0.200	0.2101		mg/Kg		105	70 - 130		
o-Xylene			0.100	0.1245		mg/Kg		125	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 880-30589/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30859 — **Prep Batch: 30589**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1160		mg/Kg		116	70 - 130	5	35
Toluene			0.100	0.1083		mg/Kg		108	70 - 130	2	35
Ethylbenzene			0.100	0.1026		mg/Kg		103	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.2112		mg/Kg		106	70 - 130	1	35
o-Xylene			0.100	0.1264		mg/Kg		126	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*131*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*

Lab Sample ID: 880-17202-A-1-D MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30859 — **Prep Batch: 30589**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U	0.101	0.09818		mg/Kg		98	70 - 130		
Toluene	<0.00201	U	0.101	0.09360		mg/Kg		93	70 - 130		
Ethylbenzene	<0.00201	U F1	0.101	0.07292		mg/Kg		72	70 - 130		
m-Xylene & p-Xylene	<0.00402	U F1	0.201	0.1277	F1	mg/Kg		63	70 - 130		
o-Xylene	<0.00201	U F1	0.101	0.1418	F1	mg/Kg		141	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*352*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*298*	*S1+*	*70 - 130*

Lab Sample ID: 880-17202-A-1-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30859 — **Prep Batch: 30589**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.100	0.09685		mg/Kg		97	70 - 130	1	35
Toluene	<0.00201	U	0.100	0.07927		mg/Kg		79	70 - 130	17	35
Ethylbenzene	<0.00201	U F1	0.100	0.06937	F1	mg/Kg		69	70 - 130	5	35

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

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

Lab Sample ID: 880-17202-A-1-E MSD
Matrix: Solid
Analysis Batch: 30859

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 30589

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
m-Xylene & p-Xylene	<0.00402	U F1	0.200	0.1122	F1	mg/Kg		56	70 - 130	13	35
o-Xylene	<0.00201	U F1	0.100	0.1004		mg/Kg		100	70 - 130	34	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*129*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: MB 880-30664/5-A
Matrix: Solid
Analysis Batch: 30657

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30664

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/26/22 09:25	07/26/22 12:01	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/26/22 09:25	07/26/22 12:01	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/26/22 09:25	07/26/22 12:01	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/26/22 09:25	07/26/22 12:01	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/26/22 09:25	07/26/22 12:01	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/26/22 09:25	07/26/22 12:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*07/26/22 09:25*	*07/26/22 12:01*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*07/26/22 09:25*	*07/26/22 12:01*	*1*

Lab Sample ID: LCS 880-30664/1-A
Matrix: Solid
Analysis Batch: 30657

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30664

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09358		mg/Kg		94	70 - 130		
Toluene			0.100	0.09382		mg/Kg		94	70 - 130		
Ethylbenzene			0.100	0.09803		mg/Kg		98	70 - 130		
m-Xylene & p-Xylene			0.200	0.1983		mg/Kg		99	70 - 130		
o-Xylene			0.100	0.1073		mg/Kg		107	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: LCSD 880-30664/2-A
Matrix: Solid
Analysis Batch: 30657

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30664

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09765		mg/Kg		98	70 - 130	4	35
Toluene			0.100	0.09676		mg/Kg		97	70 - 130	3	35
Ethylbenzene			0.100	0.1016		mg/Kg		102	70 - 130	4	35
m-Xylene & p-Xylene			0.200	0.2052		mg/Kg		103	70 - 130	3	35
o-Xylene			0.100	0.1117		mg/Kg		112	70 - 130	4	35

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

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

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

Lab Sample ID: 880-17132-A-4-F MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30657 — **Prep Batch: 30664**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U	0.100	0.08215		mg/Kg		82	70 - 130
Toluene	<0.00201	U	0.100	0.07761		mg/Kg		77	70 - 130
Ethylbenzene	<0.00201	U	0.100	0.07428		mg/Kg		74	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.200	0.1476		mg/Kg		74	70 - 130
o-Xylene	<0.00201	U	0.100	0.08083		mg/Kg		81	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

Lab Sample ID: 880-17132-A-4-G MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30657 — **Prep Batch: 30664**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0998	0.08953		mg/Kg		90	70 - 130	9	35
Toluene	<0.00201	U	0.0998	0.08606		mg/Kg		85	70 - 130	10	35
Ethylbenzene	<0.00201	U	0.0998	0.08275		mg/Kg		83	70 - 130	11	35
m-Xylene & p-Xylene	<0.00402	U	0.200	0.1653		mg/Kg		83	70 - 130	11	35
o-Xylene	<0.00201	U	0.0998	0.09102		mg/Kg		91	70 - 130	12	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	110		70 - 130
1,4-Difluorobenzene (Surr)	96		70 - 130

Lab Sample ID: MB 880-30669/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30859 — **Prep Batch: 30669**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/26/22 10:50	07/28/22 12:54	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/26/22 10:50	07/28/22 12:54	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/26/22 10:50	07/28/22 12:54	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/26/22 10:50	07/28/22 12:54	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/26/22 10:50	07/28/22 12:54	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/26/22 10:50	07/28/22 12:54	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		70 - 130	07/26/22 10:50	07/28/22 12:54	1
1,4-Difluorobenzene (Surr)	63	S1-	70 - 130	07/26/22 10:50	07/28/22 12:54	1

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

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

Lab Sample ID: MB 880-31008/5-A
Matrix: Solid
Analysis Batch: 31093

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 31008

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/29/22 12:56	07/31/22 12:18	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/29/22 12:56	07/31/22 12:18	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/29/22 12:56	07/31/22 12:18	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/29/22 12:56	07/31/22 12:18	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/29/22 12:56	07/31/22 12:18	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/29/22 12:56	07/31/22 12:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*07/29/22 12:56*	*07/31/22 12:18*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*07/29/22 12:56*	*07/31/22 12:18*	*1*

Lab Sample ID: LCS 880-31008/1-A
Matrix: Solid
Analysis Batch: 31093

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 31008

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08240		mg/Kg		82	70 - 130		
Toluene			0.100	0.07858		mg/Kg		79	70 - 130		
Ethylbenzene			0.100	0.08153		mg/Kg		82	70 - 130		
m-Xylene & p-Xylene			0.200	0.1657		mg/Kg		83	70 - 130		
o-Xylene			0.100	0.09065		mg/Kg		91	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: LCSD 880-31008/2-A
Matrix: Solid
Analysis Batch: 31093

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 31008

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1013		mg/Kg		101	70 - 130	21	35
Toluene			0.100	0.09750		mg/Kg		98	70 - 130	21	35
Ethylbenzene			0.100	0.1006		mg/Kg		101	70 - 130	21	35
m-Xylene & p-Xylene			0.200	0.2029		mg/Kg		101	70 - 130	20	35
o-Xylene			0.100	0.1108		mg/Kg		111	70 - 130	20	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: 890-2674-A-2-D MS
Matrix: Solid
Analysis Batch: 31093

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 31008

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U	0.101	0.08255		mg/Kg		82	70 - 130		
Toluene	<0.00199	U	0.101	0.07891		mg/Kg		77	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

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

Lab Sample ID: 890-2674-A-2-D MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 31093 — **Prep Batch: 31008**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U	0.101	0.08077		mg/Kg		80	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.202	0.1639		mg/Kg		81	70 - 130
o-Xylene	<0.00199	U	0.101	0.08914		mg/Kg		88	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 890-2674-A-2-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 31093 — **Prep Batch: 31008**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.0996	0.08499		mg/Kg		85	70 - 130	3	35
Toluene	<0.00199	U	0.0996	0.08281		mg/Kg		82	70 - 130	5	35
Ethylbenzene	<0.00199	U	0.0996	0.08457		mg/Kg		85	70 - 130	5	35
m-Xylene & p-Xylene	<0.00398	U	0.199	0.1702		mg/Kg		85	70 - 130	4	35
o-Xylene	<0.00199	U	0.0996	0.09264		mg/Kg		93	70 - 130	4	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: MB 880-31012/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 31093 — **Prep Batch: 31012**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/29/22 13:33	07/31/22 22:55	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/29/22 13:33	07/31/22 22:55	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/29/22 13:33	07/31/22 22:55	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/29/22 13:33	07/31/22 22:55	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/29/22 13:33	07/31/22 22:55	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/29/22 13:33	07/31/22 22:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*07/29/22 13:33*	*07/31/22 22:55*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*07/29/22 13:33*	*07/31/22 22:55*	*1*

Lab Sample ID: LCS 880-31012/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 31093 — **Prep Batch: 31012**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09484		mg/Kg		95	70 - 130
Toluene	0.100	0.08991		mg/Kg		90	70 - 130
Ethylbenzene	0.100	0.09258		mg/Kg		93	70 - 130
m-Xylene & p-Xylene	0.200	0.1866		mg/Kg		93	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

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

Lab Sample ID: LCS 880-31012/1-A
Matrix: Solid
Analysis Batch: 31093

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 31012

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
o-Xylene			0.100	0.09997		mg/Kg		100	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 880-31012/2-A
Matrix: Solid
Analysis Batch: 31093

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 31012

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08621		mg/Kg		86	70 - 130	10	35
Toluene			0.100	0.08683		mg/Kg		87	70 - 130	3	35
Ethylbenzene			0.100	0.09088		mg/Kg		91	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.1891		mg/Kg		95	70 - 130	1	35
o-Xylene			0.100	0.1128		mg/Kg		113	70 - 130	12	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: 890-2666-A-3-D MS
Matrix: Solid
Analysis Batch: 31093

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 31012

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00198	U	0.101	0.1060		mg/Kg		105	70 - 130		
Toluene	0.00327		0.101	0.1008		mg/Kg		97	70 - 130		
Ethylbenzene	0.00620		0.101	0.1041		mg/Kg		97	70 - 130		
m-Xylene & p-Xylene	0.0197		0.202	0.2112		mg/Kg		95	70 - 130		
o-Xylene	0.0128		0.101	0.1210		mg/Kg		107	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 890-2666-A-3-E MSD
Matrix: Solid
Analysis Batch: 31093

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 31012

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00198	U	0.100	0.08957		mg/Kg		89	70 - 130	17	35
Toluene	0.00327		0.100	0.09161		mg/Kg		88	70 - 130	10	35
Ethylbenzene	0.00620		0.100	0.09040		mg/Kg		84	70 - 130	14	35
m-Xylene & p-Xylene	0.0197		0.200	0.1797		mg/Kg		80	70 - 130	16	35
o-Xylene	0.0128		0.100	0.1015		mg/Kg		88	70 - 130	18	35

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

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

Lab Sample ID: 890-2666-A-3-E MSD
Matrix: Solid
Analysis Batch: 31093

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 31012

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	93		70 - 130

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

Lab Sample ID: MB 880-30164/1-A
Matrix: Solid
Analysis Batch: 30098

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30164

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		07/20/22 15:31	07/20/22 20:42	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/20/22 15:31	07/20/22 20:42	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/20/22 15:31	07/20/22 20:42	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	137	S1+	70 - 130	07/20/22 15:31	07/20/22 20:42	1
o-Terphenyl	153	S1+	70 - 130	07/20/22 15:31	07/20/22 20:42	1

Lab Sample ID: LCS 880-30164/2-A
Matrix: Solid
Analysis Batch: 30098

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30164

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1206		mg/Kg		121	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	882.5		mg/Kg		88	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	102		70 - 130
o-Terphenyl	114		70 - 130

Lab Sample ID: LCSD 880-30164/3-A
Matrix: Solid
Analysis Batch: 30098

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30164

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1236		mg/Kg					
Diesel Range Organics (Over C10-C28)			1000	871.6		mg/Kg					

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane			
o-Terphenyl			

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

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

Lab Sample ID: 880-17129-A-13-E MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30098 — **Prep Batch: 30164**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F2	1000	1016		mg/Kg		102	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	868.3		mg/Kg		87	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*82*		*70 - 130*
o-Terphenyl	*85*		*70 - 130*

Lab Sample ID: 880-17129-A-13-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30098 — **Prep Batch: 30164**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F2	999	1285	F2	mg/Kg		129	70 - 130	23	20
Diesel Range Organics (Over C10-C28)	<50.0	U	999	876.5		mg/Kg		88	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*81*		*70 - 130*
o-Terphenyl	*85*		*70 - 130*

Lab Sample ID: MB 880-30460/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30464 — **Prep Batch: 30460**

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		07/23/22 10:54	07/23/22 12:33	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/23/22 10:54	07/23/22 12:33	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/23/22 10:54	07/23/22 12:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*161*	*S1+*	*70 - 130*	*07/23/22 10:54*	*07/23/22 12:33*	*1*
o-Terphenyl	*189*	*S1+*	*70 - 130*	*07/23/22 10:54*	*07/23/22 12:33*	*1*

Lab Sample ID: LCS 880-30460/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30464 — **Prep Batch: 30460**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1129		mg/Kg		113	70 - 130
Diesel Range Organics (Over C10-C28)			1000	965.7		mg/Kg		97	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

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

Lab Sample ID: LCS 880-30460/2-A
Matrix: Solid
Analysis Batch: 30464

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30460

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	119		70 - 130
o-Terphenyl	124		70 - 130

Lab Sample ID: LCSD 880-30460/3-A
Matrix: Solid
Analysis Batch: 30464

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30460

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1091		mg/Kg		109	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	925.1		mg/Kg		93	70 - 130	4	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	112		70 - 130
o-Terphenyl	113		70 - 130

Lab Sample ID: 890-2608-A-1-E MS
Matrix: Solid
Analysis Batch: 30464

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 30460

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1 F2	1000	1074		mg/Kg		107	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	781.8		mg/Kg		78	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	82		70 - 130
o-Terphenyl	88		70 - 130

Lab Sample ID: 890-2608-A-1-F MSD
Matrix: Solid
Analysis Batch: 30464

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 30460

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1 F2	999	1368	F1 F2	mg/Kg		137	70 - 130	24	20
Diesel Range Organics (Over C10-C28)	<50.0	U	999	714.9		mg/Kg		72	70 - 130	9	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	79		70 - 130
o-Terphenyl	85		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-30121/1-A
Matrix: Solid
Analysis Batch: 30315

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			07/22/22 10:34	1

Lab Sample ID: LCS 880-30121/2-A
Matrix: Solid
Analysis Batch: 30315

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	273.9		mg/Kg		110	90 - 110		

Lab Sample ID: LCSD 880-30121/3-A
Matrix: Solid
Analysis Batch: 30315

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	274.9		mg/Kg		110	90 - 110	0	20

Lab Sample ID: 890-2586-2 MS
Matrix: Solid
Analysis Batch: 30315

Client Sample ID: FS02
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	15.6	F1	248	292.4	F1	mg/Kg		112	90 - 110		

Lab Sample ID: 890-2586-2 MSD
Matrix: Solid
Analysis Batch: 30315

Client Sample ID: FS02
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	15.6	F1	248	292.0	F1	mg/Kg		112	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

GC VOA

Prep Batch: 30296

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2586-11	SW05	Total/NA	Solid	5035	
MB 880-30296/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30296/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30296/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17068-A-41-F MS	Matrix Spike	Total/NA	Solid	5035	
880-17068-A-41-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 30501

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2586-1	FS01	Total/NA	Solid	8021B	30518
890-2586-3	FS03	Total/NA	Solid	8021B	30518
890-2586-4	FS04	Total/NA	Solid	8021B	30518
890-2586-5	FS05	Total/NA	Solid	8021B	30518
890-2586-6	FS06	Total/NA	Solid	8021B	30518
890-2586-7	SW01	Total/NA	Solid	8021B	30518
890-2586-11	SW05	Total/NA	Solid	8021B	30296
MB 880-30296/5-A	Method Blank	Total/NA	Solid	8021B	30296
MB 880-30518/5-A	Method Blank	Total/NA	Solid	8021B	30518
LCS 880-30296/1-A	Lab Control Sample	Total/NA	Solid	8021B	30296
LCS 880-30518/1-A	Lab Control Sample	Total/NA	Solid	8021B	30518
LCSD 880-30296/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30296
LCSD 880-30518/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30518
880-17068-A-41-F MS	Matrix Spike	Total/NA	Solid	8021B	30296
880-17068-A-41-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30296
880-17291-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	30518
880-17291-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30518

Prep Batch: 30518

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2586-1	FS01	Total/NA	Solid	5035	
890-2586-3	FS03	Total/NA	Solid	5035	
890-2586-4	FS04	Total/NA	Solid	5035	
890-2586-5	FS05	Total/NA	Solid	5035	
890-2586-6	FS06	Total/NA	Solid	5035	
890-2586-7	SW01	Total/NA	Solid	5035	
MB 880-30518/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30518/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30518/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17291-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
880-17291-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 30562

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-30562/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30562/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30562/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2603-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
890-2603-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

QC Association Summary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

GC VOA

Prep Batch: 30589

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2586-8	SW02	Total/NA	Solid	5035	
MB 880-30589/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30589/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30589/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17202-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
880-17202-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 30657

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2586-2	FS02	Total/NA	Solid	8021B	30664
MB 880-30562/5-A	Method Blank	Total/NA	Solid	8021B	30562
MB 880-30664/5-A	Method Blank	Total/NA	Solid	8021B	30664
LCS 880-30562/1-A	Lab Control Sample	Total/NA	Solid	8021B	30562
LCS 880-30664/1-A	Lab Control Sample	Total/NA	Solid	8021B	30664
LCSD 880-30562/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30562
LCSD 880-30664/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30664
880-17132-A-4-F MS	Matrix Spike	Total/NA	Solid	8021B	30664
880-17132-A-4-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30664
890-2603-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	30562
890-2603-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30562

Prep Batch: 30664

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2586-2	FS02	Total/NA	Solid	5035	
MB 880-30664/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30664/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30664/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17132-A-4-F MS	Matrix Spike	Total/NA	Solid	5035	
880-17132-A-4-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 30669

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-30669/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 30672

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2586-1	FS01	Total/NA	Solid	Total BTEX	
890-2586-2	FS02	Total/NA	Solid	Total BTEX	
890-2586-3	FS03	Total/NA	Solid	Total BTEX	
890-2586-4	FS04	Total/NA	Solid	Total BTEX	
890-2586-5	FS05	Total/NA	Solid	Total BTEX	
890-2586-6	FS06	Total/NA	Solid	Total BTEX	
890-2586-7	SW01	Total/NA	Solid	Total BTEX	
890-2586-8	SW02	Total/NA	Solid	Total BTEX	
890-2586-9	SW03	Total/NA	Solid	Total BTEX	
890-2586-10	SW04	Total/NA	Solid	Total BTEX	
890-2586-11	SW05	Total/NA	Solid	Total BTEX	

Analysis Batch: 30859

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2586-8	SW02	Total/NA	Solid	8021B	30589

QC Association Summary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

GC VOA (Continued)

Analysis Batch: 30859 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-30589/5-A	Method Blank	Total/NA	Solid	8021B	30589
MB 880-30669/5-A	Method Blank	Total/NA	Solid	8021B	30669
LCS 880-30589/1-A	Lab Control Sample	Total/NA	Solid	8021B	30589
LCSD 880-30589/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30589
880-17202-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	30589
880-17202-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30589

Prep Batch: 31008

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2586-9	SW03	Total/NA	Solid	5035	
890-2586-10	SW04	Total/NA	Solid	5035	
MB 880-31008/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31008/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31008/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2674-A-2-D MS	Matrix Spike	Total/NA	Solid	5035	
890-2674-A-2-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 31012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-31012/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31012/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31012/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2666-A-3-D MS	Matrix Spike	Total/NA	Solid	5035	
890-2666-A-3-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 31093

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2586-9	SW03	Total/NA	Solid	8021B	31008
890-2586-10	SW04	Total/NA	Solid	8021B	31008
MB 880-31008/5-A	Method Blank	Total/NA	Solid	8021B	31008
MB 880-31012/5-A	Method Blank	Total/NA	Solid	8021B	31012
LCS 880-31008/1-A	Lab Control Sample	Total/NA	Solid	8021B	31008
LCS 880-31012/1-A	Lab Control Sample	Total/NA	Solid	8021B	31012
LCSD 880-31008/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31008
LCSD 880-31012/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31012
890-2666-A-3-D MS	Matrix Spike	Total/NA	Solid	8021B	31012
890-2666-A-3-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	31012
890-2674-A-2-D MS	Matrix Spike	Total/NA	Solid	8021B	31008
890-2674-A-2-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	31008

GC Semi VOA

Analysis Batch: 30098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2586-4	FS04	Total/NA	Solid	8015B NM	30164
890-2586-6	FS06	Total/NA	Solid	8015B NM	30164
MB 880-30164/1-A	Method Blank	Total/NA	Solid	8015B NM	30164
LCS 880-30164/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30164
LCSD 880-30164/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30164
880-17129-A-13-E MS	Matrix Spike	Total/NA	Solid	8015B NM	30164
880-17129-A-13-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30164

QC Association Summary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

GC Semi VOA

Prep Batch: 30164

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2586-4	FS04	Total/NA	Solid	8015NM Prep	
890-2586-6	FS06	Total/NA	Solid	8015NM Prep	
MB 880-30164/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30164/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30164/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-17129-A-13-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-17129-A-13-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 30277

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2586-1	FS01	Total/NA	Solid	8015 NM	
890-2586-2	FS02	Total/NA	Solid	8015 NM	
890-2586-3	FS03	Total/NA	Solid	8015 NM	
890-2586-4	FS04	Total/NA	Solid	8015 NM	
890-2586-5	FS05	Total/NA	Solid	8015 NM	
890-2586-6	FS06	Total/NA	Solid	8015 NM	
890-2586-7	SW01	Total/NA	Solid	8015 NM	
890-2586-8	SW02	Total/NA	Solid	8015 NM	
890-2586-9	SW03	Total/NA	Solid	8015 NM	
890-2586-10	SW04	Total/NA	Solid	8015 NM	
890-2586-11	SW05	Total/NA	Solid	8015 NM	

Prep Batch: 30460

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2586-1	FS01	Total/NA	Solid	8015NM Prep	
890-2586-2	FS02	Total/NA	Solid	8015NM Prep	
890-2586-3	FS03	Total/NA	Solid	8015NM Prep	
890-2586-5	FS05	Total/NA	Solid	8015NM Prep	
890-2586-7	SW01	Total/NA	Solid	8015NM Prep	
890-2586-8	SW02	Total/NA	Solid	8015NM Prep	
890-2586-9	SW03	Total/NA	Solid	8015NM Prep	
890-2586-10	SW04	Total/NA	Solid	8015NM Prep	
890-2586-11	SW05	Total/NA	Solid	8015NM Prep	
MB 880-30460/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30460/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30460/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2608-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2608-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 30464

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2586-1	FS01	Total/NA	Solid	8015B NM	30460
890-2586-2	FS02	Total/NA	Solid	8015B NM	30460
890-2586-3	FS03	Total/NA	Solid	8015B NM	30460
890-2586-5	FS05	Total/NA	Solid	8015B NM	30460
890-2586-7	SW01	Total/NA	Solid	8015B NM	30460
890-2586-8	SW02	Total/NA	Solid	8015B NM	30460
890-2586-9	SW03	Total/NA	Solid	8015B NM	30460
890-2586-10	SW04	Total/NA	Solid	8015B NM	30460
890-2586-11	SW05	Total/NA	Solid	8015B NM	30460
MB 880-30460/1-A	Method Blank	Total/NA	Solid	8015B NM	30460

QC Association Summary

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

GC Semi VOA (Continued)

Analysis Batch: 30464 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-30460/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30460
LCSD 880-30460/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30460
890-2608-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	30460
890-2608-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30460

HPLC/IC

Leach Batch: 30121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2586-1	FS01	Soluble	Solid	DI Leach	
890-2586-2	FS02	Soluble	Solid	DI Leach	
890-2586-3	FS03	Soluble	Solid	DI Leach	
890-2586-4	FS04	Soluble	Solid	DI Leach	
890-2586-5	FS05	Soluble	Solid	DI Leach	
890-2586-6	FS06	Soluble	Solid	DI Leach	
890-2586-7	SW01	Soluble	Solid	DI Leach	
890-2586-8	SW02	Soluble	Solid	DI Leach	
890-2586-9	SW03	Soluble	Solid	DI Leach	
890-2586-10	SW04	Soluble	Solid	DI Leach	
890-2586-11	SW05	Soluble	Solid	DI Leach	
MB 880-30121/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-30121/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-30121/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2586-2 MS	FS02	Soluble	Solid	DI Leach	
890-2586-2 MSD	FS02	Soluble	Solid	DI Leach	

Analysis Batch: 30315

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2586-1	FS01	Soluble	Solid	300.0	30121
890-2586-2	FS02	Soluble	Solid	300.0	30121
890-2586-3	FS03	Soluble	Solid	300.0	30121
890-2586-4	FS04	Soluble	Solid	300.0	30121
890-2586-5	FS05	Soluble	Solid	300.0	30121
890-2586-6	FS06	Soluble	Solid	300.0	30121
890-2586-7	SW01	Soluble	Solid	300.0	30121
890-2586-8	SW02	Soluble	Solid	300.0	30121
890-2586-9	SW03	Soluble	Solid	300.0	30121
890-2586-10	SW04	Soluble	Solid	300.0	30121
890-2586-11	SW05	Soluble	Solid	300.0	30121
MB 880-30121/1-A	Method Blank	Soluble	Solid	300.0	30121
LCS 880-30121/2-A	Lab Control Sample	Soluble	Solid	300.0	30121
LCSD 880-30121/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30121
890-2586-2 MS	FS02	Soluble	Solid	300.0	30121
890-2586-2 MSD	FS02	Soluble	Solid	300.0	30121

Lab Chronicle

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

Client Sample ID: FS01
Date Collected: 07/18/22 13:55
Date Received: 07/19/22 10:57

Lab Sample ID: 890-2586-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	30518	07/25/22 09:31	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30501	07/25/22 18:46	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30672	07/26/22 11:03	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30277	07/21/22 13:53	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	30460	07/23/22 10:54	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30464	07/23/22 19:32	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	30121	07/20/22 11:51	SMC	XEN MID
Soluble	Analysis	300.0		1			30315	07/22/22 12:40	CH	XEN MID

Client Sample ID: FS02
Date Collected: 07/18/22 12:15
Date Received: 07/19/22 10:57

Lab Sample ID: 890-2586-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	30664	07/26/22 09:25	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30657	07/26/22 18:12	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30672	07/26/22 11:03	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30277	07/21/22 13:53	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	30460	07/23/22 10:54	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30464	07/23/22 19:54	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	30121	07/20/22 11:51	SMC	XEN MID
Soluble	Analysis	300.0		1			30315	07/22/22 12:48	CH	XEN MID

Client Sample ID: FS03
Date Collected: 07/18/22 12:20
Date Received: 07/19/22 10:57

Lab Sample ID: 890-2586-3
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			5.03 g	5 mL	30518	07/25/22 09:31	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30501	07/25/22 19:27	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30672	07/26/22 11:03	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30277	07/21/22 13:53	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	30460	07/23/22 10:54	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30464	07/23/22 20:36	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	30121	07/20/22 11:51	SMC	XEN MID
Soluble	Analysis	300.0		1			30315	07/22/22 15:50	CH	XEN MID

Client Sample ID: FS04
Date Collected: 07/14/22 15:00
Date Received: 07/19/22 10:57

Lab Sample ID: 890-2586-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	30518	07/25/22 09:31	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30501	07/25/22 19:47	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30672	07/26/22 11:03	SM	XEN MID

Lab Chronicle

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

Client Sample ID: FS04
Date Collected: 07/14/22 15:00
Date Received: 07/19/22 10:57

Lab Sample ID: 890-2586-4
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			30277	07/21/22 13:53	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	30164	07/20/22 15:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30098	07/21/22 05:49	SM	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	30121	07/20/22 11:51	SMC	XEN MID
Soluble	Analysis	300.0		1			30315	07/22/22 15:58	CH	XEN MID

Client Sample ID: FS05
Date Collected: 07/18/22 12:25
Date Received: 07/19/22 10:57

Lab Sample ID: 890-2586-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	30518	07/25/22 09:31	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30501	07/25/22 20:08	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30672	07/26/22 11:03	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30277	07/21/22 13:53	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	30460	07/23/22 10:54	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30464	07/23/22 21:19	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	30121	07/20/22 11:51	SMC	XEN MID
Soluble	Analysis	300.0		1			30315	07/22/22 16:21	CH	XEN MID

Client Sample ID: FS06
Date Collected: 07/14/22 15:05
Date Received: 07/19/22 10:57

Lab Sample ID: 890-2586-6
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			4.96 g	5 mL	30518	07/25/22 09:31	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30501	07/25/22 20:28	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30672	07/26/22 11:03	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30277	07/21/22 13:53	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	30164	07/20/22 15:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30098	07/21/22 06:10	SM	XEN MID
Soluble	Leach	DI Leach			4.98 g	50 mL	30121	07/20/22 11:51	SMC	XEN MID
Soluble	Analysis	300.0		1			30315	07/22/22 16:29	CH	XEN MID

Client Sample ID: SW01
Date Collected: 07/18/22 12:30
Date Received: 07/19/22 10:57

Lab Sample ID: 890-2586-7
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			5.01 g	5 mL	30518	07/25/22 09:31	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30501	07/25/22 20:49	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30672	07/26/22 11:03	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30277	07/21/22 13:53	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	30460	07/23/22 10:54	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30464	07/23/22 22:01	AJ	XEN MID

Lab Chronicle

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

Client Sample ID: SW01
Date Collected: 07/18/22 12:30
Date Received: 07/19/22 10:57

Lab Sample ID: 890-2586-7
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			5.02 g	50 mL	30121	07/20/22 11:51	SMC	XEN MID
Soluble	Analysis	300.0		1			30315	07/22/22 16:37	CH	XEN MID

Client Sample ID: SW02
Date Collected: 07/18/22 12:35
Date Received: 07/19/22 10:57

Lab Sample ID: 890-2586-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	30589	07/25/22 12:06	EL	XEN MID
Total/NA	Analysis	8021B		1			30859	07/29/22 05:08	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30672	07/26/22 11:03	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30277	07/21/22 13:53	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	30460	07/23/22 10:54	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30464	07/23/22 22:23	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	30121	07/20/22 11:51	SMC	XEN MID
Soluble	Analysis	300.0		1			30315	07/22/22 17:08	CH	XEN MID

Client Sample ID: SW03
Date Collected: 07/18/22 12:40
Date Received: 07/19/22 10:57

Lab Sample ID: 890-2586-9
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			4.99 g	5 mL	31008	07/29/22 12:56	EL	XEN MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	31093	07/31/22 18:09	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30672	07/26/22 11:03	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30277	07/21/22 13:53	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	30460	07/23/22 10:54	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30464	07/23/22 22:44	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	30121	07/20/22 11:51	SMC	XEN MID
Soluble	Analysis	300.0		1			30315	07/22/22 17:16	CH	XEN MID

Client Sample ID: SW04
Date Collected: 07/18/22 12:45
Date Received: 07/19/22 10:57

Lab Sample ID: 890-2586-10
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			4.98 g	5 mL	31008	07/29/22 12:56	EL	XEN MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	31093	07/31/22 18:29	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30672	07/26/22 11:03	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30277	07/21/22 13:53	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	30460	07/23/22 10:54	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30464	07/23/22 23:05	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	30121	07/20/22 11:51	SMC	XEN MID
Soluble	Analysis	300.0		1			30315	07/22/22 17:24	CH	XEN MID

Lab Chronicle

Client: Ensolum
Project/Site: PLU 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

Client Sample ID: SW05

Date Collected: 07/18/22 14:30
Date Received: 07/19/22 10:57

Lab Sample ID: 890-2586-11

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			4.97 g	5 mL	30296	07/21/22 15:56	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30501	07/26/22 08:24	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30672	07/26/22 11:03	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30277	07/21/22 13:53	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	30460	07/23/22 10:54	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30464	07/23/22 23:26	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	30121	07/20/22 11:51	SMC	XEN MID
Soluble	Analysis	300.0		1			30315	07/22/22 17:32	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 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

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 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

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 15 TWR

Job ID: 890-2586-1
SDG: 03E1558013

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2586-1	FS01	Solid	07/18/22 13:55	07/19/22 10:57	4
890-2586-2	FS02	Solid	07/18/22 12:15	07/19/22 10:57	3
890-2586-3	FS03	Solid	07/18/22 12:20	07/19/22 10:57	3
890-2586-4	FS04	Solid	07/14/22 15:00	07/19/22 10:57	2
890-2586-5	FS05	Solid	07/18/22 12:25	07/19/22 10:57	3
890-2586-6	FS06	Solid	07/14/22 15:05	07/19/22 10:57	2
890-2586-7	SW01	Solid	07/18/22 12:30	07/19/22 10:57	0 - 4
890-2586-8	SW02	Solid	07/18/22 12:35	07/19/22 10:57	0 - 3
890-2586-9	SW03	Solid	07/18/22 12:40	07/19/22 10:57	0 - 4
890-2586-10	SW04	Solid	07/18/22 12:45	07/19/22 10:57	0 - 3
890-2586-11	SW05	Solid	07/18/22 14:30	07/19/22 10:57	0 - 2

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 2

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 15 TWR	**Turn Around**	
Project Number:	03E1558013	☑ Routine ☐ Rush	
Project Location:	EDDY COUNTY, NM	Due Date:	
Sampler's Name:	Conner Shore	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#4.0071
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	5.2
Total Containers:		Corrected Temperature:	5.0

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021
FS01	S	7/18/2022	1355	4'	C	1		X	X	X
FS02	S	7/18/2022	1215	3'	C	1		X	X	X
FS03	S	7/18/2022	1220	3'	C	1		X	X	X
FS04	S	7/14/2022	1500	2'	C	1		X	X	X
FS05	S	7/18/2022	1225	3'	C	1		X	X	X
FS06	S	7/14/2022	1505	2'	C	1		X	X	X
SW01	S	7/18/2022	1230	0-4'	C	1		X	X	X
SW02	S	7/18/2022	1235	0-3'	C	1		X	X	X
SW03	S	7/18/2022	1240	0-4'	C	1		X	X	X
SW04	S	7/18/2022	1245	0-3'	C	1		X	X	X

890-2586 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: 2027711001

Incident Number: nAPP2205641685

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	Dale Clifton	7.19.22 1057	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: _____

www.xenco.com Page 2 of 2

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 15 TWR	Turn Around	☑ Routine ☐ Rush
Project Number:	03E1558013	Due Date:	
Project Location:	EDDY COUNTY, NM	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Conner Shore		
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_2SO_4: H_2; NaOH: Na; H_3PO_4: HP; $NaHSO_4$: NABIS; $Na_2S_2O_3$: $NaSO_3$; Zn Acetate+NaOH: Zn; NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)	Sample Comments
SW05	S	7/18/2022	1430	0-2'	C	1		X	X	X	

Cost Center: 2027711001

Incident Number: nAPP2205641685

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			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: _____

www.xenco.com Page 1 of 2

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 15 TWR	Turn Around	☑ Routine ☐ Rush
Project Number:	03E1558013	Due Date:	
Project Location:	EDDY COUNTY, NM	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Conner Shore		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	IR-003
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	5.2
Total Containers:		Corrected Temperature:	5.0

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	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021	Sample Comments
FS01	S	7/18/2022	1355	4'	C	1	X	X	X	
FS02	S	7/18/2022	1215	3'	C	1	X	X	X	
FS03	S	7/18/2022	1220	3'	C	1	X	X	X	
FS04	S	7/14/2022	1500	2'	C	1	X	X	X	
FS05	S	7/18/2022	1225	3'	C	1	X	X	X	Cost Center: 2027711001
FS06	S	7/14/2022	1505	2'	C	1	X	X	X	
SW01	S	7/18/2022	1230	0-4'	C	1	X	X	X	Incident Number: nAPP2205641685
SW02	S	7/18/2022	1235	0-3'	C	1	X	X	X	
SW03	S	7/18/2022	1240	0-4'	C	1	X	X	X	
SW04	S	7/18/2022	1245	0-3'	C	1	X	X	X	

890-2586 Chain of Custody

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Cole Clifton	7.19.22 1057	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

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Work Order No: _____

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 15 TWR	Turn Around	☑ Routine ☐ Rush
Project Number:	03E1558013	Due Date:	
Project Location:	EDDY COUNTY, NM	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Conner Shore		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	IR-8003
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	5.2
Total Containers:		Corrected Temperature:	5.0

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021
FS01	S	7/18/2022	1355	4'	C	1	X	X	X
FS02	S	7/18/2022	1215	3'	C	1	X	X	X
FS03	S	7/18/2022	1220	3'	C	1	X	X	X
FS04	S	7/14/2022	1500	2'	C	1	X	X	X
FS05	S	7/18/2022	1225	3'	C	1	X	X	X
FS06	S	7/14/2022	1505	2'	C	1	X	X	X
SW01	S	7/18/2022	1230	0-4'	C	1	X	X	X
SW02	S	7/18/2022	1235	0-3'	C	1	X	X	X
SW03	S	7/18/2022	1240	0-4'	C	1	X	X	X
SW04	S	7/18/2022	1245	0-3'	C	1	X	X	X

890-2586 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: 2027711001

Incident Number: nAPP2205641685

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	Clara Clifton	7.19.22 1057			
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)	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 15 TWR	Turn Around	
Project Number:	03E1558013	☑ Routine ☐ Rush	
Project Location:	EDDY COUNTY, NM	Due Date:	
Sampler's Name:	Conner Shore	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	Sample Comments
SW05	S	7/18/2022	1430	0-2'	C	1		X	X	X	

Cost Center: 2027711001

Incident Number: nAPP2205641685

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

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

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

Revised Date: 08/25/2020 Rev. 2020 2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2586-1
SDG Number: 03E1558013

Login Number: 2586
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: 890-2586-1
SDG Number: 03E1558013

Login Number: 2586
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 07/20/22 10:53 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

Tacoma Morrissey

From: Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>
Sent: Wednesday, May 11, 2022 4:57 PM
To: Green, Garrett J
Cc: DelawareSpills /SM; Ben Belill; Aimee Cole; Tacoma Morrissey; Kalei Jennings; Bratcher, Mike, EMNRD; Nobui, Jennifer, EMNRD; Nobui, Jennifer, EMNRD
Subject: (Extension Approval) - PLU 15 TWR Battery (Incident Numbers nAPP2205641685, nAPP2205638843, nAPP2207746719)

[**EXTERNAL EMAIL**]

RE: Incident #**NAPP2205641685, NAPP2205638843, NAPP2207746719**

Garrett,

Your request for an extension to **August 10th, 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: Green, Garrett J <garrett.green@exxonmobil.com>
Sent: Wednesday, May 11, 2022 2:41 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>
Cc: DelawareSpills /SM <DelawareSpills@exxonmobil.com>; Ben Belill <bbelill@ensolum.com>; Aimee Cole <acole@ensolum.com>; Tacoma Morrissey <tmorrissey@ensolum.com>; Kalei Jennings <kjennings@ensolum.com>
Subject: [EXTERNAL] XTO - Extension Request - PLU 15 TWR Battery (Incident Numbers nAPP2205641685, nAPP2205638843, nAPP2207746719)

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

All,

PLU 15 TWR Battery (Incident Numbers nAPP2205641685, nAPP2205638843, nAPP2207746719)
XTO is requesting an extension for the current deadlines of May 12, 2022, May 21, 2022, and June 2, 2022 for submitting a remediation work plan, closure, or deferral report required in 19.15.29.12.B.(1) NMAC at the PLU 15 TWR Battery for Incident Numbers nAPP2205641685, nAPP2205638843, and nAPP2207746719. The releases occurred on February 11,

2022, February 20, 2022, and March 4, 2022, respectively. Fluids were released on pad around active production equipment. An initial site assessment has been conducted to assess each release area and analytical results indicate that additional remediation is required.

Due to all three releases occurring on the same pad, delineation and remediation activities are scheduled to be completed concurrently. XTO requests to extend the deadline to complete remediation activities and submit a closure or deferral report for Incident Numbers nAPP2205641685, nAPP2205638843, and nAPP2207746719 to August 10, 2022, which is a 90-day extension of the due date for the first release.

Thank you,

Garrett Green
Environmental Coordinator
Delaware Business Unit
(575) 200-0729
Garrett.Green@ExxonMobil.com

XTO Energy, Inc.
3104 E. Greene Street | Carlsbad, NM 88220 | M: (575)200-0729

From: Green, Garrett J
To: ocd.enviro@state.nm.us; Bratcher, Mike, EMNRD; Hamlet, Robert, EMNRD
Cc: Pennington, Shelby G; Tacoma Morrissey; DelawareSpills /SM
Subject: XTO - Sampling Notification (week of 7/11/22 - 7/15/22)
Date: Friday, July 8, 2022 1:21:32 PM

[**EXTERNAL EMAIL**]

All,

XTO plans to complete final sampling activities at the following sites the week of July 11, 2022.

Monday, July 11
- PLU 442, 443 / nAPP2214734717

Wednesday, July 13
- PLU 15 TWR Battery / nAPP2205641685, nAPP2205638843, nAPP2207746719

Thursday, July 14
- PLU 15 TWR Battery / nAPP2205641685, nAPP2205638843, nAPP2207746719

Friday, July 15
- PLU 15 TWR Battery / nAPP2205641685, nAPP2205638843, nAPP2207746719

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

Tacoma Morrissey

From: Green, Garrett J <garrett.green@exxonmobil.com>
Sent: Monday, July 11, 2022 5:10 PM
To: ocd.enviro@state.nm.us; Bratcher, Mike, EMNRD; Hamlet, Robert, EMNRD
Cc: Ben Belill; DelawareSpills /SM
Subject: XTO 48 Liner Notification - PLU 15 TWR - nAPP2205641685, nAPP2205638843 and nAPP2207746719

[**EXTERNAL EMAIL**]

Good afternoon,

This is sent as a 48-hour notification, XTO is scheduled to inspect the lined containment at PLU 15 TWR Battery released on (2/11/22 nAPP2205641685, 2/20/22 nAPP2205638843, 3/4/22 nAPP2207746719), on Thursday, July 14, 2022, at 9:30am MST. A 24 hour release notification for nAPP2205641685 was sent out on Saturday, February 12, 2022 1:42 PM since the release was greater than 25 barrels in volume. Please call us with any questions or concerns.

GPS Coordinates: (32.209, -103.770)

Thank you,

Garrett Green
Environmental Coordinator
Delaware Business Unit
(575) 200-0729
Garrett.Green@ExxonMobil.com

XTO Energy, Inc.
3104 E. Greene Street | Carlsbad, NM 88220 | M: (575)200-0729

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

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

CONDITIONS

Action 132683

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 132683
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Closure Report Approved.	9/20/2022