State of New Mexico
Oil Conservation Division

Incident ID	NAPP2227244441
District RP	
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

- ☒ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☒ Extents of contamination must be fully delineated.
- ☒ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: Garrett Green Title: SSHE Coordinator

Signature: Garrett Green Date: 6/23/2023

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

OCD Only

Received by: Shelly Wells Date: 6/23/2023

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☒ Deferral Approved

Signature: Robert Hamlet Date: 11/29/2023

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	NAPP2227244441
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Garrett Green	Contact Telephone 575-200-0729
Contact email garrett.green@exxonmobil.com	Incident # *(assigned by OCD)*
Contact mailing address 3104 E. Greene Street, Carlsbad, New Mexico, 88220	

Location of Release Source

Latitude 32.00075 Longitude -103.91530

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Ross Draw 3031 CTB	Site Type Central Tank Battery
Date Release Discovered 09/15/2022	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
H	31	26S	30E	Eddy

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 365.54	Volume Recovered (bbls) 360.00
	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: Alarms did not engage due to PLC failure, causing water tanks to overflow into lined containment. Liner integrity failed, allowing fluids to contact soil. All free fluids were recovered. A third-party cotractor has been retained for remediation purposes.

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Oil Conservation Division

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Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? 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 Jake Foust to ocd.enviro@state.nm.us, Mike Bratcher, Robert Hamlet on 09/16/2022 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: Garrett Green
Title: SSHE Coordinator
Signature: Garrett Green
Date: 9/29/2022
email: garrett.green@exxonmobil.com
Telephone: 575-200-0729

OCD Only

Received by: Jocelyn Harimon
Date: 09/29/2022

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2227244441
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?	<50 (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	NAPP2227244441
District RP	
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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: _SSHE Coordinator _____

Signature:__  _____ Date: ___6/23/2023_____

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

OCD Only

Received by: Shelly Wells _____ Date: 6/23/2023_____

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2227244441
District RP	
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

- ☒ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☒ Extents of contamination must be fully delineated.
- ☒ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: Garrett Green Title: SSHE Coordinator

Signature: Garrett Green Date: 6/23/2023

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

OCD Only

Received by: Shelly Wells Date: 6/23/2023

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: Date:

ENSOLUM

June 23, 2023

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

Re: Deferral Request
Ross Draw 3031 CTB
Incident Numbers NAPP2227244441 & NAPP2300442748
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum) on behalf of XTO Energy, Inc. (XTO), has prepared this *Deferral Request* to document excavation and soil sampling activities performed at the Ross Draw 3031 Central Tank Battery (CTB; Site) to address impacted soil resulting from a release of produced water at the Site. The excavation and soil sampling activities were conducted as outlined in the *Remediation Work Plan* (*Work Plan*) submitted to the New Mexico Oil Conservation Division (NMOCD) on December 14, 2022. A second release of produced water occurred in the same location at the Site on December 25, 2022 (Incident Number NAPP2300442748). XTO is submitting this *Deferral Request*, describing excavation and soil sampling activities that have occurred and requesting deferral of final remediation for Incident Numbers NAPP2227244441 and NAPP2300442748 until the Site is reconstructed, and/or the well pad is abandoned.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit H, Section 31, Township 26 South, Range 30 East, in Eddy County, New Mexico (32.00075°N, 103.91530°W; Figure 1) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On September 15, 2022, a programmable logic controller did not engage alarms, allowing the produced water tanks to overflow and resulting in the release of 365.54 barrels (bbls) of produced water into the lined containment. Liner integrity failed, resulting in the release of fluids to the well pad. A vacuum truck was dispatched to the Site and recovered approximately 360 bbls of the released fluid. The release extent measured approximately 9,270 square feet and most of the release occurred immediately adjacent to and beneath active production equipment. XTO immediately reported the release to the NMOCD via email on September 16, 2022, and submitted a Release Notification Form C-141 on September 29, 2022. The release was assigned Incident Number NAPP2227244441.

On December 25, 2022, a second spill occurred at the Site due to a seal failing on a saltwater disposal (SWD) pump, releasing fluids into the same containment and onto the pad. Approximately 8.35 bbls of produced water were released. A vacuum truck was dispatched to the Site and recovered approximately 6 bbls of the released fluid. The release extent measured approximately 5,290 square feet and most of the release occurred immediately adjacent to and beneath active production equipment. XTO reported

the release to the NMOCD and submitted a Release Notification Form C-141 on January 4, 2023. The release was assigned Incident Number NAPP2300442748.

Initial response efforts included recovery of the free-standing fluid from within the containment and lateral and vertical delineation of the impacted soil resulting from the release. The delineation activities and soil sample analytical results were detailed in the *Work Plan* submitted to the NMOCD on December 14, 2022. The *Work Plan* proposed additional delineation activities including delineation within the lined containment, excavation of impacted soil to the maximum extent possible, and requested a sampling variance. On April 26, 2023, the NMOCD denied the sampling variance portion of the *Work Plan* but approved the proposed delineation and excavation activities. NMOCD requested that delineation and excavation activities be completed within 90 days.

As presented in the December 14, 2022, *Work Plan*, the following NMOCD Table I Closure Criteria (Closure Criteria) apply:

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH): 100 mg/kg
- Chloride: 600 mg/kg

DELINEATION AND EXCAVATION SOIL SAMPLING ACTIVITIES

Between May 11, 2023, and May 19, 2023, Ensolum were at the Site to oversee delineation and excavation activities. As outlined in the *Work Plan,* Ensolum personnel advanced one borehole (BH01) via hand-auger at the location of the tear in the liner identified during the liner integrity inspection. Four discrete delineation soil samples were collected from the borehole at depths ranging from 0.5 feet to 3 feet bgs. Four additional boreholes (BH02 through BH05) were advanced by hand auger within and around the release extent to assess the lateral and vertical extent of the release. Discrete soil samples were collected from the boreholes at depths ranging from 0.5 feet to 4 feet below ground surface (bgs). Soil from the boreholes was field screened for volatile organic compounds (VOCs) and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Delineation potholes PH01 through PH07 were completed during November 2022 and were detailed in the December 14, 2022, *Work Plan.* The borehole and pothole locations are depicted on Figure 2. Photographic documentation was completed during delineation and excavation activities, the photographic log can be found in Appendix A. Field screening results and observations for the pothole and borehole delineation samples were logged on lithologic/soil sampling logs, which are included in Appendix B.

The delineation soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of the following constituents of concern (COC): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0. Soil samples delivered to the laboratory the same day they are collected may not have equilibrated to the 6 degrees Celcius required for shipment and long-term storage, but are considered to have been received in acceptable condition.

Excavation activities were completed in the release areas outside of the containment. Impacted soil was removed from the northern, western and southern release areas by use of heavy equipment. To direct excavation activities, Ensolum personnel screened soil for VOCs and chloride as described above.

Following removal of soil, Ensolum personnel collected 5-point composite soil samples representing no more than 200 square feet from the floor and sidewalls of the excavations. 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. The excavation soil samples were handled, and analyzed following the same procedures as described above. Floor samples FS01 through FS19 were collected from the floors of the excavations at depths ranging from 1-foot bgs to 4 feet bgs. Sidewall samples SW01 through SW14 were collected from the sidewalls of the excavations from depths ranging from ground surface to 4 feet bgs. Additional areas were hand shoveled to remove stained soil immediately adjacent to active production equipment and above ground piping. The excavation extents, hand shoveled areas, and excavation soil sample locations are presented on Figure 3.

The north excavation measured approximately 1,625 square feet, the west excavation measured approximately 605 square feet, the southwest excavation measured approximately 80 square feet, and the southeast excavation measured approximately 200 square feet. A total of approximately 340 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and disposed of at a licensed disposal facility. After completion of confirmation sampling, the excavation areas were secured with fencing.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for the delineation soil samples collected from borehole BH01, located within the lined containment, indicated that TPH and chloride concentrations exceeded the Closure Criteria at depths of 0.5 feet and 1-foot bgs, directly beneath the tear in the liner. Subsequent delineation samples BH01B and BH01C, collected at 2 feet and 3 feet bgs, respectively, indicated that all COC concentrations were compliant with the Closure Criteria and vertically defined the release extent beneath the containment.

Laboratory analytical results for the delineation soil samples from potholes PH01 and PH03 and borehole BH02, collected within the release extent, indicated that TPH and/or chloride, concentrations exceeded the Closure Criteria at depths ranging from 0.5 feet bgs to 4 feet bgs. The terminal depth sample from pothole PH01, collected at 5 feet bgs, indicated all COC concentrations were compliant with the Closure Criteria and vertically defined the release extent outside of the containment. Laboratory analytical results for the delineation soil samples from potholes PH02, PH04 through PH07 and boreholes BH03 through BH05, collected around the release extent at depths ranging from 0.5 feet to 5 feet bgs, indicated all COC concentrations were compliant with the Closure Criteria and laterally defined the release extent.

Laboratory analytical results for excavation floor samples FS01, FS03, FS04 and sidewall samples SW01 through SW03 and SW10 indicated TPH and/or chloride concentrations exceeded the Closure Criteria. Additional soil was removed from these areas and subsequent soil samples FS05, FS06, FS07 and SW04, SW07 and SW09 were collected in the location of floor samples FS01, FS03, FS04 and sidewall samples SW01 through SW03. Final excavation soil samples FS05, FS06, FS07 and SW04, SW07 and SW09 were compliant with the Closure Criteria. No additional soil could be removed from the area around sidewall sample SW10 due to proximity to active production equipment and surrounding surface pipelines. Laboratory analytical results for sidewall sample SW10 indicated chloride impacted soil remained in place immediately adjacent to active production equipment and surface pipelines. Laboratory analytical results for all final excavation soil samples, with the exception of SW10, indicated all COC concentrations were compliant with the Closure Criteria.

The delineation and excavation soil sample laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix C.

DEFERRAL REQUEST

Excavation and delineation activities were conducted at the Site as outlined in the *Work Plan* and in accordance with NMOCD's April 26, 2023, excavation sampling condition. Excavation was conducted to remove as much impacted soil as possible. However, impacted soil remains in-place beneath the lined containment, immediately adjacent to active production equipment, and below active surface pipelines. The impacted soil left in-place contains chloride concentrations ranging from 635 mg/kg to 697 mg/kg and TPH concentrations ranging from 115 mg/kg to 5,020 mg/kg. Impacted soil was left in-place in the areas of pothole PH03, located immediately adjacent to active production equipment, borehole BH01, located within the lined containment, and excavation sidewall sample SW10, located immediately adjacent to active production equipment. XTO is requesting deferral of final remediation in these areas as excavation would require major facility deconstruction. Vertical delineation of the residual impacted soil is defined by the delineation soil samples PH01A collected at 5 feet bgs, BH01B collected at 2 feet bgs, and BH02A collected at 3 feet bgs. Lateral delineation of residual impacted soil is defined by soil samples collected from potholes PH02 and PH04 through PH07 and BH03 through BH05 collected at depths ranging from 0.5 feet bgs to 5 feet bgs. The deferral area includes a maximum of 975 cubic yards of TPH and/or chloride impacted soil remaining in place based on the delineation samples listed above; however, approximately 800 cubic yards of the assumed impacted soil remains in place immediately beneath the lined containment, which will limit migration of impacts.

XTO has made every effort to remove as much impacted soil as possible, including areas immediately surrounding the above ground equipment. Complete lateral and vertical delineation of impacted soil remaining in place has been completed. XTO does not believe deferment of the remaining impacted soil will result in imminent risk to human health, the environment, or groundwater and the impacted soil remaining in place is limited in areal and vertical extent. As such, XTO requests deferral of final remediation for Incident Numbers NAPP222724441 and NAPP2300442748 until final reclamation of the well pad or major construction, whichever comes first.

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

Sincerely,
Ensolum, LLC

Mariaha O'Dell

Mariaha D. O'Dell
Associate Geologist

Ashley L. Ager

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

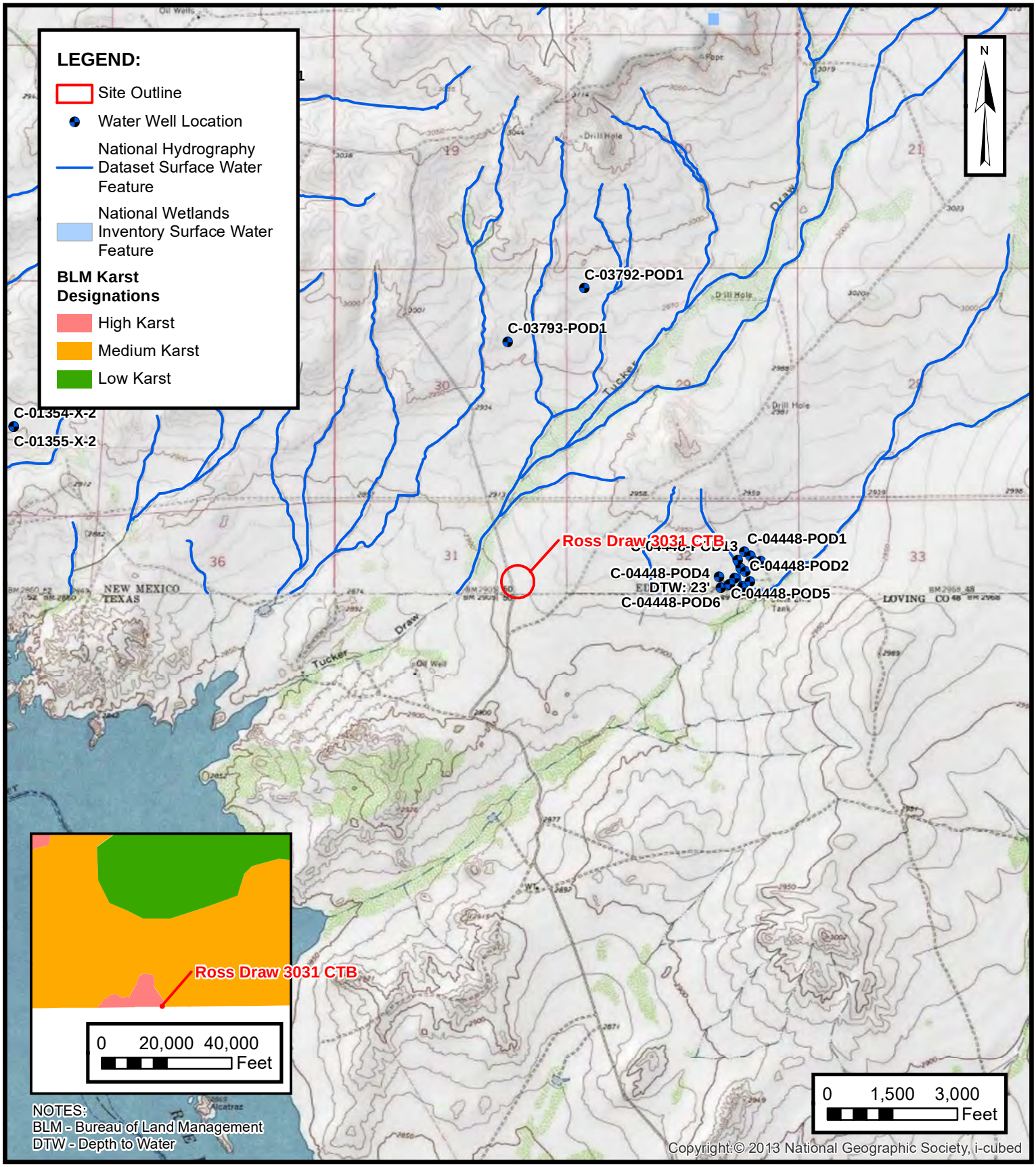
cc: Garrett Green, XTO
Shelby Pennington, XTO
Bureau of Land Management

Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Figure 4	Deferral Area
Table 1	Soil Sample Analytical Results

ENSOLUM

FIGURES



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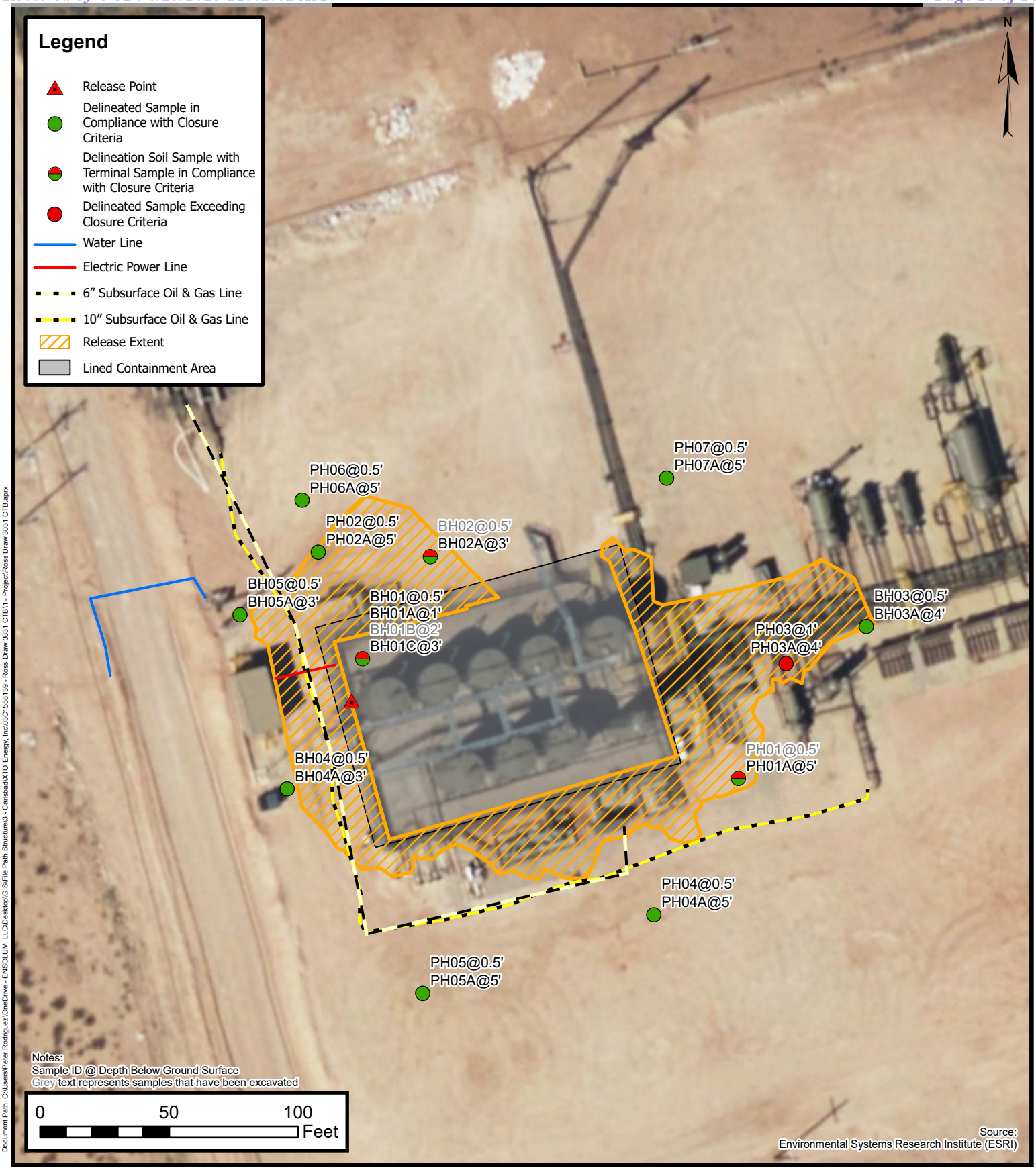
Environmental, Engineering and Hydrogeologic Consultants

SITE RECEPTOR MAP

XTO Energy, Inc
Ross Draw 3031 CTB
Incident Number: NAPP2227244441 & NAPP2300442748
Unit H, Section 31, T26S, R30E
Eddy County,New Mexico

FIGURE
1



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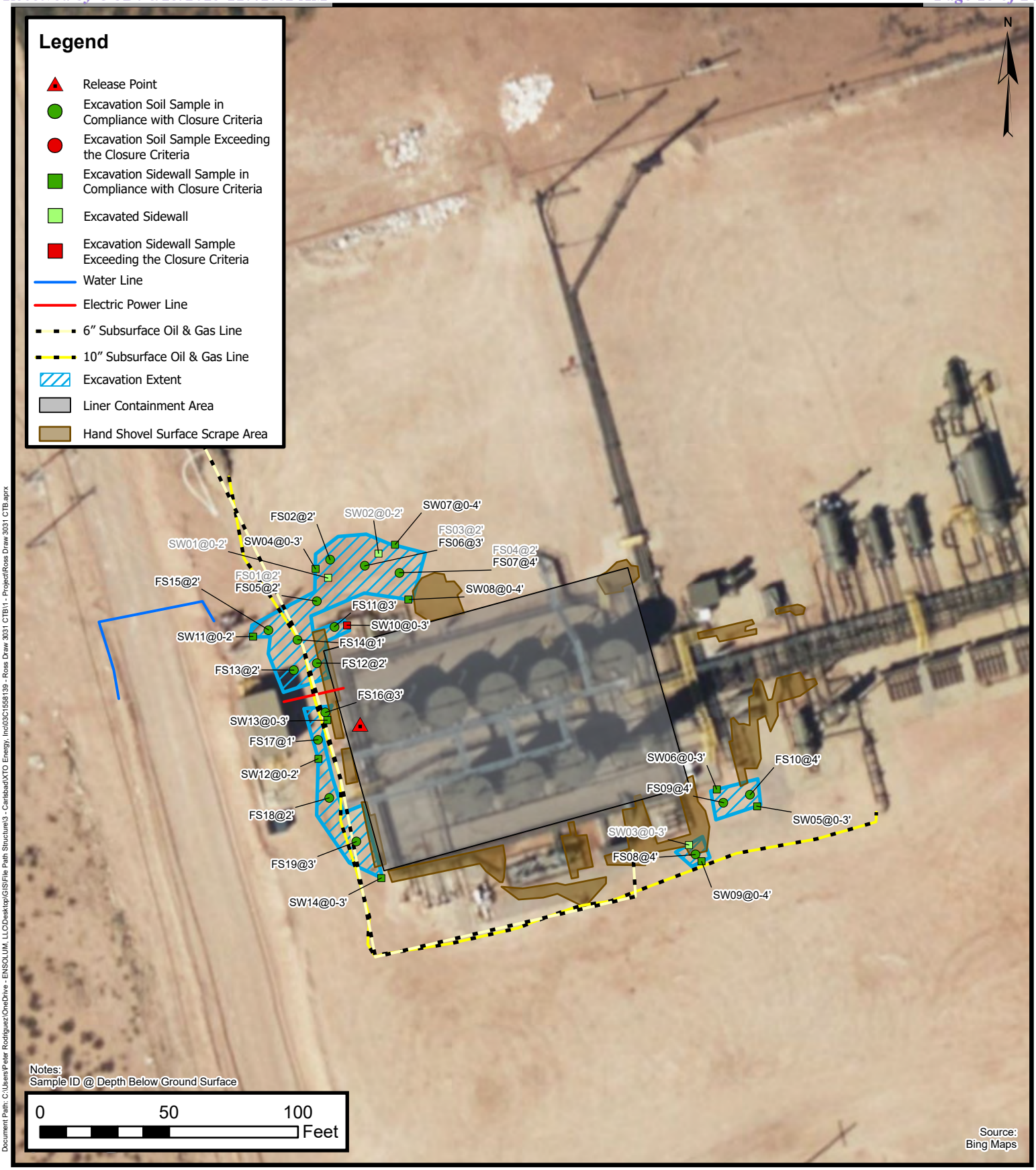
Environmental, Engineering and Hydrogeologic Consultants

Delineation Soil Samples Locations

XTO Energy, Inc
Ross Draw 3031 CTB
Incident Number: NAPP2227244441 & NAPP2300442748
Unit H, Section 31, T26S, R30E
Eddy County,New Mexico

FIGURE
2



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Environmental, Engineering and Hydrogeologic Consultants

Excavation Soil Sample Locations

XTO Energy, Inc

Ross Draw 3031 CTB

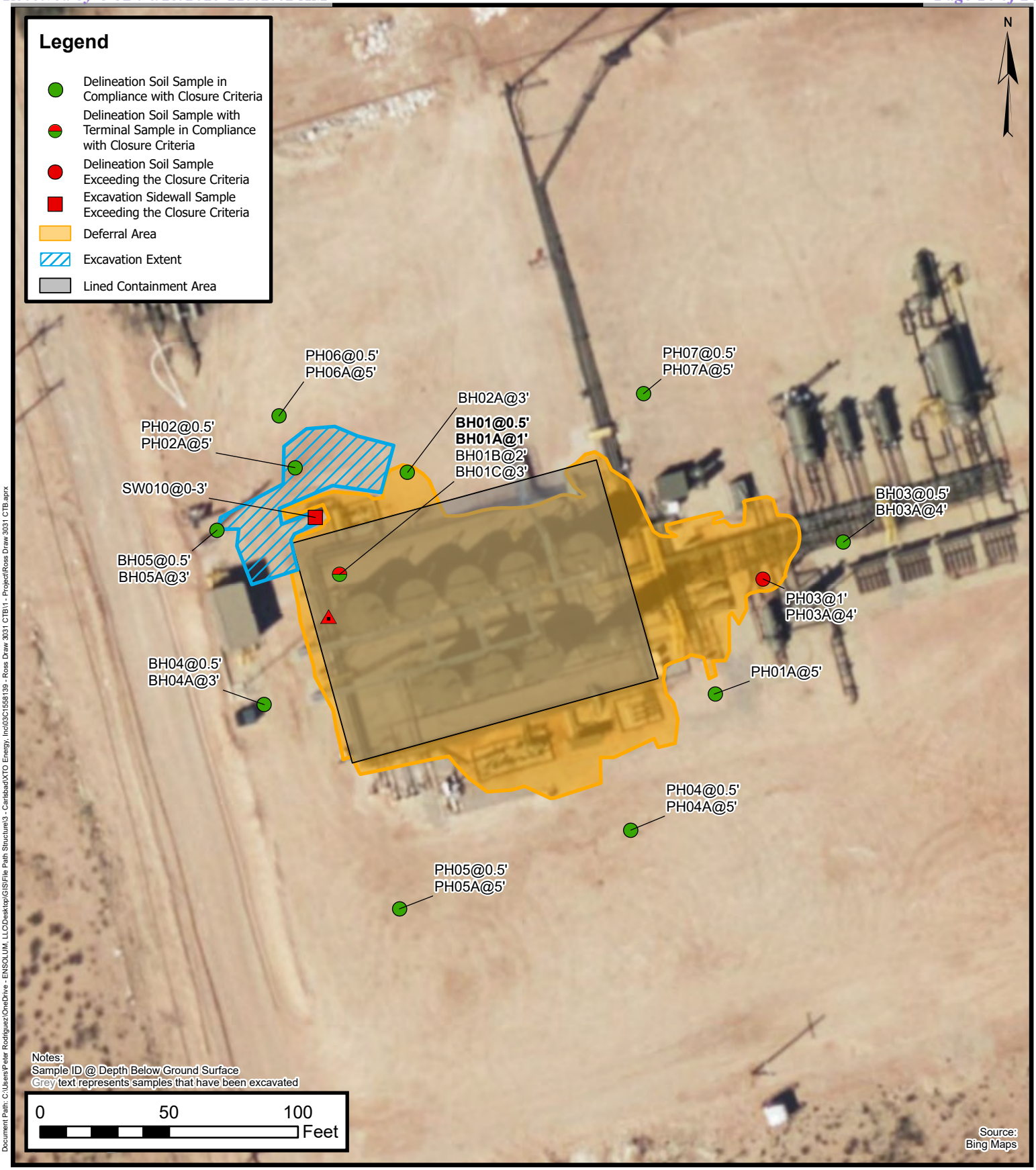
Incident Number: NAPP2227244441 & NAPP2300442748

Unit H, Section 31, T26S, R30E

Eddy County,New Mexico

FIGURE

3



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Deferral Area

XTO Energy, Inc
Ross Draw 3031 CTB
Incident Number: NAPP2227244441 & NAPP2300442748
Unit H, Section 31, T26S, R30E
Eddy County,New Mexico

FIGURE
4

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
ROSS DRAW 3031 CTB
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	NE	100	600
Delineation Soil Samples										
~~PH01~~	~~11/23/2022~~	~~0.5~~	~~<0.200~~	~~73.4~~	~~2,410~~	~~2,130~~	~~<50.0~~	~~4,540~~	~~**4,540**~~	~~142~~
PH01A	11/23/2022	5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	50.6
PH02	11/23/2022	0.5	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	159
PH02A	11/23/2022	5	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	219
PH03	11/23/2022	1	<0.00199	0.0264	141	526	<50.0	667	**667**	463
PH03A	11/23/2022	4	<0.00200	<0.00401	<49.9	526	<49.9	526	**526**	53.9
PH04	11/23/2022	0.5	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	<50.0	22.1
PH04A	11/23/2022	5	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	62.8
PH05	11/23/2022	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	410
PH05A	11/23/2022	5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	21.0
PH06	11/23/2022	0.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	41.4
PH06A	11/23/2022	5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	38.2
PH07	11/23/2022	0.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	253
PH07A	11/23/2022	5	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	63.4
BH01	05/12/2023	0.5	0.00747	4.44	914	3710	393	4,624	**5,020**	**635**
BH01A	05/12/2023	1	<0.00199	0.0448	<49.9	115	<49.9	115	**115**	**684**
BH01B	05/12/2023	2	<0.00198	0.0164	<49.8	<49.8	<49.8	<49.8	<49.8	210
BH01C	05/12/2023	3	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	134
~~BH02~~	~~05/17/2023~~	~~0.5~~	~~<0.000386~~	~~<0.00101~~	~~49.5~~	~~104~~	~~<15.0~~	~~154~~	~~**154**~~	~~**2,970**~~
BH02A	05/17/2023	3	<0.000383	<0.00101	15.3	32.4	<15.0	47.7	47.7	326
BH03	05/19/2023	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	398
BH03A	05/19/2023	4	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	114
BH04	05/19/2023	0.5	<0.00202	<0.00404	<49.9	<49.9	<49.9	<49.9	<49.9	450
BH04A	05/19/2023	3	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	334
BH05	05/19/2023	0.5	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	384
BH05A	05/19/2023	3	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	100

ENSOLUM

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
ROSS DRAW 3031 CTB
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	NE	100	600
Excavation Floor Samples										
~~FS01~~	~~05/12/2023~~	~~2~~	~~<0.00200~~	~~<0.00399~~	~~<49.8~~	~~187~~	~~<49.8~~	~~187~~	~~**187**~~	~~**1,680**~~
FS05	05/15/2023	3	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	71.6
FS02	05/12/2023	2	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	415
~~FS03~~	~~05/12/2023~~	~~2~~	~~<0.00199~~	~~<0.00398~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~**1,150**~~
FS06	05/15/2023	3	<0.00200	<0.00401	<49.9	52.6	<49.9	<49.9	52.6	63.9
~~FS04~~	~~05/12/2023~~	~~2~~	~~<0.00201~~	~~<0.00402~~	~~<49.8~~	~~<49.8~~	~~<49.8~~	~~<49.8~~	~~<49.8~~	~~**907**~~
FS07	05/16/2023	4	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	55.4
FS08	05/16/2023	4	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	59.1
FS09	05/16/2023	4	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	106
FS10	05/16/2023	4	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	74.2
FS11	05/16/2023	3	<0.00200	<0.00401	<49.8	<49.8	<49.8	<49.8	<49.8	346
FS12	05/16/2023	2	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	220
FS13	05/16/2023	2	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	145
FS14	05/16/2023	2	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	125
FS15	05/16/2023	2	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	147
FS16	05/17/2023	3	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	83.8
FS17	05/17/2023	1	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	335
FS18	05/17/2023	2	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	92.6
FS19	05/17/2023	3	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	103
Excavation Sidewall Samples										
~~SW01~~	~~05/12/2023~~	~~0-2~~	~~<0.00200~~	~~<0.00401~~	~~<49.8~~	~~108~~	~~<49.9~~	~~108~~	~~**108**~~	~~413~~
~~SW02~~	~~05/12/2023~~	~~0-2~~	~~<0.00199~~	~~<0.00398~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~<49.9~~	~~<50.0~~	~~**757**~~
~~SW03~~	~~05/15/2023~~	~~0-3~~	~~<0.00199~~	~~<0.00398~~	~~<50.0~~	~~404~~	~~<50.0~~	~~404~~	~~**404**~~	~~123~~
SW04	05/15/2023	0-3	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	120
SW05	05/15/2023	0-3	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	90.7
SW06	05/15/2023	0-3	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	83.3
SW07	05/16/2023	0-4	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	100
SW08	05/16/2023	0-4	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	108
SW09	05/16/2023	0-4	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	98.9

ENSOLUM

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
ROSS DRAW 3031 CTB
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	NE	100	600
SW10	05/16/2023	0-3	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	**697**
SW11	05/17/2023	0-2	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	576
SW12	05/17/2023	0-2	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	132
SW13	05/17/2023	0-3	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	114
SW14	05/17/2023	0-3	<0.00199	<0.00398	<50.0	79.5	<50.0	79.5	79.5	201

Notes:

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

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APPENDIX A

Photographic Log

ENSOLUM

Photographic Log
XTO Energy, Inc
Ross Draw 3031 CTB
Incident Number nAPP2227244441 & NAPP2300442748

Photograph 1 Date: 5/02/2023
Description: Site assessment activities, release extent.
View: West

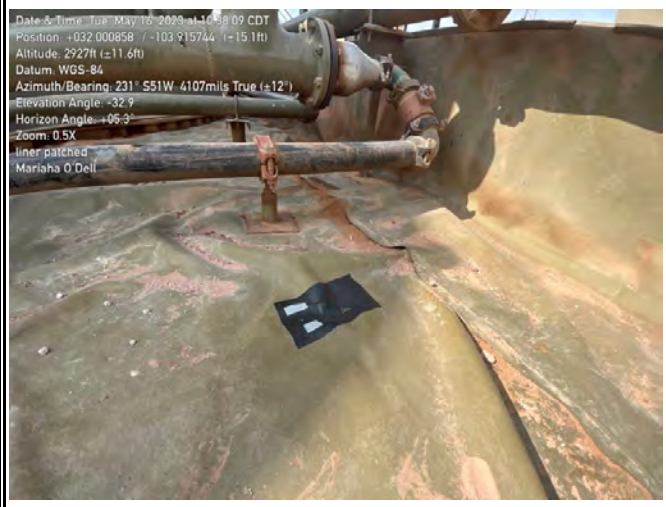
Photograph 2 Date: 5/02/2023
Description: Site assessment activities, release extent.
View: North

Photograph 3 Date: 5/02/2023
Description: Liner inspection
View: South

Photograph 4 Date: 5/02/2023
Description: Liner delineation, BH01
View: South

ENSOLUM

Photographic Log
XTO Energy, Inc
Ross Draw 3031 CTB
Incident Number nAPP2227244441 & NAPP2300442748



Photograph 5 Date: 5/16/2023
Description: Delineation activities, BH01 liner patch
View: South

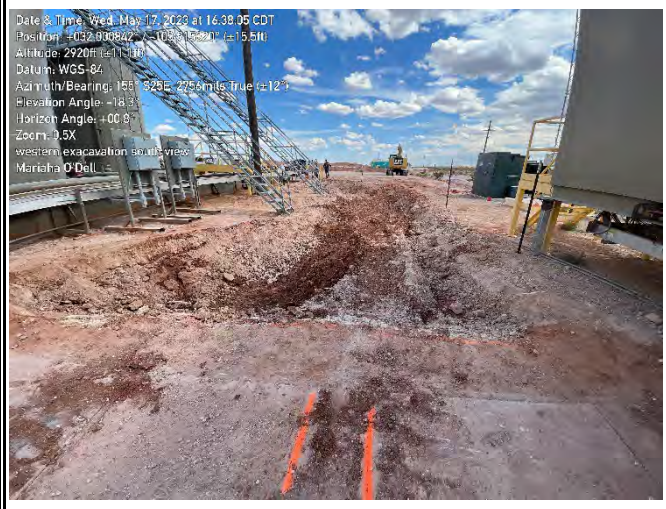
Photograph 6 Date: 5/19/2023
Description: Delineation activities, BH03
View: North

Photograph 7 Date: 5/15/2023
Description: South excavation
View: East

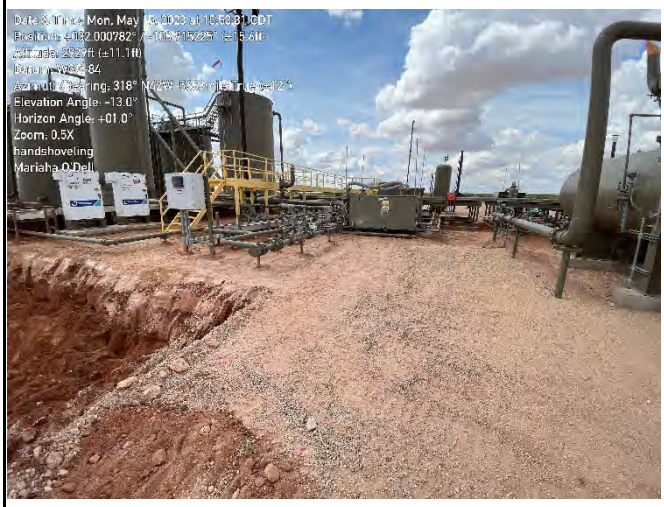
Photograph 8 Date: 5/17/2023
Description: West excavation
View: North

ENSOLUM

Photographic Log
XTO Energy, Inc
Ross Draw 3031 CTB
Incident Number nAPP2227244441 & NAPP2300442748



Photograph 9 Date: 5/17/2023
Description: West excavation
View: South



Photograph 10 Date: 5/15/2023
Description: Surface scrape
View: North

Photograph 11 Date: 5/15/2023
Description: Surface scrape
View: East

Photograph 12 Date: 5/17/2023
Description: Surface scrape
View: West

ENSOLUM

APPENDIX B

Lithologic Soil Sampling Logs

ENSOLUM

	Sample Name: PH01	Date: 11/23/22
	Site Name: Ross Draw 3031	
	Incident Number: nAPP2227244441	
	Job Number: 03E1558139	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Kase Parker	Method: Backhoe
Coordinates: 32.000705, -103.915273	Hole Diameter: ~2'	Total Depth: 5'

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. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	<173	3,103	Y	PH01	0.5	0.5	SM	Very fine red sand
M	<173	159	Y			1	SM	Very fine red sand
M	<173	28.7	N			2	SM	Very fine red sand
M	<173	27.7	N			3	SM	Very fine red sand
M	<173	12.5	N			4	SM	Very fine red sand
M	<173	0.9	N	PH01A	5	5	SM	Very fine red sand

TD @ 5' bgs.

ENSOLUM

	Sample Name: PH02	Date: 11/23/22
	Site Name: Ross Draw 3031	
	Incident Number: nAPP2227244441	
	Job Number: 03E1558139	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Kase Parker	Method: Backhoe
Coordinates: 32.000953, -103.915798	Hole Diameter: ~2'	Total Depth: 5'

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. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	<173	0	N	PH02	0.5	0.5	SM	Silty, Very fine red sand
M	<173	0	N			1	SM	Silty, Very fine red sand
M	<173	0	N			2	SM	Silty, Very fine red sand
M	<173	0	N			3	SM	Silty, Very fine red sand
M	<173	0	N			4	SM	Silty, Very fine red sand
M	<173	0	N	PH02A	5	5	SM	Silty, Very fine red sand

TD @ 5' bgs.

ENSOLUM

	Sample Name: PH03	Date: 11/23/22
	Site Name: Ross Draw 3031	
	Incident Number: nAPP2227244441	
	Job Number: 03E1558139	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Kase Parker	Method: Hand Auger
Coordinates: 32.000828, -103.915216	Hole Diameter: ~4"	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. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	173	65	Y	PH03	0.5	0.5	SC	Clayey, Very fine red sand
M	459	78.1	Y			1	SC	Clayey, Very fine red sand
M	2,576	29.1	N			2	SC	Clayey, Very fine red sand
M	364	12.5	N			3	SC	Clayey, Very fine red sand
M	173	10.1	N	PH03A	4	4	SC	Clayey, Very fine red sand (refusal)

TD @ 4' bgs. Hand Auger refusal @ 4' bgs.

ENSOLUM

	Sample Name: PH04	Date: 11/23/22
	Site Name: Ross Draw 3031	
	Incident Number: nAPP2227244441	
	Job Number: 03E1558139	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Kase Parker	Method: Backhoe
Coordinates: 32.000564, -103.915383	Hole Diameter: ~2'	Total Depth: 5'

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. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	<173	0	N	PH04	0.5	0.5	SM	Silty, Very fine red sand
M	<173	0.1	N			1	SM	Silty, Very fine red sand
M	<173	0	N			2	SM	Silty, Very fine red sand
M	<173	0	N			3	SM	Silty, Very fine red sand
M	<173	0	N			4	SM	Silty, Very fine red sand
M	<173	0.5	N	PH04A	5	5	SM,CCH	Well graded caliche, silty, fine red sand

TD @ 5' bgs.

ENSOLUM

	Sample Name: PH05	Date: 11/23/22
	Site Name: Ross Draw 3031	
	Incident Number: nAPP2227244441	
	Job Number: 03E1558139	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Kase Parker	Method: Backhoe
Coordinates: 32.000484, -103.915678	Hole Diameter: ~2'	Total Depth: 5'

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. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	240	0	N	PH05	0.5	0.5	SM	Silty, Very fine red sand
M	<173	0	N			1	SM	Silty, Very fine red sand
M	<173	0	N			2	SM	Silty, Very fine red sand
M	<173	0	N			3	SM	Silty, Very fine red sand
M	<173	0	N			4	SM,CCH	Well graded caliche, silty, fine red sand
M	<173	0	N	PH05A	5	5	SM,CCH	Well graded caliche, silty, fine red sand

TD @ 5' bgs.

ENSOLUM

	Sample Name: PH06	Date: 11/23/22
	Site Name: Ross Draw 3031	
	Incident Number: nAPP2227244441	
	Job Number: 03E1558139	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Kase Parker	Method: Backhoe
Coordinates: 32.001008, -103.915817	Hole Diameter: ~2'	Total Depth: 5'

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. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	<173	0	N	PH06	0.5	0.5	SM	Silty, Very fine red sand
M	<173	0	N			1	SM	Silty, Very fine red sand
M	<173	0	N			2	SM	Silty, Very fine red sand
M	<173	0	N			3	SM	Silty, Very fine red sand
M	<173	0	N			4	SM	Silty, Very fine red sand
M	<173	0	N	PH06A	5	5	SM	Silty, Very fine red sand

TD @ 5' bgs.

ENSOLUM

	Sample Name: PH07	Date: 11/23/22
	Site Name: Ross Draw 3031	
	Incident Number: nAPP2227244441	
	Job Number: 03E1558139	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Kase Parker	Method: Backhoe
Coordinates: 32.001030, -103.915359	Hole Diameter: ~2'	Total Depth: 5'

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. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	207	0	N	PH07	0.5	0.5	CCH	Well graded, silty caliche
M	<173	0	N			1	CCH	Well graded, silty caliche
M	<173	0	N			2	SM	Silty, Very fine red sand
M	<173	0	N			3	SM,CCH	Well graded caliche, silty, fine red sand
M	<173	0	N			4	SM,CCH	Well graded caliche, silty, fine red sand
M	<173	0	N	PH07A	5	5	SM,CCH	Well graded caliche, silty, fine red sand

TD @ 5' bgs.

ENSOLUM

	Sample Name: BH01	Date: 05-12-2023
	Site Name: Ross Draw 3031	
	Incident Number: NAPP230044274 & nAPP2227244441	
	Job Number: 03C1558139	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Mariaha O'Dell	Method: Hand Auger
Coordinates: 32.000839, -103.915743	Hole Diameter: 6"	Total Depth: 3.5'

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. 40 % correction factor added to all Chloride measurements

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
D	319.2	1,336	Y	BH01	0.5		CCHE	CCHE. Pad material. Dry.
M	408.8	177	Y	BH01A	1	1	SW	Sand. Reddish brown, well graded, vf - f grained. Trace CCHE. Moist
M	240.8	40.4	N	BH01B	2	2	SW	Sand. Reddish brown, well graded, vf - f grained. Moist
M	<173.6	25.2	N	BH01C	3	3		

TD @ 3' bgs. Hand Auger refusal at 3'.

ENSOLUM

	Sample Name: BH02	Date: 05-17-2023
	Site Name: Ross Draw 3031	
	Incident Number: NAPP230044274 & nAPP2227244441	
	Job Number: 03C1558139	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Mariaha O'Dell	Method: Hand Auger
Coordinates: 32.000947, -103.915657	Hole Diameter: 6"	Total Depth: 3.0'

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. 40 % correction factor added to all Chloride measurements

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
D	3,853	0	N	BH02	0.5		CCHE	CCHE. Pad material. Dry.
D	1,831	0.1	N		1	1	SW	Sand. Reddish brown, well graded, vf - f grained. Dry
D	700	0	N		2	2		
M	241	0	N	BH02A	3	3		

TD @ 3.0' bgs. Hand Auger refusal at 3.0'.

ENSOLUM

	Sample Name: BH03	Date: 05/19/2023
	Site Name: Ross Draw 3031	
	Incident Number: NAPP230044274 & nAPP2227244441	
	Job Number: 03C1558139	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Mariaha O'Dell	Method: Hand Auger
Coordinates: 32.000847, -103.915127	Hole Diameter: 6"	Total Depth: 4.0'

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. 40% correction factor added to all Chloride measurements

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
D	<174	0	N	BH03	0.5		CCHE	CCHE. Pad material. Dry.
D	<174	0	N		1	1	SP	Sand. Reddish brown, vf -f gr, poorly sorted, dry.
D	<174	0	N		2	2	SP	
D	<174	0	N		3	3	SP	
D	<174	0	N	BH03A	4	4	SP	

TD @ 4.0' bgs. Hand Auger refusal at 4.0'.

ENSOLUM

	Sample Name: BH04	Date: 05-19-2023
	Site Name: Ross Draw 3031	
	Incident Number: NAPP230044274 & nAPP2227244441	
	Job Number: 03C1558139	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Mariaha O'Dell	Method: Hand Auger
Coordinates: 32.000701, -103.915839	Hole Diameter: 6"	Total Depth: 3.0'

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. 40 % correction factor added to all Chloride measurements

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
D	286	0	N	BH04	0.5		CCHE	CCHE. Pad material. Dry.
D	246	0	N		1	1	SP	Sand. Reddish brown, poorly graded, vf - f grained. Dry
D	174	0	N		2	2		
D	174	0	N	BH04A	3	3		

TD @ 3.0' bgs. Hand Auger refusal at 3.0'.

ENSOLUM

	Sample Name: BH05	Date: 05-19-2023
	Site Name: Ross Draw 3031	
	Incident Number: NAPP230044274 & nAPP2227244441	
	Job Number: 03C1558139	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Mariaha O'Dell	Method: Hand Auger
Coordinates: 32.000888, -103.915896	Hole Diameter: 6"	Total Depth: 3.0'

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. 40 % correction factor added to all Chloride measurements

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
D	207	0	N	BH05	0.5		CCHE	CCHE. Pad material. Dry.
D	207	0	N		1	1	SW	Sand. Reddish brown, well graded, vf - f grained. Dry
D	<174	0	N		2	2		
D	<174	0	N	BH05A	3	3		

TD @ 3.0' bgs. Hand Auger refusal at 3.0'.

ENSOLUM

APPENDIX C

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Kalei Jennings
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 12/8/2022 11:53:14 AM

JOB DESCRIPTION

Ross Draw 3031
SDG NUMBER 03E1558139

JOB NUMBER

880-22189-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.

my EOL

Eurofins Midland

Job Notes

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

Authorization

Generated
12/8/2022 11:53:14 AM

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

Client: Ensolum
Project/Site: Ross Draw 3031

Laboratory Job ID: 880-22189-1
SDG: 03E1558139

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 880-22189-1
Project/Site: Ross Draw 3031 SDG: 03E1558139

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
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: Ross Draw 3031

Job ID: 880-22189-1
SDG: 03E1558139

Job ID: 880-22189-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-22189-1

Receipt
The samples were received on 12/1/2022 11:17 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice.

GC VOA
Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-41160 and analytical batch 880-41157 was outside the control limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: PH01A (880-22189-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following samples were outside control limits: PH04 (880-22189-5) and PH04A (880-22189-6). 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 sample was outside control limits: PH05 (880-22189-7). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: PH01 (880-22189-1), PH01A (880-22189-2) and PH02 (880-22189-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (880-22243-A-22-B). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-40959 and analytical batch 880-41085 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: Ross Draw 3031

Job ID: 880-22189-1
SDG: 03E1558139

Client Sample ID: PH01

Date Collected: 11/23/22 10:30
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22189-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.200	U	0.200		mg/Kg		12/07/22 09:16	12/07/22 15:06	100
Toluene	**6.43**		0.200		mg/Kg		12/07/22 09:16	12/07/22 15:06	100
Ethylbenzene	**8.73**		0.200		mg/Kg		12/07/22 09:16	12/07/22 15:06	100
m-Xylene & p-Xylene	**47.4**		0.399		mg/Kg		12/07/22 09:16	12/07/22 15:06	100
o-Xylene	**10.8**		0.200		mg/Kg		12/07/22 09:16	12/07/22 15:06	100
Xylenes, Total	**58.2**		0.399		mg/Kg		12/07/22 09:16	12/07/22 15:06	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*127*		*70 - 130*	*12/07/22 09:16*	*12/07/22 15:06*	*100*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*	*12/07/22 09:16*	*12/07/22 15:06*	*100*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**73.4**		0.399		mg/Kg			12/07/22 16:12	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**4540**		50.0		mg/Kg			12/07/22 09:45	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**2410**		50.0		mg/Kg		12/06/22 10:12	12/06/22 23:12	1
Diesel Range Organics (Over C10-C28)	**2130**		50.0		mg/Kg		12/06/22 10:12	12/06/22 23:12	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/06/22 10:12	12/06/22 23:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*158*	*S1+*	*70 - 130*	*12/06/22 10:12*	*12/06/22 23:12*	*1*
o-Terphenyl	*124*		*70 - 130*	*12/06/22 10:12*	*12/06/22 23:12*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**142**		5.00		mg/Kg			12/07/22 22:30	1

Client Sample ID: PH01A

Date Collected: 11/23/22 10:55
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22189-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		12/06/22 11:32	12/06/22 19:23	1
Toluene	<0.00201	U	0.00201		mg/Kg		12/06/22 11:32	12/06/22 19:23	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		12/06/22 11:32	12/06/22 19:23	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		12/06/22 11:32	12/06/22 19:23	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		12/06/22 11:32	12/06/22 19:23	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		12/06/22 11:32	12/06/22 19:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*61*	*S1-*	*70 - 130*	*12/06/22 11:32*	*12/06/22 19:23*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*12/06/22 11:32*	*12/06/22 19:23*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 880-22189-1
SDG: 03E1558139

Client Sample ID: PH01A

Date Collected: 11/23/22 10:55
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22189-2
Matrix: Solid

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			12/07/22 10:39	1

Method: SW846 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			12/07/22 09:45	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		12/06/22 10:12	12/06/22 23:33	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/06/22 10:12	12/06/22 23:33	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/06/22 10:12	12/06/22 23:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*136*	*S1+*	*70 - 130*	*12/06/22 10:12*	*12/06/22 23:33*	*1*
o-Terphenyl	*128*		*70 - 130*	*12/06/22 10:12*	*12/06/22 23:33*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**50.6**		5.04		mg/Kg			12/07/22 22:50	1

Client Sample ID: PH02

Date Collected: 11/23/22 11:00
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22189-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		12/06/22 11:32	12/06/22 19:44	1
Toluene	<0.00199	U	0.00199		mg/Kg		12/06/22 11:32	12/06/22 19:44	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		12/06/22 11:32	12/06/22 19:44	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		12/06/22 11:32	12/06/22 19:44	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		12/06/22 11:32	12/06/22 19:44	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		12/06/22 11:32	12/06/22 19:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*12/06/22 11:32*	*12/06/22 19:44*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*12/06/22 11:32*	*12/06/22 19:44*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			12/07/22 10:39	1

Method: SW846 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			12/07/22 09:45	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		12/06/22 10:12	12/06/22 23:55	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		12/06/22 10:12	12/06/22 23:55	1

Client Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 880-22189-1
SDG: 03E1558139

Client Sample ID: PH02

Date Collected: 11/23/22 11:00
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22189-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		12/06/22 10:12	12/06/22 23:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*131*	*S1+*	*70 - 130*	*12/06/22 10:12*	*12/06/22 23:55*	*1*
o-Terphenyl	*125*		*70 - 130*	*12/06/22 10:12*	*12/06/22 23:55*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**159**		25.2		mg/Kg			12/07/22 22:57	5

Client Sample ID: PH02A

Date Collected: 11/23/22 11:25
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22189-4
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/06/22 11:32	12/06/22 20:04	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/06/22 11:32	12/06/22 20:04	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/06/22 11:32	12/06/22 20:04	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		12/06/22 11:32	12/06/22 20:04	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/06/22 11:32	12/06/22 20:04	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		12/06/22 11:32	12/06/22 20:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*81*		*70 - 130*	*12/06/22 11:32*	*12/06/22 20:04*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*12/06/22 11:32*	*12/06/22 20:04*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			12/07/22 10:39	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			12/07/22 09:45	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		12/06/22 10:12	12/07/22 00:17	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/06/22 10:12	12/07/22 00:17	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/06/22 10:12	12/07/22 00:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*127*		*70 - 130*	*12/06/22 10:12*	*12/07/22 00:17*	*1*
o-Terphenyl	*125*		*70 - 130*	*12/06/22 10:12*	*12/07/22 00:17*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**219**		5.05		mg/Kg			12/07/22 23:03	1

Client Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 880-22189-1
SDG: 03E1558139

Client Sample ID: PH04

Date Collected: 11/23/22 11:55
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22189-5
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		12/06/22 11:32	12/06/22 20:25	1
Toluene	<0.00202	U	0.00202		mg/Kg		12/06/22 11:32	12/06/22 20:25	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		12/06/22 11:32	12/06/22 20:25	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		12/06/22 11:32	12/06/22 20:25	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		12/06/22 11:32	12/06/22 20:25	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		12/06/22 11:32	12/06/22 20:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*62*	*S1-*	*70 - 130*	*12/06/22 11:32*	*12/06/22 20:25*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*12/06/22 11:32*	*12/06/22 20:25*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			12/07/22 10:39	1

Method: SW846 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			12/07/22 09:45	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		12/06/22 10:12	12/07/22 00:39	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/06/22 10:12	12/07/22 00:39	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/06/22 10:12	12/07/22 00:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*130*		*70 - 130*	*12/06/22 10:12*	*12/07/22 00:39*	*1*
o-Terphenyl	*124*		*70 - 130*	*12/06/22 10:12*	*12/07/22 00:39*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**22.1**		4.95		mg/Kg			12/07/22 23:10	1

Client Sample ID: PH04A

Date Collected: 11/23/22 12:20
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22189-6
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/06/22 11:32	12/06/22 20:45	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/06/22 11:32	12/06/22 20:45	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/06/22 11:32	12/06/22 20:45	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		12/06/22 11:32	12/06/22 20:45	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/06/22 11:32	12/06/22 20:45	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		12/06/22 11:32	12/06/22 20:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*66*	*S1-*	*70 - 130*	*12/06/22 11:32*	*12/06/22 20:45*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*12/06/22 11:32*	*12/06/22 20:45*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 880-22189-1
SDG: 03E1558139

Client Sample ID: PH04A
Date Collected: 11/23/22 12:20
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22189-6
Matrix: Solid

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			12/07/22 10:39	1

Method: SW846 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			12/07/22 09:45	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		12/06/22 10:12	12/07/22 01:00	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/06/22 10:12	12/07/22 01:00	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/06/22 10:12	12/07/22 01:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*118*		*70 - 130*	*12/06/22 10:12*	*12/07/22 01:00*	*1*
o-Terphenyl	*112*		*70 - 130*	*12/06/22 10:12*	*12/07/22 01:00*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**62.8**		5.03		mg/Kg			12/07/22 23:30	1

Client Sample ID: PH05
Date Collected: 11/23/22 12:25
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22189-7
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		12/06/22 11:32	12/06/22 21:05	1
Toluene	<0.00199	U	0.00199		mg/Kg		12/06/22 11:32	12/06/22 21:05	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		12/06/22 11:32	12/06/22 21:05	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		12/06/22 11:32	12/06/22 21:05	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		12/06/22 11:32	12/06/22 21:05	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		12/06/22 11:32	12/06/22 21:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*	*12/06/22 11:32*	*12/06/22 21:05*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*12/06/22 11:32*	*12/06/22 21:05*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			12/07/22 10:39	1

Method: SW846 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			12/07/22 09:45	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		12/06/22 10:12	12/07/22 01:22	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/06/22 10:12	12/07/22 01:22	1

Client Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 880-22189-1
SDG: 03E1558139

Client Sample ID: PH05

Date Collected: 11/23/22 12:25
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22189-7
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/06/22 10:12	12/07/22 01:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*135*	*S1+*	*70 - 130*	*12/06/22 10:12*	*12/07/22 01:22*	*1*
o-Terphenyl	*130*		*70 - 130*	*12/06/22 10:12*	*12/07/22 01:22*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**410**		25.1		mg/Kg			12/07/22 23:37	5

Client Sample ID: PH05A

Date Collected: 11/23/22 12:50
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22189-8
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		12/06/22 11:32	12/06/22 21:26	1
Toluene	<0.00201	U	0.00201		mg/Kg		12/06/22 11:32	12/06/22 21:26	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		12/06/22 11:32	12/06/22 21:26	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		12/06/22 11:32	12/06/22 21:26	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		12/06/22 11:32	12/06/22 21:26	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		12/06/22 11:32	12/06/22 21:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*12/06/22 11:32*	*12/06/22 21:26*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*12/06/22 11:32*	*12/06/22 21:26*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			12/07/22 10:39	1

Method: SW846 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			12/07/22 09:45	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		12/06/22 10:12	12/07/22 02:06	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/06/22 10:12	12/07/22 02:06	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/06/22 10:12	12/07/22 02:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*123*		*70 - 130*	*12/06/22 10:12*	*12/07/22 02:06*	*1*
o-Terphenyl	*115*		*70 - 130*	*12/06/22 10:12*	*12/07/22 02:06*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**21.0**		5.00		mg/Kg			12/07/22 23:43	1

Client Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 880-22189-1
SDG: 03E1558139

Client Sample ID: PH06

Date Collected: 11/23/22 12:55
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22189-9
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		12/06/22 11:32	12/06/22 21:46	1
Toluene	<0.00201	U	0.00201		mg/Kg		12/06/22 11:32	12/06/22 21:46	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		12/06/22 11:32	12/06/22 21:46	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		12/06/22 11:32	12/06/22 21:46	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		12/06/22 11:32	12/06/22 21:46	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		12/06/22 11:32	12/06/22 21:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*	*12/06/22 11:32*	*12/06/22 21:46*	*1*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*	*12/06/22 11:32*	*12/06/22 21:46*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			12/07/22 10:39	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			12/07/22 09:45	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		12/06/22 10:12	12/07/22 02:28	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/06/22 10:12	12/07/22 02:28	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/06/22 10:12	12/07/22 02:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*120*		*70 - 130*	*12/06/22 10:12*	*12/07/22 02:28*	*1*
o-Terphenyl	*117*		*70 - 130*	*12/06/22 10:12*	*12/07/22 02:28*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**41.4**		4.96		mg/Kg			12/07/22 23:50	1

Client Sample ID: PH06A

Date Collected: 11/23/22 13:20
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22189-10
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		12/06/22 11:32	12/06/22 22:07	1
Toluene	<0.00199	U	0.00199		mg/Kg		12/06/22 11:32	12/06/22 22:07	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		12/06/22 11:32	12/06/22 22:07	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		12/06/22 11:32	12/06/22 22:07	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		12/06/22 11:32	12/06/22 22:07	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		12/06/22 11:32	12/06/22 22:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*	*12/06/22 11:32*	*12/06/22 22:07*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*12/06/22 11:32*	*12/06/22 22:07*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 880-22189-1
SDG: 03E1558139

Client Sample ID: PH06A
Date Collected: 11/23/22 13:20
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22189-10
Matrix: Solid

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			12/07/22 10:39	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			12/07/22 09:45	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		12/06/22 10:12	12/07/22 02:49	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/06/22 10:12	12/07/22 02:49	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/06/22 10:12	12/07/22 02:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*120*		*70 - 130*	*12/06/22 10:12*	*12/07/22 02:49*	*1*
o-Terphenyl	*116*		*70 - 130*	*12/06/22 10:12*	*12/07/22 02:49*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**38.2**		4.96		mg/Kg			12/07/22 23:57	1

Client Sample ID: PH07
Date Collected: 11/23/22 13:25
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22189-11
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		12/06/22 11:32	12/07/22 00:17	1
Toluene	<0.00201	U	0.00201		mg/Kg		12/06/22 11:32	12/07/22 00:17	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		12/06/22 11:32	12/07/22 00:17	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		12/06/22 11:32	12/07/22 00:17	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		12/06/22 11:32	12/07/22 00:17	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		12/06/22 11:32	12/07/22 00:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*71*		*70 - 130*	*12/06/22 11:32*	*12/07/22 00:17*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*12/06/22 11:32*	*12/07/22 00:17*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			12/07/22 10:39	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			12/07/22 09:45	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		12/06/22 10:12	12/07/22 03:11	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/06/22 10:12	12/07/22 03:11	1

Client Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 880-22189-1
SDG: 03E1558139

Client Sample ID: PH07

Date Collected: 11/23/22 13:25
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22189-11
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/06/22 10:12	12/07/22 03:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*124*		*70 - 130*	*12/06/22 10:12*	*12/07/22 03:11*	*1*
o-Terphenyl	*122*		*70 - 130*	*12/06/22 10:12*	*12/07/22 03:11*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**253**	**F1**	24.8		mg/Kg			12/08/22 07:59	5

Client Sample ID: PH07A

Date Collected: 11/23/22 13:50
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22189-12
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/06/22 11:32	12/07/22 00:37	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/06/22 11:32	12/07/22 00:37	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/06/22 11:32	12/07/22 00:37	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		12/06/22 11:32	12/07/22 00:37	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/06/22 11:32	12/07/22 00:37	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		12/06/22 11:32	12/07/22 00:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*75*		*70 - 130*	*12/06/22 11:32*	*12/07/22 00:37*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*12/06/22 11:32*	*12/07/22 00:37*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			12/07/22 10:39	1

Method: SW846 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			12/07/22 09:45	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		12/06/22 10:12	12/07/22 03:33	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/06/22 10:12	12/07/22 03:33	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/06/22 10:12	12/07/22 03:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*114*		*70 - 130*	*12/06/22 10:12*	*12/07/22 03:33*	*1*
o-Terphenyl	*110*		*70 - 130*	*12/06/22 10:12*	*12/07/22 03:33*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**63.4**		5.05		mg/Kg			12/08/22 08:19	1

Surrogate Summary

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 880-22189-1
SDG: 03E1558139

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)
880-22189-1	PH01	127	108
880-22189-2	PH01A	61 S1-	105
880-22189-2 MS	PH01A	79	100
880-22189-2 MSD	PH01A	73	102
880-22189-3	PH02	80	107
880-22189-4	PH02A	81	104
880-22189-5	PH04	62 S1-	105
880-22189-6	PH04A	66 S1-	103
880-22189-7	PH05	83	98
880-22189-8	PH05A	90	99
880-22189-9	PH06	87	108
880-22189-10	PH06A	87	107
880-22189-11	PH07	71	98
880-22189-12	PH07A	75	101
880-22352-A-1-D MS	Matrix Spike	102	114
880-22352-A-1-E MSD	Matrix Spike Duplicate	102	119
LCS 880-40641/1-A	Lab Control Sample	97	111
LCS 880-41160/1-A	Lab Control Sample	76	107
LCSD 880-40641/2-A	Lab Control Sample Dup	96	116
LCSD 880-41160/2-A	Lab Control Sample Dup	80	99
MB 880-40641/5-A	Method Blank	82	100
MB 880-41160/5-A	Method Blank	67 S1-	103

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)
880-22189-1	PH01	158 S1+	124
880-22189-2	PH01A	136 S1+	128
880-22189-3	PH02	131 S1+	125
880-22189-4	PH02A	127	125
880-22189-5	PH04	130	124
880-22189-6	PH04A	118	112
880-22189-7	PH05	135 S1+	130
880-22189-8	PH05A	123	115
880-22189-9	PH06	120	117
880-22189-10	PH06A	120	116
880-22189-11	PH07	124	122
880-22189-12	PH07A	114	110
880-22243-A-22-C MS	Matrix Spike	117	97
880-22243-A-22-D MSD	Matrix Spike Duplicate	118	98
LCS 880-41142/2-A	Lab Control Sample	128	114
LCSD 880-41142/3-A	Lab Control Sample Dup	109	113
MB 880-41142/1-A	Method Blank	109	110

Surrogate Summary

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 880-22189-1
SDG: 03E1558139

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 880-22189-1
SDG: 03E1558139

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-40641/5-A
Matrix: Solid
Analysis Batch: 41222

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40641

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/29/22 09:16	12/07/22 11:40	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/29/22 09:16	12/07/22 11:40	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/29/22 09:16	12/07/22 11:40	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/29/22 09:16	12/07/22 11:40	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/29/22 09:16	12/07/22 11:40	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/29/22 09:16	12/07/22 11:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*70 - 130*	*11/29/22 09:16*	*12/07/22 11:40*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*11/29/22 09:16*	*12/07/22 11:40*	*1*

Lab Sample ID: LCS 880-40641/1-A
Matrix: Solid
Analysis Batch: 41222

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40641

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09342		mg/Kg		93	70 - 130		
Toluene			0.100	0.08359		mg/Kg		84	70 - 130		
Ethylbenzene			0.100	0.07983		mg/Kg		80	70 - 130		
m-Xylene & p-Xylene			0.200	0.1630		mg/Kg		82	70 - 130		
o-Xylene			0.100	0.08217		mg/Kg		82	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*

Lab Sample ID: LCSD 880-40641/2-A
Matrix: Solid
Analysis Batch: 41222

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 40641

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1165		mg/Kg		117	70 - 130	22	35
Toluene			0.100	0.09996		mg/Kg		100	70 - 130	18	35
Ethylbenzene			0.100	0.09697		mg/Kg		97	70 - 130	19	35
m-Xylene & p-Xylene			0.200	0.1952		mg/Kg		98	70 - 130	18	35
o-Xylene			0.100	0.09498		mg/Kg		95	70 - 130	14	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*

Lab Sample ID: MB 880-41160/5-A
Matrix: Solid
Analysis Batch: 41157

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 41160

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/06/22 11:32	12/06/22 18:55	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/06/22 11:32	12/06/22 18:55	1

QC Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 880-22189-1
SDG: 03E1558139

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

Lab Sample ID: MB 880-41160/5-A
Matrix: Solid
Analysis Batch: 41157

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 41160

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/06/22 11:32	12/06/22 18:55	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/06/22 11:32	12/06/22 18:55	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/06/22 11:32	12/06/22 18:55	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/06/22 11:32	12/06/22 18:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*67*	*S1-*	*70 - 130*	*12/06/22 11:32*	*12/06/22 18:55*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*12/06/22 11:32*	*12/06/22 18:55*	*1*

Lab Sample ID: LCS 880-41160/1-A
Matrix: Solid
Analysis Batch: 41157

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 41160

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09296		mg/Kg		93	70 - 130		
Toluene			0.100	0.09973		mg/Kg		100	70 - 130		
Ethylbenzene			0.100	0.09287		mg/Kg		93	70 - 130		
m-Xylene & p-Xylene			0.200	0.1622		mg/Kg		81	70 - 130		
o-Xylene			0.100	0.07929		mg/Kg		79	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*76*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: LCSD 880-41160/2-A
Matrix: Solid
Analysis Batch: 41157

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 41160

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08382		mg/Kg		84	70 - 130	10	35
Toluene			0.100	0.09298		mg/Kg		93	70 - 130	7	35
Ethylbenzene			0.100	0.09005		mg/Kg		90	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1588		mg/Kg		79	70 - 130	2	35
o-Xylene			0.100	0.07789		mg/Kg		78	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 880-22189-2 MS
Matrix: Solid
Analysis Batch: 41157

Client Sample ID: PH01A
Prep Type: Total/NA
Prep Batch: 41160

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U	0.0996	0.08443		mg/Kg		84	70 - 130		
Toluene	<0.00201	U	0.0996	0.09336		mg/Kg		94	70 - 130		
Ethylbenzene	<0.00201	U	0.0996	0.08859		mg/Kg		89	70 - 130		
m-Xylene & p-Xylene	<0.00402	U	0.199	0.1566		mg/Kg		78	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 880-22189-1
SDG: 03E1558139

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

Lab Sample ID: 880-22189-2 MS
Matrix: Solid
Analysis Batch: 41157

Client Sample ID: PH01A
Prep Type: Total/NA
Prep Batch: 41160

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
o-Xylene	<0.00201	U	0.0996	0.07696		mg/Kg		76	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*79*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 880-22189-2 MSD
Matrix: Solid
Analysis Batch: 41157

Client Sample ID: PH01A
Prep Type: Total/NA
Prep Batch: 41160

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	0.07850		mg/Kg		78	70 - 130	7	35
Toluene	<0.00201	U	0.0998	0.09068		mg/Kg		91	70 - 130	3	35
Ethylbenzene	<0.00201	U	0.0998	0.08847		mg/Kg		89	70 - 130	0	35
m-Xylene & p-Xylene	<0.00402	U	0.200	0.1560		mg/Kg		77	70 - 130	0	35
o-Xylene	<0.00201	U	0.0998	0.07387		mg/Kg		73	70 - 130	4	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*73*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

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

Lab Sample ID: MB 880-41142/1-A
Matrix: Solid
Analysis Batch: 41104

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 41142

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		12/06/22 10:12	12/06/22 20:18	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		12/06/22 10:12	12/06/22 20:18	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/06/22 10:12	12/06/22 20:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*12/06/22 10:12*	*12/06/22 20:18*	*1*
o-Terphenyl	*110*		*70 - 130*	*12/06/22 10:12*	*12/06/22 20:18*	*1*

Lab Sample ID: LCS 880-41142/2-A
Matrix: Solid
Analysis Batch: 41104

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 41142

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	867.2		mg/Kg		87	70 - 130
Diesel Range Organics (Over C10-C28)	1000	841.6		mg/Kg		84	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 880-22189-1
SDG: 03E1558139

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

Lab Sample ID: LCS 880-41142/2-A
Matrix: Solid
Analysis Batch: 41104

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 41142

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	128		70 - 130
o-Terphenyl	114		70 - 130

Lab Sample ID: LCSD 880-41142/3-A
Matrix: Solid
Analysis Batch: 41104

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 41142

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	998.7		mg/Kg		100	70 - 130	14	20
Diesel Range Organics (Over C10-C28)			1000	841.9		mg/Kg		84	70 - 130	0	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	109		70 - 130
o-Terphenyl	113		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-40959/1-A
Matrix: Solid
Analysis Batch: 41085

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			12/07/22 22:10	1

Lab Sample ID: LCS 880-40959/2-A
Matrix: Solid
Analysis Batch: 41085

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	267.0		mg/Kg		107	90 - 110		

Lab Sample ID: LCSD 880-40959/3-A
Matrix: Solid
Analysis Batch: 41085

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	267.4		mg/Kg		107	90 - 110	0	20

Lab Sample ID: 880-22189-1 MS
Matrix: Solid
Analysis Batch: 41085

Client Sample ID: PH01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	142		250	407.5		mg/Kg		106	90 - 110		

QC Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 880-22189-1
SDG: 03E1558139

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-22189-1 MSD — **Client Sample ID: PH01**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 41085

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	142		250	408.1		mg/Kg		106	90 - 110	0	20

Lab Sample ID: 880-22189-11 MS — **Client Sample ID: PH07**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 41085

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	253	F1	1240	1623	F1	mg/Kg		111	90 - 110

Lab Sample ID: 880-22189-11 MSD — **Client Sample ID: PH07**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 41085

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	253	F1	1240	1612		mg/Kg		110	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 880-22189-1
SDG: 03E1558139

GC VOA

Prep Batch: 40641

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22189-1	PH01	Total/NA	Solid	5035	
MB 880-40641/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-40641/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-40641/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 41157

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22189-2	PH01A	Total/NA	Solid	8021B	41160
880-22189-3	PH02	Total/NA	Solid	8021B	41160
880-22189-4	PH02A	Total/NA	Solid	8021B	41160
880-22189-5	PH04	Total/NA	Solid	8021B	41160
880-22189-6	PH04A	Total/NA	Solid	8021B	41160
880-22189-7	PH05	Total/NA	Solid	8021B	41160
880-22189-8	PH05A	Total/NA	Solid	8021B	41160
880-22189-9	PH06	Total/NA	Solid	8021B	41160
880-22189-10	PH06A	Total/NA	Solid	8021B	41160
880-22189-11	PH07	Total/NA	Solid	8021B	41160
880-22189-12	PH07A	Total/NA	Solid	8021B	41160
MB 880-41160/5-A	Method Blank	Total/NA	Solid	8021B	41160
LCS 880-41160/1-A	Lab Control Sample	Total/NA	Solid	8021B	41160
LCSD 880-41160/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	41160
880-22189-2 MS	PH01A	Total/NA	Solid	8021B	41160
880-22189-2 MSD	PH01A	Total/NA	Solid	8021B	41160

Prep Batch: 41160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22189-2	PH01A	Total/NA	Solid	5035	
880-22189-3	PH02	Total/NA	Solid	5035	
880-22189-4	PH02A	Total/NA	Solid	5035	
880-22189-5	PH04	Total/NA	Solid	5035	
880-22189-6	PH04A	Total/NA	Solid	5035	
880-22189-7	PH05	Total/NA	Solid	5035	
880-22189-8	PH05A	Total/NA	Solid	5035	
880-22189-9	PH06	Total/NA	Solid	5035	
880-22189-10	PH06A	Total/NA	Solid	5035	
880-22189-11	PH07	Total/NA	Solid	5035	
880-22189-12	PH07A	Total/NA	Solid	5035	
MB 880-41160/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-41160/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-41160/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-22189-2 MS	PH01A	Total/NA	Solid	5035	
880-22189-2 MSD	PH01A	Total/NA	Solid	5035	

Analysis Batch: 41222

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22189-1	PH01	Total/NA	Solid	8021B	40641
MB 880-40641/5-A	Method Blank	Total/NA	Solid	8021B	40641
LCS 880-40641/1-A	Lab Control Sample	Total/NA	Solid	8021B	40641
LCSD 880-40641/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	40641

QC Association Summary

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 880-22189-1
SDG: 03E1558139

GC VOA

Analysis Batch: 41260

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22189-1	PH01	Total/NA	Solid	Total BTEX	
880-22189-2	PH01A	Total/NA	Solid	Total BTEX	
880-22189-3	PH02	Total/NA	Solid	Total BTEX	
880-22189-4	PH02A	Total/NA	Solid	Total BTEX	
880-22189-5	PH04	Total/NA	Solid	Total BTEX	
880-22189-6	PH04A	Total/NA	Solid	Total BTEX	
880-22189-7	PH05	Total/NA	Solid	Total BTEX	
880-22189-8	PH05A	Total/NA	Solid	Total BTEX	
880-22189-9	PH06	Total/NA	Solid	Total BTEX	
880-22189-10	PH06A	Total/NA	Solid	Total BTEX	
880-22189-11	PH07	Total/NA	Solid	Total BTEX	
880-22189-12	PH07A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 41104

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22189-1	PH01	Total/NA	Solid	8015B NM	41142
880-22189-2	PH01A	Total/NA	Solid	8015B NM	41142
880-22189-3	PH02	Total/NA	Solid	8015B NM	41142
880-22189-4	PH02A	Total/NA	Solid	8015B NM	41142
880-22189-5	PH04	Total/NA	Solid	8015B NM	41142
880-22189-6	PH04A	Total/NA	Solid	8015B NM	41142
880-22189-7	PH05	Total/NA	Solid	8015B NM	41142
880-22189-8	PH05A	Total/NA	Solid	8015B NM	41142
880-22189-9	PH06	Total/NA	Solid	8015B NM	41142
880-22189-10	PH06A	Total/NA	Solid	8015B NM	41142
880-22189-11	PH07	Total/NA	Solid	8015B NM	41142
880-22189-12	PH07A	Total/NA	Solid	8015B NM	41142
MB 880-41142/1-A	Method Blank	Total/NA	Solid	8015B NM	41142
LCS 880-41142/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	41142
LCSD 880-41142/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	41142

Prep Batch: 41142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22189-1	PH01	Total/NA	Solid	8015NM Prep	
880-22189-2	PH01A	Total/NA	Solid	8015NM Prep	
880-22189-3	PH02	Total/NA	Solid	8015NM Prep	
880-22189-4	PH02A	Total/NA	Solid	8015NM Prep	
880-22189-5	PH04	Total/NA	Solid	8015NM Prep	
880-22189-6	PH04A	Total/NA	Solid	8015NM Prep	
880-22189-7	PH05	Total/NA	Solid	8015NM Prep	
880-22189-8	PH05A	Total/NA	Solid	8015NM Prep	
880-22189-9	PH06	Total/NA	Solid	8015NM Prep	
880-22189-10	PH06A	Total/NA	Solid	8015NM Prep	
880-22189-11	PH07	Total/NA	Solid	8015NM Prep	
880-22189-12	PH07A	Total/NA	Solid	8015NM Prep	
MB 880-41142/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-41142/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-41142/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 880-22189-1
SDG: 03E1558139

GC Semi VOA

Analysis Batch: 41233

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22189-1	PH01	Total/NA	Solid	8015 NM	
880-22189-2	PH01A	Total/NA	Solid	8015 NM	
880-22189-3	PH02	Total/NA	Solid	8015 NM	
880-22189-4	PH02A	Total/NA	Solid	8015 NM	
880-22189-5	PH04	Total/NA	Solid	8015 NM	
880-22189-6	PH04A	Total/NA	Solid	8015 NM	
880-22189-7	PH05	Total/NA	Solid	8015 NM	
880-22189-8	PH05A	Total/NA	Solid	8015 NM	
880-22189-9	PH06	Total/NA	Solid	8015 NM	
880-22189-10	PH06A	Total/NA	Solid	8015 NM	
880-22189-11	PH07	Total/NA	Solid	8015 NM	
880-22189-12	PH07A	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 40959

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22189-1	PH01	Soluble	Solid	DI Leach	
880-22189-2	PH01A	Soluble	Solid	DI Leach	
880-22189-3	PH02	Soluble	Solid	DI Leach	
880-22189-4	PH02A	Soluble	Solid	DI Leach	
880-22189-5	PH04	Soluble	Solid	DI Leach	
880-22189-6	PH04A	Soluble	Solid	DI Leach	
880-22189-7	PH05	Soluble	Solid	DI Leach	
880-22189-8	PH05A	Soluble	Solid	DI Leach	
880-22189-9	PH06	Soluble	Solid	DI Leach	
880-22189-10	PH06A	Soluble	Solid	DI Leach	
880-22189-11	PH07	Soluble	Solid	DI Leach	
880-22189-12	PH07A	Soluble	Solid	DI Leach	
MB 880-40959/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-40959/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-40959/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-22189-1 MS	PH01	Soluble	Solid	DI Leach	
880-22189-1 MSD	PH01	Soluble	Solid	DI Leach	
880-22189-11 MS	PH07	Soluble	Solid	DI Leach	
880-22189-11 MSD	PH07	Soluble	Solid	DI Leach	

Analysis Batch: 41085

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22189-1	PH01	Soluble	Solid	300.0	40959
880-22189-2	PH01A	Soluble	Solid	300.0	40959
880-22189-3	PH02	Soluble	Solid	300.0	40959
880-22189-4	PH02A	Soluble	Solid	300.0	40959
880-22189-5	PH04	Soluble	Solid	300.0	40959
880-22189-6	PH04A	Soluble	Solid	300.0	40959
880-22189-7	PH05	Soluble	Solid	300.0	40959
880-22189-8	PH05A	Soluble	Solid	300.0	40959
880-22189-9	PH06	Soluble	Solid	300.0	40959
880-22189-10	PH06A	Soluble	Solid	300.0	40959
880-22189-11	PH07	Soluble	Solid	300.0	40959
880-22189-12	PH07A	Soluble	Solid	300.0	40959

QC Association Summary

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 880-22189-1
SDG: 03E1558139

HPLC/IC (Continued)

Analysis Batch: 41085 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-40959/1-A	Method Blank	Soluble	Solid	300.0	40959
LCS 880-40959/2-A	Lab Control Sample	Soluble	Solid	300.0	40959
LCSD 880-40959/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	40959
880-22189-1 MS	PH01	Soluble	Solid	300.0	40959
880-22189-1 MSD	PH01	Soluble	Solid	300.0	40959
880-22189-11 MS	PH07	Soluble	Solid	300.0	40959
880-22189-11 MSD	PH07	Soluble	Solid	300.0	40959

Lab Chronicle

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 880-22189-1
SDG: 03E1558139

Client Sample ID: PH01
Date Collected: 11/23/22 10:30
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22189-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			40641	MNR	EET MID	12/07/22 09:16
Total/NA	Analysis	8021B		100	41222	MNR	EET MID	12/07/22 15:06
Total/NA	Analysis	Total BTEX		1	41260	SM	EET MID	12/07/22 16:12
Total/NA	Analysis	8015 NM		1	41233	SM	EET MID	12/07/22 09:45
Total/NA	Prep	8015NM Prep			41142	DM	EET MID	12/06/22 10:12
Total/NA	Analysis	8015B NM		1	41104	SM	EET MID	12/06/22 23:12
Soluble	Leach	DI Leach			40959	SMC	EET MID	12/03/22 13:50
Soluble	Analysis	300.0		1	41085	CH	EET MID	12/07/22 22:30

Client Sample ID: PH01A
Date Collected: 11/23/22 10:55
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22189-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			41160	MNR	EET MID	12/06/22 11:32
Total/NA	Analysis	8021B		1	41157	MNR	EET MID	12/06/22 19:23
Total/NA	Analysis	Total BTEX		1	41260	SM	EET MID	12/07/22 10:39
Total/NA	Analysis	8015 NM		1	41233	SM	EET MID	12/07/22 09:45
Total/NA	Prep	8015NM Prep			41142	DM	EET MID	12/06/22 10:12
Total/NA	Analysis	8015B NM		1	41104	SM	EET MID	12/06/22 23:33
Soluble	Leach	DI Leach			40959	SMC	EET MID	12/03/22 13:50
Soluble	Analysis	300.0		1	41085	CH	EET MID	12/07/22 22:50

Client Sample ID: PH02
Date Collected: 11/23/22 11:00
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22189-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			41160	MNR	EET MID	12/06/22 11:32
Total/NA	Analysis	8021B		1	41157	MNR	EET MID	12/06/22 19:44
Total/NA	Analysis	Total BTEX		1	41260	SM	EET MID	12/07/22 10:39
Total/NA	Analysis	8015 NM		1	41233	SM	EET MID	12/07/22 09:45
Total/NA	Prep	8015NM Prep			41142	DM	EET MID	12/06/22 10:12
Total/NA	Analysis	8015B NM		1	41104	SM	EET MID	12/06/22 23:55
Soluble	Leach	DI Leach			40959	SMC	EET MID	12/03/22 13:50
Soluble	Analysis	300.0		5	41085	CH	EET MID	12/07/22 22:57

Client Sample ID: PH02A
Date Collected: 11/23/22 11:25
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22189-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			41160	MNR	EET MID	12/06/22 11:32
Total/NA	Analysis	8021B		1	41157	MNR	EET MID	12/06/22 20:04
Total/NA	Analysis	Total BTEX		1	41260	SM	EET MID	12/07/22 10:39

Eurofins Midland

Lab Chronicle

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 880-22189-1
SDG: 03E1558139

Client Sample ID: PH02A
Date Collected: 11/23/22 11:25
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22189-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015 NM		1	41233	SM	EET MID	12/07/22 09:45
Total/NA	Prep	8015NM Prep			41142	DM	EET MID	12/06/22 10:12
Total/NA	Analysis	8015B NM		1	41104	SM	EET MID	12/07/22 00:17
Soluble	Leach	DI Leach			40959	SMC	EET MID	12/03/22 13:50
Soluble	Analysis	300.0		1	41085	CH	EET MID	12/07/22 23:03

Client Sample ID: PH04
Date Collected: 11/23/22 11:55
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22189-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			41160	MNR	EET MID	12/06/22 11:32
Total/NA	Analysis	8021B		1	41157	MNR	EET MID	12/06/22 20:25
Total/NA	Analysis	Total BTEX		1	41260	SM	EET MID	12/07/22 10:39
Total/NA	Analysis	8015 NM		1	41233	SM	EET MID	12/07/22 09:45
Total/NA	Prep	8015NM Prep			41142	DM	EET MID	12/06/22 10:12
Total/NA	Analysis	8015B NM		1	41104	SM	EET MID	12/07/22 00:39
Soluble	Leach	DI Leach			40959	SMC	EET MID	12/03/22 13:50
Soluble	Analysis	300.0		1	41085	CH	EET MID	12/07/22 23:10

Client Sample ID: PH04A
Date Collected: 11/23/22 12:20
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22189-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			41160	MNR	EET MID	12/06/22 11:32
Total/NA	Analysis	8021B		1	41157	MNR	EET MID	12/06/22 20:45
Total/NA	Analysis	Total BTEX		1	41260	SM	EET MID	12/07/22 10:39
Total/NA	Analysis	8015 NM		1	41233	SM	EET MID	12/07/22 09:45
Total/NA	Prep	8015NM Prep			41142	DM	EET MID	12/06/22 10:12
Total/NA	Analysis	8015B NM		1	41104	SM	EET MID	12/07/22 01:00
Soluble	Leach	DI Leach			40959	SMC	EET MID	12/03/22 13:50
Soluble	Analysis	300.0		1	41085	CH	EET MID	12/07/22 23:30

Client Sample ID: PH05
Date Collected: 11/23/22 12:25
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22189-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			41160	MNR	EET MID	12/06/22 11:32
Total/NA	Analysis	8021B		1	41157	MNR	EET MID	12/06/22 21:05
Total/NA	Analysis	Total BTEX		1	41260	SM	EET MID	12/07/22 10:39
Total/NA	Analysis	8015 NM		1	41233	SM	EET MID	12/07/22 09:45
Total/NA	Prep	8015NM Prep			41142	DM	EET MID	12/06/22 10:12
Total/NA	Analysis	8015B NM		1	41104	SM	EET MID	12/07/22 01:22

Lab Chronicle

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 880-22189-1
SDG: 03E1558139

Client Sample ID: PH05
Date Collected: 11/23/22 12:25
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22189-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			40959	SMC	EET MID	12/03/22 13:50
Soluble	Analysis	300.0		5	41085	CH	EET MID	12/07/22 23:37

Client Sample ID: PH05A
Date Collected: 11/23/22 12:50
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22189-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			41160	MNR	EET MID	12/06/22 11:32
Total/NA	Analysis	8021B		1	41157	MNR	EET MID	12/06/22 21:26
Total/NA	Analysis	Total BTEX		1	41260	SM	EET MID	12/07/22 10:39
Total/NA	Analysis	8015 NM		1	41233	SM	EET MID	12/07/22 09:45
Total/NA	Prep	8015NM Prep			41142	DM	EET MID	12/06/22 10:12
Total/NA	Analysis	8015B NM		1	41104	SM	EET MID	12/07/22 02:06
Soluble	Leach	DI Leach			40959	SMC	EET MID	12/03/22 13:50
Soluble	Analysis	300.0		1	41085	CH	EET MID	12/07/22 23:43

Client Sample ID: PH06
Date Collected: 11/23/22 12:55
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22189-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			41160	MNR	EET MID	12/06/22 11:32
Total/NA	Analysis	8021B		1	41157	MNR	EET MID	12/06/22 21:46
Total/NA	Analysis	Total BTEX		1	41260	SM	EET MID	12/07/22 10:39
Total/NA	Analysis	8015 NM		1	41233	SM	EET MID	12/07/22 09:45
Total/NA	Prep	8015NM Prep			41142	DM	EET MID	12/06/22 10:12
Total/NA	Analysis	8015B NM		1	41104	SM	EET MID	12/07/22 02:28
Soluble	Leach	DI Leach			40959	SMC	EET MID	12/03/22 13:50
Soluble	Analysis	300.0		1	41085	CH	EET MID	12/07/22 23:50

Client Sample ID: PH06A
Date Collected: 11/23/22 13:20
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22189-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			41160	MNR	EET MID	12/06/22 11:32
Total/NA	Analysis	8021B		1	41157	MNR	EET MID	12/06/22 22:07
Total/NA	Analysis	Total BTEX		1	41260	SM	EET MID	12/07/22 10:39
Total/NA	Analysis	8015 NM		1	41233	SM	EET MID	12/07/22 09:45
Total/NA	Prep	8015NM Prep			41142	DM	EET MID	12/06/22 10:12
Total/NA	Analysis	8015B NM		1	41104	SM	EET MID	12/07/22 02:49
Soluble	Leach	DI Leach			40959	SMC	EET MID	12/03/22 13:50
Soluble	Analysis	300.0		1	41085	CH	EET MID	12/07/22 23:57

Lab Chronicle

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 880-22189-1
SDG: 03E1558139

Client Sample ID: PH07

Date Collected: 11/23/22 13:25
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22189-11

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			41160	MNR	EET MID	12/06/22 11:32
Total/NA	Analysis	8021B		1	41157	MNR	EET MID	12/07/22 00:17
Total/NA	Analysis	Total BTEX		1	41260	SM	EET MID	12/07/22 10:39
Total/NA	Analysis	8015 NM		1	41233	SM	EET MID	12/07/22 09:45
Total/NA	Prep	8015NM Prep			41142	DM	EET MID	12/06/22 10:12
Total/NA	Analysis	8015B NM		1	41104	SM	EET MID	12/07/22 03:11
Soluble	Leach	DI Leach			40959	SMC	EET MID	12/03/22 13:50
Soluble	Analysis	300.0		5	41085	CH	EET MID	12/08/22 07:59

Client Sample ID: PH07A

Date Collected: 11/23/22 13:50
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22189-12

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			41160	MNR	EET MID	12/06/22 11:32
Total/NA	Analysis	8021B		1	41157	MNR	EET MID	12/07/22 00:37
Total/NA	Analysis	Total BTEX		1	41260	SM	EET MID	12/07/22 10:39
Total/NA	Analysis	8015 NM		1	41233	SM	EET MID	12/07/22 09:45
Total/NA	Prep	8015NM Prep			41142	DM	EET MID	12/06/22 10:12
Total/NA	Analysis	8015B NM		1	41104	SM	EET MID	12/07/22 03:33
Soluble	Leach	DI Leach			40959	SMC	EET MID	12/03/22 13:50
Soluble	Analysis	300.0		1	41085	CH	EET MID	12/08/22 08:19

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 880-22189-1
SDG: 03E1558139

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: Ross Draw 3031

Job ID: 880-22189-1
SDG: 03E1558139

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 880-22189-1
SDG: 03E1558139

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-22189-1	PH01	Solid	11/23/22 10:30	12/01/22 11:17
880-22189-2	PH01A	Solid	11/23/22 10:55	12/01/22 11:17
880-22189-3	PH02	Solid	11/23/22 11:00	12/01/22 11:17
880-22189-4	PH02A	Solid	11/23/22 11:25	12/01/22 11:17
880-22189-5	PH04	Solid	11/23/22 11:55	12/01/22 11:17
880-22189-6	PH04A	Solid	11/23/22 12:20	12/01/22 11:17
880-22189-7	PH05	Solid	11/23/22 12:25	12/01/22 11:17
880-22189-8	PH05A	Solid	11/23/22 12:50	12/01/22 11:17
880-22189-9	PH06	Solid	11/23/22 12:55	12/01/22 11:17
880-22189-10	PH06A	Solid	11/23/22 13:20	12/01/22 11:17
880-22189-11	PH07	Solid	11/23/22 13:25	12/01/22 11:17
880-22189-12	PH07A	Solid	11/23/22 13:50	12/01/22 11:17

eurofins

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: 22189

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

Work Order Comments

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

Project Name	Ross Draw 3031	Turn Around	
Project Number	03E1558139	☑ Routine ☐ Rush	
Project Location	32 00075, -103 91531	Due Date	
Sampler's Name	Kase Parker	TAT starts the day received by the lab if received by 4 30pm	
PO #:			

SAMPLE RECEIPT					
Temp Blank	Yes No	Wet Ice	Yes No		
Samples Received Intact	Yes No	Thermometer ID	T-NM-007		
Cooler Custody Seals	Yes No N/A	Correction Factor:			
Sample Custody Seals	Yes No N/A	Temperature Reading.	3.2		
Total Containers		Corrected Temperature:			

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA 300.0)	TPH (8015)	BTEX (8021)
PH01	S	11/23/2022	10 30	0 5'	Grab/	1		x	x	x
PH01A	S	11/23/2022	10 55	5'	Grab/	1		x	x	x
PH02	S	11/23/2022	11 00	0 5'	Grab/	1		x	x	x
PH02A	S	11/23/2022	11 25	5'	Grab/	1		x	x	x
PH04	S	11/23/2022	11 55	0 5'	Grab/	1		x	x	x
PH04A	S	11/23/2022	12 20	5'	Grab/	1		x	x	x
PH05	S	11/23/2022	12 25	0 5'	Grab/	1		x	x	x
PH05A	S	11/23/2022	12 50	5'	Grab/	1		x	x	x
PH06	S	11/23/2022	12 55	0 5'	Grab/	1		x	x	x
PH06A	S	11/23/2022	13 20	5'	Grab/	1		x	x	x

880-22189 Chain of Custody

Preservative Codes

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

Sample Comments

Incident ID
nAPP2227244441
Cost Center:
1067631001
AFE

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg 1631 / 245 1 / 7470 / 7471

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

Relinquished by (Signature)	Received by (Signature)	Date/Time	Relinquished by (Signature)	Received by (Signature)	Date/Time
1		12/1/22 11:17	2		
3			4		
5			6		

Revised Date 08/25/2020 Rev 2020.2

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Eurofins Xenco

Chain of Custody

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

Work Order No: _____

www.xenco.com Page 2 of 2

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

Work Order Comments

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

Project Name	Ross Draw 3031	Turn Around	
Project Number	03E1558139	☑ Routine ☐ Rush	
Project Location	32 00075 -103 91531	Due Date	
Sampler's Name	Kase Parker	TAT starts the day received by the lab if received by 4 30pm	
PO #:			

SAMPLE RECEIPT				
Temp Blank	Yes No	Wet Ice	(Yes) No	
Samples Received Intact:	Yes No	Thermometer ID	T-NM-007	
Cooler Custody Seals	Yes No N/A	Correction Factor		
Sample Custody Seals	Yes No N/A	Temperature Reading	3.2	
Total Containers		Corrected Temperature		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	CHLORIDES (EPA 300.0)	TPH (8015)	BTEX (8021)
PH07	S	11/23/2022	13 25	0 5'	Grab/	1	x	x	x
PH07A	S	11/23/2022	13 50	5'	Grab/	1	x	x	x

Loc: 880
22189

Preservative Codes

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

Sample Comments

Incident ID
nAPP2227244441
Cost Center
1067631001
AFE

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg 1631 / 245 1 / 7470 / 7471

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Relinquished by (Signature)	Received by (Signature)	Date/Time	Relinquished by (Signature)	Received by (Signature)	Date/Time
1		12-1-22 11:17	2		
3			4		
5			6		

Revised Date 08/25/2020 Rev 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-22189-1
SDG Number: 03E1558139

Login Number: 22189
List Number: 1
Creator: Kramer, Jessica

List Source: Eurofins Midland

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.	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").	N/A	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Kalei Jennings
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 12/8/2022 11:53:08 AM

JOB DESCRIPTION

Ross Draw 3031
SDG NUMBER 03E1558139

JOB NUMBER

880-22190-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.

my EOL

Eurofins Midland

Job Notes

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

Authorization

Generated
12/8/2022 11:53:08 AM

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

Client: Ensolum
Project/Site: Ross Draw 3031

Laboratory Job ID: 880-22190-1
SDG: 03E1558139

Table of Contents

Eurofins Midland
12/8/2022

Definitions/Glossary

Client: Ensolum Job ID: 880-22190-1
Project/Site: Ross Draw 3031 SDG: 03E1558139

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
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: Ross Draw 3031

Job ID: 880-22190-1
SDG: 03E1558139

Job ID: 880-22190-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-22190-1

Receipt
The samples were received on 12/1/2022 11:17 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice.

GC VOA
Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-41160 and analytical batch 880-41157 was outside the control limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (880-22189-A-2-J). 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: (880-22110-A-1-D) and (880-22110-A-1-E MS). 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: Ross Draw 3031

Job ID: 880-22190-1
SDG: 03E1558139

Client Sample ID: PH03

Date Collected: 11/23/22 11:35
Date Received: 12/01/22 11:17
Sample Depth: 1'

Lab Sample ID: 880-22190-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		12/06/22 11:32	12/07/22 00:57	1
Toluene	<0.00199	U	0.00199		mg/Kg		12/06/22 11:32	12/07/22 00:57	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		12/06/22 11:32	12/07/22 00:57	1
m-Xylene & p-Xylene	**0.0132**		0.00398		mg/Kg		12/06/22 11:32	12/07/22 00:57	1
o-Xylene	**0.0132**		0.00199		mg/Kg		12/06/22 11:32	12/07/22 00:57	1
Xylenes, Total	**0.0264**		0.00398		mg/Kg		12/06/22 11:32	12/07/22 00:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*	*12/06/22 11:32*	*12/07/22 00:57*	*1*
1,4-Difluorobenzene (Surr)	*126*		*70 - 130*	*12/06/22 11:32*	*12/07/22 00:57*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0264**		0.00398		mg/Kg			12/07/22 10:39	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**667**		50.0		mg/Kg			12/07/22 09:45	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**141**		50.0		mg/Kg		12/05/22 11:32	12/06/22 19:13	1
Diesel Range Organics (Over C10-C28)	**526**		50.0		mg/Kg		12/05/22 11:32	12/06/22 19:13	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/05/22 11:32	12/06/22 19:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*119*		*70 - 130*	*12/05/22 11:32*	*12/06/22 19:13*	*1*
o-Terphenyl	*113*		*70 - 130*	*12/05/22 11:32*	*12/06/22 19:13*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**463**		5.03		mg/Kg			12/08/22 08:26	1

Client Sample ID: PH03A

Date Collected: 11/23/22 11:50
Date Received: 12/01/22 11:17
Sample Depth: 4'

Lab Sample ID: 880-22190-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/06/22 11:32	12/07/22 01:18	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/06/22 11:32	12/07/22 01:18	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/06/22 11:32	12/07/22 01:18	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		12/06/22 11:32	12/07/22 01:18	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/06/22 11:32	12/07/22 01:18	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		12/06/22 11:32	12/07/22 01:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*	*12/06/22 11:32*	*12/07/22 01:18*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 880-22190-1
SDG: 03E1558139

Client Sample ID: PH03A

Date Collected: 11/23/22 11:50
Date Received: 12/01/22 11:17
Sample Depth: 4'

Lab Sample ID: 880-22190-2

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*12/06/22 11:32*	*12/07/22 01:18*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			12/07/22 10:39	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**526**		49.9		mg/Kg			12/07/22 09:45	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		12/05/22 11:32	12/06/22 19:35	1
Diesel Range Organics (Over C10-C28)	**526**		49.9		mg/Kg		12/05/22 11:32	12/06/22 19:35	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/05/22 11:32	12/06/22 19:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*117*		*70 - 130*	*12/05/22 11:32*	*12/06/22 19:35*	*1*
o-Terphenyl	*113*		*70 - 130*	*12/05/22 11:32*	*12/06/22 19:35*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**53.9**		5.01		mg/Kg			12/08/22 08:46	1

Surrogate Summary

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 880-22190-1
SDG: 03E1558139

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)
880-22189-A-2-H MS	Matrix Spike	79	100
880-22189-A-2-I MSD	Matrix Spike Duplicate	73	102
880-22190-1	PH03	92	126
880-22190-2	PH03A	88	102
LCS 880-41160/1-A	Lab Control Sample	76	107
LCSD 880-41160/2-A	Lab Control Sample Dup	80	99
MB 880-41160/5-A	Method Blank	67 S1-	103

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)
880-22110-A-1-E MS	Matrix Spike	142 S1+	112
880-22110-A-1-F MSD	Matrix Spike Duplicate	120	99
880-22190-1	PH03	119	113
880-22190-2	PH03A	117	113
LCS 880-41024/2-A	Lab Control Sample	129	120
LCSD 880-41024/3-A	Lab Control Sample Dup	129	117
MB 880-41024/1-A	Method Blank	130	127

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 880-22190-1
SDG: 03E1558139

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-41160/5-A
Matrix: Solid
Analysis Batch: 41157

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 41160

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/06/22 11:32	12/06/22 18:55	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/06/22 11:32	12/06/22 18:55	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/06/22 11:32	12/06/22 18:55	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/06/22 11:32	12/06/22 18:55	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/06/22 11:32	12/06/22 18:55	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/06/22 11:32	12/06/22 18:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*67*	*S1-*	*70 - 130*	*12/06/22 11:32*	*12/06/22 18:55*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*12/06/22 11:32*	*12/06/22 18:55*	*1*

Lab Sample ID: LCS 880-41160/1-A
Matrix: Solid
Analysis Batch: 41157

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 41160

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09296		mg/Kg		93	70 - 130		
Toluene			0.100	0.09973		mg/Kg		100	70 - 130		
Ethylbenzene			0.100	0.09287		mg/Kg		93	70 - 130		
m-Xylene & p-Xylene			0.200	0.1622		mg/Kg		81	70 - 130		
o-Xylene			0.100	0.07929		mg/Kg		79	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*76*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: LCSD 880-41160/2-A
Matrix: Solid
Analysis Batch: 41157

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 41160

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08382		mg/Kg		84	70 - 130	10	35
Toluene			0.100	0.09298		mg/Kg		93	70 - 130	7	35
Ethylbenzene			0.100	0.09005		mg/Kg		90	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1588		mg/Kg		79	70 - 130	2	35
o-Xylene			0.100	0.07789		mg/Kg		78	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 880-22190-1
SDG: 03E1558139

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

Lab Sample ID: MB 880-41024/1-A
Matrix: Solid
Analysis Batch: 41104

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 41024

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		12/05/22 11:32	12/06/22 08:55	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/05/22 11:32	12/06/22 08:55	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/05/22 11:32	12/06/22 08:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*130*		*70 - 130*	*12/05/22 11:32*	*12/06/22 08:55*	*1*
o-Terphenyl	*127*		*70 - 130*	*12/05/22 11:32*	*12/06/22 08:55*	*1*

Lab Sample ID: LCS 880-41024/2-A
Matrix: Solid
Analysis Batch: 41104

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 41024

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	840.2		mg/Kg		84	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	897.2		mg/Kg		90	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*129*		*70 - 130*
o-Terphenyl	*120*		*70 - 130*

Lab Sample ID: LCSD 880-41024/3-A
Matrix: Solid
Analysis Batch: 41104

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 41024

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	836.2		mg/Kg		84	70 - 130	0	20
Diesel Range Organics (Over C10-C28)			1000	886.7		mg/Kg		89	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*129*		*70 - 130*
o-Terphenyl	*117*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-40959/1-A
Matrix: Solid
Analysis Batch: 41085

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			12/07/22 22:10	1

QC Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 880-22190-1
SDG: 03E1558139

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-40959/2-A
Matrix: Solid
Analysis Batch: 41085

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	267.0		mg/Kg		107	90 - 110

Lab Sample ID: LCSD 880-40959/3-A
Matrix: Solid
Analysis Batch: 41085

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	267.4		mg/Kg		107	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 880-22190-1
SDG: 03E1558139

GC VOA

Analysis Batch: 41157

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22190-1	PH03	Total/NA	Solid	8021B	41160
880-22190-2	PH03A	Total/NA	Solid	8021B	41160
MB 880-41160/5-A	Method Blank	Total/NA	Solid	8021B	41160
LCS 880-41160/1-A	Lab Control Sample	Total/NA	Solid	8021B	41160
LCSD 880-41160/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	41160

Prep Batch: 41160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22190-1	PH03	Total/NA	Solid	5035	
880-22190-2	PH03A	Total/NA	Solid	5035	
MB 880-41160/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-41160/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-41160/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 41261

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22190-1	PH03	Total/NA	Solid	Total BTEX	
880-22190-2	PH03A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 41024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22190-1	PH03	Total/NA	Solid	8015NM Prep	
880-22190-2	PH03A	Total/NA	Solid	8015NM Prep	
MB 880-41024/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-41024/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-41024/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 41104

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22190-1	PH03	Total/NA	Solid	8015B NM	41024
880-22190-2	PH03A	Total/NA	Solid	8015B NM	41024
MB 880-41024/1-A	Method Blank	Total/NA	Solid	8015B NM	41024
LCS 880-41024/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	41024
LCSD 880-41024/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	41024

Analysis Batch: 41231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22190-1	PH03	Total/NA	Solid	8015 NM	
880-22190-2	PH03A	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 40959

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22190-1	PH03	Soluble	Solid	DI Leach	
880-22190-2	PH03A	Soluble	Solid	DI Leach	
MB 880-40959/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-40959/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-40959/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 880-22190-1
SDG: 03E1558139

HPLC/IC

Analysis Batch: 41085

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22190-1	PH03	Soluble	Solid	300.0	40959
880-22190-2	PH03A	Soluble	Solid	300.0	40959
MB 880-40959/1-A	Method Blank	Soluble	Solid	300.0	40959
LCS 880-40959/2-A	Lab Control Sample	Soluble	Solid	300.0	40959
LCSD 880-40959/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	40959

Lab Chronicle

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 880-22190-1
SDG: 03E1558139

Client Sample ID: PH03

Date Collected: 11/23/22 11:35
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22190-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			41160	MNR	EET MID	12/06/22 11:32
Total/NA	Analysis	8021B		1	41157	MNR	EET MID	12/07/22 00:57
Total/NA	Analysis	Total BTEX		1	41261	SM	EET MID	12/07/22 10:39
Total/NA	Analysis	8015 NM		1	41231	SM	EET MID	12/07/22 09:45
Total/NA	Prep	8015NM Prep			41024	DM	EET MID	12/05/22 11:32
Total/NA	Analysis	8015B NM		1	41104	SM	EET MID	12/06/22 19:13
Soluble	Leach	DI Leach			40959	SMC	EET MID	12/03/22 13:50
Soluble	Analysis	300.0		1	41085	CH	EET MID	12/08/22 08:26

Client Sample ID: PH03A

Date Collected: 11/23/22 11:50
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22190-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			41160	MNR	EET MID	12/06/22 11:32
Total/NA	Analysis	8021B		1	41157	MNR	EET MID	12/07/22 01:18
Total/NA	Analysis	Total BTEX		1	41261	SM	EET MID	12/07/22 10:39
Total/NA	Analysis	8015 NM		1	41231	SM	EET MID	12/07/22 09:45
Total/NA	Prep	8015NM Prep			41024	DM	EET MID	12/05/22 11:32
Total/NA	Analysis	8015B NM		1	41104	SM	EET MID	12/06/22 19:35
Soluble	Leach	DI Leach			40959	SMC	EET MID	12/03/22 13:50
Soluble	Analysis	300.0		1	41085	CH	EET MID	12/08/22 08:46

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 880-22190-1
SDG: 03E1558139

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: Ross Draw 3031

Job ID: 880-22190-1
SDG: 03E1558139

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 880-22190-1
SDG: 03E1558139

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-22190-1	PH03	Solid	11/23/22 11:35	12/01/22 11:17	1'
880-22190-2	PH03A	Solid	11/23/22 11:50	12/01/22 11:17	4'

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Environment Testing

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: 22190

www.xenco.com Page 1 of 1

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

Work Order Comments

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

Project Name	Ross Draw 3031	Turn Around	☑ Routine ☐ Rush
Project Number	03E1558139	Due Date	
Project Location	32 00075 -103 91531	TAT starts the day received by the lab if received by 4 30pm	
Sampler's Name	Kase Parker		
PO #:			

SAMPLE RECEIPT				
Temp Blank.	Yes No	Wet Ice	(Yes) No	
Samples Received Intact.	Yes No	Thermometer ID	T-NM-007	
Cooler Custody Seals.	Yes No N/A	Correction Factor		
Sample Custody Seals	Yes No N/A	Temperature Reading	3.2	
Total Containers		Corrected Temperature		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA 300.0)	TPH (8015)	BTEX (8021)
PH03	S	11/23/2022	11 35	1'	Grab/	1		x	x	x
PH03A	S	11/23/2022	11 50	4'	Grab/	1		x	x	x

ANALYSIS REQUEST — Parameters

Preservative Codes

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

Sample Comments

Incident ID
nAPP2227244441
Cost Center
1067631001
AFE

880-22190 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		12/1/22 11:17	2		
3			4		
5			6		

Revised Date 08/25/2020 Rev 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-22190-1
SDG Number: 03E1558139

Login Number: 22190
List Number: 1
Creator: Kramer, Jessica

List Source: Eurofins Midland

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.	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").	N/A	

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 5/24/2023 12:39:57 PM

JOB DESCRIPTION

Ross Draw 3031
SDG NUMBER 03C1558139

JOB NUMBER

890-4661-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

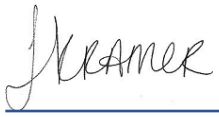
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Authorization



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5/24/2023 12:39:57 PM

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

Client: Ensolum
Project/Site: Ross Draw 3031

Laboratory Job ID: 890-4661-1
SDG: 03C1558139

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-4661-1
Project/Site: Ross Draw 3031 SDG: 03C1558139

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
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
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: Ross Draw 3031

Job ID: 890-4661-1
SDG: 03C1558139

Job ID: 890-4661-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4661-1

Receipt
The samples were received on 5/15/2023 9:36 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 2.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SW01 (890-4661-1), SW02 (890-4661-2), FS01 (890-4661-3), FS02 (890-4661-4), FS03 (890-4661-5), FS04 (890-4661-6), BH01 (890-4661-7), BH01A (890-4661-8), BH01B (890-4661-9), BH01C (890-4661-10) and BH01D (890-4661-11).

GC VOA
Method 8021B: The continuing calibration verification (CCV) associated with batch 880-53790 recovered under the lower and/or insufficient spike for CCV control limit for Benzene, Toluene, Ethylbenzene, m-Xylene & p-Xylene and o-Xylene. The samples associated with this CCV were ran within 12 hours of passing CCV; therefore, the data have been reported.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (MB 880-53606/5-A). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following samples were outside control limits: BH01 (890-4661-7) and BH01A (890-4661-8). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following samples were outside control limits: BH01 (890-4661-7) and (MB 880-53898/5-A). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-53898 and analytical batch 880-53944 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: The surrogate recovery for the blank associated with preparation batch 880-53469 and analytical batch 880-53450 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (LCSD 880-53469/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (890-4659-A-9-B). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: SW01 (890-4661-1), SW02 (890-4661-2), FS01 (890-4661-3), FS02 (890-4661-4), FS03 (890-4661-5), FS04 (890-4661-6), BH01 (890-4661-7), BH01A (890-4661-8), BH01B (890-4661-9) and BH01C (890-4661-10). 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: Ross Draw 3031

Job ID: 890-4661-1
SDG: 03C1558139

Client Sample ID: SW01

Lab Sample ID: 890-4661-1

Date Collected: 05/12/23 11:35
Matrix: Solid
Date Received: 05/15/23 09:36
Sample Depth: 0-2'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/17/23 15:10	05/19/23 19:53	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/17/23 15:10	05/19/23 19:53	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/17/23 15:10	05/19/23 19:53	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		05/17/23 15:10	05/19/23 19:53	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/17/23 15:10	05/19/23 19:53	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		05/17/23 15:10	05/19/23 19:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*05/17/23 15:10*	*05/19/23 19:53*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*05/17/23 15:10*	*05/19/23 19:53*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			05/22/23 16:14	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**108**		49.9		mg/Kg			05/17/23 12:07	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/16/23 11:47	05/17/23 01:27	1
Diesel Range Organics (Over C10-C28)	**108**		49.9		mg/Kg		05/16/23 11:47	05/17/23 01:27	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/16/23 11:47	05/17/23 01:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*05/16/23 11:47*	*05/17/23 01:27*	*1*
o-Terphenyl	*136*	*S1+*	*70 - 130*	*05/16/23 11:47*	*05/17/23 01:27*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**413**		24.9		mg/Kg			05/18/23 02:06	5

Client Sample ID: SW02

Lab Sample ID: 890-4661-2

Date Collected: 05/12/23 13:20
Matrix: Solid
Date Received: 05/15/23 09:36
Sample Depth: 0-2'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/17/23 15:10	05/19/23 20:19	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/17/23 15:10	05/19/23 20:19	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/17/23 15:10	05/19/23 20:19	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/17/23 15:10	05/19/23 20:19	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/17/23 15:10	05/19/23 20:19	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/17/23 15:10	05/19/23 20:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*05/17/23 15:10*	*05/19/23 20:19*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4661-1
SDG: 03C1558139

Client Sample ID: SW02

Lab Sample ID: 890-4661-2

Date Collected: 05/12/23 13:20
Date Received: 05/15/23 09:36
Sample Depth: 0-2'

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*05/17/23 15:10*	*05/19/23 20:19*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			05/22/23 16:14	1

Method: SW846 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			05/17/23 12:07	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/16/23 11:47	05/17/23 01:49	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/16/23 11:47	05/17/23 01:49	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/16/23 11:47	05/17/23 01:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*05/16/23 11:47*	*05/17/23 01:49*	*1*
o-Terphenyl	*138*	*S1+*	*70 - 130*	*05/16/23 11:47*	*05/17/23 01:49*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**757**		25.2	mg/Kg			05/18/23 02:22	5

Client Sample ID: FS01

Lab Sample ID: 890-4661-3

Date Collected: 05/12/23 11:30
Date Received: 05/15/23 09:36
Sample Depth: 2'

Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/17/23 15:10	05/19/23 20:45	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/17/23 15:10	05/19/23 20:45	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/17/23 15:10	05/19/23 20:45	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		05/17/23 15:10	05/19/23 20:45	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/17/23 15:10	05/19/23 20:45	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/17/23 15:10	05/19/23 20:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*127*		*70 - 130*	*05/17/23 15:10*	*05/19/23 20:45*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*05/17/23 15:10*	*05/19/23 20:45*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			05/22/23 16:14	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**187**		49.8	mg/Kg			05/17/23 12:07	1

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Client Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4661-1
SDG: 03C1558139

Client Sample ID: FS01

Lab Sample ID: 890-4661-3
Matrix: Solid
Date Collected: 05/12/23 11:30
Date Received: 05/15/23 09:36
Sample Depth: 2'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		05/16/23 11:47	05/17/23 02:10	1
Diesel Range Organics (Over C10-C28)	**187**		49.8		mg/Kg		05/16/23 11:47	05/17/23 02:10	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/16/23 11:47	05/17/23 02:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*05/16/23 11:47*	*05/17/23 02:10*	*1*
o-Terphenyl	*138*	*S1+*	*70 - 130*	*05/16/23 11:47*	*05/17/23 02:10*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1680**		25.1		mg/Kg			05/18/23 02:28	5

Client Sample ID: FS02

Lab Sample ID: 890-4661-4
Matrix: Solid
Date Collected: 05/12/23 13:35
Date Received: 05/15/23 09:36
Sample Depth: 2'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/17/23 15:10	05/19/23 21:10	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/17/23 15:10	05/19/23 21:10	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/17/23 15:10	05/19/23 21:10	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/17/23 15:10	05/19/23 21:10	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/17/23 15:10	05/19/23 21:10	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/17/23 15:10	05/19/23 21:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*05/17/23 15:10*	*05/19/23 21:10*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*05/17/23 15:10*	*05/19/23 21:10*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/22/23 16:14	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			05/17/23 12:07	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/16/23 11:47	05/17/23 02:32	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/16/23 11:47	05/17/23 02:32	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/16/23 11:47	05/17/23 02:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*05/16/23 11:47*	*05/17/23 02:32*	*1*
o-Terphenyl	*136*	*S1+*	*70 - 130*	*05/16/23 11:47*	*05/17/23 02:32*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4661-1
SDG: 03C1558139

Client Sample ID: FS02
Date Collected: 05/12/23 13:35
Date Received: 05/15/23 09:36
Sample Depth: 2'

Lab Sample ID: 890-4661-4
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	415		24.9		mg/Kg			05/18/23 02:33	5

Client Sample ID: FS03
Date Collected: 05/12/23 13:40
Date Received: 05/15/23 09:36
Sample Depth: 2'

Lab Sample ID: 890-4661-5
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/17/23 15:10	05/19/23 21:36	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/17/23 15:10	05/19/23 21:36	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/17/23 15:10	05/19/23 21:36	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/17/23 15:10	05/19/23 21:36	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/17/23 15:10	05/19/23 21:36	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/17/23 15:10	05/19/23 21:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*	*05/17/23 15:10*	*05/19/23 21:36*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*05/17/23 15:10*	*05/19/23 21:36*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/22/23 16:14	1

Method: SW846 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			05/17/23 12:07	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/16/23 11:47	05/17/23 02:53	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/16/23 11:47	05/17/23 02:53	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/16/23 11:47	05/17/23 02:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*135*	*S1+*	*70 - 130*	*05/16/23 11:47*	*05/17/23 02:53*	*1*
o-Terphenyl	*160*	*S1+*	*70 - 130*	*05/16/23 11:47*	*05/17/23 02:53*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1150		25.1		mg/Kg			05/18/23 02:38	5

Client Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4661-1
SDG: 03C1558139

Client Sample ID: FS04

Lab Sample ID: 890-4661-6
Matrix: Solid
Date Collected: 05/12/23 13:45
Date Received: 05/15/23 09:36
Sample Depth: 2'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		05/17/23 15:10	05/19/23 22:01	1
Toluene	<0.00201	U	0.00201		mg/Kg		05/17/23 15:10	05/19/23 22:01	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		05/17/23 15:10	05/19/23 22:01	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		05/17/23 15:10	05/19/23 22:01	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		05/17/23 15:10	05/19/23 22:01	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		05/17/23 15:10	05/19/23 22:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*05/17/23 15:10*	*05/19/23 22:01*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*05/17/23 15:10*	*05/19/23 22:01*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			05/22/23 16:14	1

Method: SW846 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			05/17/23 12:07	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		05/16/23 11:47	05/17/23 03:15	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/16/23 11:47	05/17/23 03:15	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/16/23 11:47	05/17/23 03:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*117*		*70 - 130*	*05/16/23 11:47*	*05/17/23 03:15*	*1*
o-Terphenyl	*142*	*S1+*	*70 - 130*	*05/16/23 11:47*	*05/17/23 03:15*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**907**		24.8		mg/Kg			05/18/23 02:55	5

Client Sample ID: BH01

Lab Sample ID: 890-4661-7
Matrix: Solid
Date Collected: 05/12/23 08:15
Date Received: 05/15/23 09:36
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.00747**		0.00200		mg/Kg		05/17/23 15:10	05/19/23 22:27	1
Toluene	<0.100	U	0.100		mg/Kg		05/22/23 15:02	05/23/23 22:39	50
Ethylbenzene	**0.159**		0.00200		mg/Kg		05/17/23 15:10	05/19/23 22:27	1
m-Xylene & p-Xylene	**2.95**		0.201		mg/Kg		05/22/23 15:02	05/23/23 22:39	50
o-Xylene	**1.32**		0.100		mg/Kg		05/22/23 15:02	05/23/23 22:39	50
Xylenes, Total	**4.27**		0.201		mg/Kg		05/22/23 15:02	05/23/23 22:39	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*515*	*S1+*	*70 - 130*	*05/17/23 15:10*	*05/19/23 22:27*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4661-1
SDG: 03C1558139

Client Sample ID: BH01

Lab Sample ID: 890-4661-7
Matrix: Solid
Date Collected: 05/12/23 08:15
Date Received: 05/15/23 09:36
Sample Depth: 0.5'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*05/17/23 15:10*	*05/19/23 22:27*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**4.44**		0.201	mg/Kg			05/22/23 16:14	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**5020**		49.8	mg/Kg			05/17/23 12:07	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**914**		49.8	mg/Kg		05/16/23 11:47	05/17/23 03:36	1
Diesel Range Organics (Over C10-C28)	**3710**		49.8	mg/Kg		05/16/23 11:47	05/17/23 03:36	1
Oil Range Organics (Over C28-C36)	**393**		49.8	mg/Kg		05/16/23 11:47	05/17/23 03:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*143*	*S1+*	*70 - 130*	*05/16/23 11:47*	*05/17/23 03:36*	*1*
o-Terphenyl	*137*	*S1+*	*70 - 130*	*05/16/23 11:47*	*05/17/23 03:36*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**635**		4.96	mg/Kg			05/18/23 03:00	1

Client Sample ID: BH01A

Lab Sample ID: 890-4661-8
Matrix: Solid
Date Collected: 05/12/23 08:20
Date Received: 05/15/23 09:36
Sample Depth: 1.0'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/17/23 15:10	05/19/23 22:52	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/17/23 15:10	05/19/23 22:52	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/17/23 15:10	05/19/23 22:52	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/17/23 15:10	05/19/23 22:52	1
o-Xylene	**0.0448**		0.00199	mg/Kg		05/17/23 15:10	05/19/23 22:52	1
Xylenes, Total	**0.0448**		0.00398	mg/Kg		05/17/23 15:10	05/19/23 22:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*136*	*S1+*	*70 - 130*	*05/17/23 15:10*	*05/19/23 22:52*	*1*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*	*05/17/23 15:10*	*05/19/23 22:52*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0448**		0.00398	mg/Kg			05/22/23 16:14	1

Client Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4661-1
SDG: 03C1558139

Client Sample ID: BH01A

Lab Sample ID: 890-4661-8
Matrix: Solid
Date Collected: 05/12/23 08:20
Date Received: 05/15/23 09:36
Sample Depth: 1.0'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**115**		49.9		mg/Kg			05/17/23 12:07	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/16/23 11:47	05/17/23 03:58	1
Diesel Range Organics (Over C10-C28)	**115**		49.9		mg/Kg		05/16/23 11:47	05/17/23 03:58	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/16/23 11:47	05/17/23 03:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*114*		*70 - 130*	*05/16/23 11:47*	*05/17/23 03:58*	*1*
o-Terphenyl	*141*	*S1+*	*70 - 130*	*05/16/23 11:47*	*05/17/23 03:58*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**684**		25.3		mg/Kg			05/18/23 03:05	5

Client Sample ID: BH01B

Lab Sample ID: 890-4661-9
Matrix: Solid
Date Collected: 05/12/23 08:25
Date Received: 05/15/23 09:36
Sample Depth: 2.0'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		05/17/23 15:10	05/19/23 23:18	1
Toluene	<0.00198	U	0.00198		mg/Kg		05/17/23 15:10	05/19/23 23:18	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		05/17/23 15:10	05/19/23 23:18	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		05/17/23 15:10	05/19/23 23:18	1
o-Xylene	**0.0164**		0.00198		mg/Kg		05/17/23 15:10	05/19/23 23:18	1
Xylenes, Total	**0.0164**		0.00396		mg/Kg		05/17/23 15:10	05/19/23 23:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*05/17/23 15:10*	*05/19/23 23:18*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*05/17/23 15:10*	*05/19/23 23:18*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0164**		0.00396		mg/Kg			05/22/23 16:14	1

Method: SW846 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			05/17/23 12:07	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		05/16/23 11:47	05/17/23 04:20	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/16/23 11:47	05/17/23 04:20	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/16/23 11:47	05/17/23 04:20	1

Client Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4661-1
SDG: 03C1558139

Client Sample ID: BH01B

Date Collected: 05/12/23 08:25
Date Received: 05/15/23 09:36
Sample Depth: 2.0'

Lab Sample ID: 890-4661-9
Matrix: Solid

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*05/16/23 11:47*	*05/17/23 04:20*	*1*
o-Terphenyl	*142*	*S1+*	*70 - 130*	*05/16/23 11:47*	*05/17/23 04:20*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**210**		5.05	mg/Kg			05/18/23 03:11	1

Client Sample ID: BH01C

Date Collected: 05/12/23 08:50
Date Received: 05/15/23 09:36
Sample Depth: 3.0'

Lab Sample ID: 890-4661-10
Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/17/23 15:10	05/19/23 23:43	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/17/23 15:10	05/19/23 23:43	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/17/23 15:10	05/19/23 23:43	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/17/23 15:10	05/19/23 23:43	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/17/23 15:10	05/19/23 23:43	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/17/23 15:10	05/19/23 23:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*	*05/17/23 15:10*	*05/19/23 23:43*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*05/17/23 15:10*	*05/19/23 23:43*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			05/22/23 16:14	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			05/17/23 12:07	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/16/23 11:47	05/17/23 04:41	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/16/23 11:47	05/17/23 04:41	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/16/23 11:47	05/17/23 04:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*124*		*70 - 130*	*05/16/23 11:47*	*05/17/23 04:41*	*1*
o-Terphenyl	*147*	*S1+*	*70 - 130*	*05/16/23 11:47*	*05/17/23 04:41*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**134**		4.98	mg/Kg			05/18/23 08:47	1

Surrogate Summary

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4661-1
SDG: 03C1558139

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)
880-28626-A-1-D MS	Matrix Spike	110	105
880-28626-A-1-E MSD	Matrix Spike Duplicate	108	87
890-4661-1	SW01	105	84
890-4661-1 MS	SW01	108	90
890-4661-1 MSD	SW01	110	114
890-4661-2	SW02	115	98
890-4661-3	FS01	127	99
890-4661-4	FS02	109	98
890-4661-5	FS03	125	91
890-4661-6	FS04	114	95
890-4661-7	BH01	515 S1+	90
890-4661-8	BH01A	136 S1+	108
890-4661-9	BH01B	118	96
890-4661-10	BH01C	125	98
LCS 880-53606/1-A	Lab Control Sample	101	108
LCS 880-53898/1-A	Lab Control Sample	107	104
LCSD 880-53606/2-A	Lab Control Sample Dup	108	115
LCSD 880-53898/2-A	Lab Control Sample Dup	111	88
MB 880-53606/5-A	Method Blank	61 S1-	87
MB 880-53898/5-A	Method Blank	66 S1-	99
MB 880-53946/5-A	Method Blank	71	80

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)
890-4659-A-9-C MS	Matrix Spike	116	128
890-4659-A-9-D MSD	Matrix Spike Duplicate	112	127
890-4661-1	SW01	111	136 S1+
890-4661-2	SW02	113	138 S1+
890-4661-3	FS01	112	138 S1+
890-4661-4	FS02	111	136 S1+
890-4661-5	FS03	135 S1+	160 S1+
890-4661-6	FS04	117	142 S1+
890-4661-7	BH01	143 S1+	137 S1+
890-4661-8	BH01A	114	141 S1+
890-4661-9	BH01B	113	142 S1+
890-4661-10	BH01C	124	147 S1+
LCS 880-53469/2-A	Lab Control Sample	93	117
LCSD 880-53469/3-A	Lab Control Sample Dup	110	135 S1+
MB 880-53469/1-A	Method Blank	164 S1+	211 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4661-1
SDG: 03C1558139

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-53606/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 53790 — **Prep Batch: 53606**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/17/23 15:10	05/19/23 19:27	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/17/23 15:10	05/19/23 19:27	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/17/23 15:10	05/19/23 19:27	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/17/23 15:10	05/19/23 19:27	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/17/23 15:10	05/19/23 19:27	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/17/23 15:10	05/19/23 19:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*61*	*S1-*	*70 - 130*	*05/17/23 15:10*	*05/19/23 19:27*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*05/17/23 15:10*	*05/19/23 19:27*	*1*

Lab Sample ID: LCS 880-53606/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 53790 — **Prep Batch: 53606**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1179		mg/Kg		118	70 - 130		
Toluene			0.100	0.1092		mg/Kg		109	70 - 130		
Ethylbenzene			0.100	0.1107		mg/Kg		111	70 - 130		
m-Xylene & p-Xylene			0.200	0.2324		mg/Kg		116	70 - 130		
o-Xylene			0.100	0.1120		mg/Kg		112	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: LCSD 880-53606/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 53790 — **Prep Batch: 53606**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1249		mg/Kg		125	70 - 130	6	35
Toluene			0.100	0.1117		mg/Kg		112	70 - 130	2	35
Ethylbenzene			0.100	0.1142		mg/Kg		114	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.2417		mg/Kg		121	70 - 130	4	35
o-Xylene			0.100	0.1177		mg/Kg		118	70 - 130	5	35

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

Lab Sample ID: 890-4661-1 MS — **Client Sample ID: SW01**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 53790 — **Prep Batch: 53606**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U	0.0998	0.1031		mg/Kg		103	70 - 130		
Toluene	<0.00200	U	0.0998	0.09288		mg/Kg		93	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4661-1
SDG: 03C1558139

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

Lab Sample ID: 890-4661-1 MS
Matrix: Solid
Analysis Batch: 53790

Client Sample ID: SW01
Prep Type: Total/NA
Prep Batch: 53606

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.0998	0.08741		mg/Kg		88	70 - 130
m-Xylene & p-Xylene	<0.00401	U	0.200	0.1810		mg/Kg		91	70 - 130
o-Xylene	<0.00200	U	0.0998	0.08740		mg/Kg		88	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*

Lab Sample ID: 890-4661-1 MSD
Matrix: Solid
Analysis Batch: 53790

Client Sample ID: SW01
Prep Type: Total/NA
Prep Batch: 53606

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.100	0.1223		mg/Kg		122	70 - 130	17	35
Toluene	<0.00200	U	0.100	0.1074		mg/Kg		107	70 - 130	14	35
Ethylbenzene	<0.00200	U	0.100	0.1029		mg/Kg		103	70 - 130	16	35
m-Xylene & p-Xylene	<0.00401	U	0.200	0.2112		mg/Kg		105	70 - 130	15	35
o-Xylene	<0.00200	U	0.100	0.1041		mg/Kg		104	70 - 130	17	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*

Lab Sample ID: MB 880-53898/5-A
Matrix: Solid
Analysis Batch: 53944

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53898

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/22/23 15:02	05/23/23 21:56	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/22/23 15:02	05/23/23 21:56	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/22/23 15:02	05/23/23 21:56	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/22/23 15:02	05/23/23 21:56	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/22/23 15:02	05/23/23 21:56	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/22/23 15:02	05/23/23 21:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*66*	*S1-*	*70 - 130*	*05/22/23 15:02*	*05/23/23 21:56*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*05/22/23 15:02*	*05/23/23 21:56*	*1*

Lab Sample ID: LCS 880-53898/1-A
Matrix: Solid
Analysis Batch: 53944

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53898

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1307	*+	mg/Kg		131	70 - 130
Toluene	0.100	0.1133		mg/Kg		113	70 - 130
Ethylbenzene	0.100	0.1146		mg/Kg		115	70 - 130
m-Xylene & p-Xylene	0.200	0.2358		mg/Kg		118	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4661-1
SDG: 03C1558139

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

Lab Sample ID: LCS 880-53898/1-A
Matrix: Solid
Analysis Batch: 53944

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53898

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
o-Xylene			0.100	0.1244		mg/Kg		124	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 880-53898/2-A
Matrix: Solid
Analysis Batch: 53944

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53898

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1290		mg/Kg		129	70 - 130	1	35
Toluene			0.100	0.1103		mg/Kg		110	70 - 130	3	35
Ethylbenzene			0.100	0.1140		mg/Kg		114	70 - 130	0	35
m-Xylene & p-Xylene			0.200	0.2363		mg/Kg		118	70 - 130	0	35
o-Xylene			0.100	0.1228		mg/Kg		123	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*

Lab Sample ID: 880-28626-A-1-D MS
Matrix: Solid
Analysis Batch: 53944

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 53898

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U *+	0.0998	0.1106		mg/Kg		111	70 - 130		
Toluene	<0.00201	U	0.0998	0.09312		mg/Kg		93	70 - 130		
Ethylbenzene	<0.00201	U	0.0998	0.09424		mg/Kg		94	70 - 130		
m-Xylene & p-Xylene	<0.00402	U	0.200	0.1949		mg/Kg		98	70 - 130		
o-Xylene	<0.00201	U	0.0998	0.09996		mg/Kg		100	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: 880-28626-A-1-E MSD
Matrix: Solid
Analysis Batch: 53944

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 53898

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	0.1136		mg/Kg		113	70 - 130	3	35
Toluene	<0.00201	U	0.100	0.1011		mg/Kg		101	70 - 130	8	35
Ethylbenzene	<0.00201	U	0.100	0.1009		mg/Kg		101	70 - 130	7	35
m-Xylene & p-Xylene	<0.00402	U	0.200	0.2066		mg/Kg		103	70 - 130	6	35
o-Xylene	<0.00201	U	0.100	0.1049		mg/Kg		105	70 - 130	5	35

QC Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4661-1
SDG: 03C1558139

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

Lab Sample ID: 880-28626-A-1-E MSD
Matrix: Solid
Analysis Batch: 53944

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 53898

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*

Lab Sample ID: MB 880-53946/5-A
Matrix: Solid
Analysis Batch: 53944

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53946

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/23/23 08:48	05/23/23 11:20	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/23/23 08:48	05/23/23 11:20	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/23/23 08:48	05/23/23 11:20	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/23/23 08:48	05/23/23 11:20	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/23/23 08:48	05/23/23 11:20	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/23/23 08:48	05/23/23 11:20	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*71*		*70 - 130*	*05/23/23 08:48*	*05/23/23 11:20*	*1*
1,4-Difluorobenzene (Surr)	*80*		*70 - 130*	*05/23/23 08:48*	*05/23/23 11:20*	*1*

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

Lab Sample ID: MB 880-53469/1-A
Matrix: Solid
Analysis Batch: 53450

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53469

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		05/16/23 11:47	05/16/23 19:50	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/16/23 11:47	05/16/23 19:50	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/16/23 11:47	05/16/23 19:50	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*164*	*S1+*	*70 - 130*	*05/16/23 11:47*	*05/16/23 19:50*	*1*
o-Terphenyl	*211*	*S1+*	*70 - 130*	*05/16/23 11:47*	*05/16/23 19:50*	*1*

Lab Sample ID: LCS 880-53469/2-A
Matrix: Solid
Analysis Batch: 53450

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53469

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	918.7		mg/Kg		92	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	933.5		mg/Kg		93	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	*93*		*70 - 130*
o-Terphenyl	*117*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4661-1
SDG: 03C1558139

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

Lab Sample ID: LCSD 880-53469/3-A
Matrix: Solid
Analysis Batch: 53450

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53469

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	973.4		mg/Kg		97	70 - 130	6	20
Diesel Range Organics (Over C10-C28)			1000	971.2		mg/Kg		97	70 - 130	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*110*		*70 - 130*
o-Terphenyl	*135*	*S1+*	*70 - 130*

Lab Sample ID: 890-4659-A-9-C MS
Matrix: Solid
Analysis Batch: 53450

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 53469

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	997	952.0		mg/Kg		93	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	997	1087		mg/Kg		106	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*116*		*70 - 130*
o-Terphenyl	*128*		*70 - 130*

Lab Sample ID: 890-4659-A-9-D MSD
Matrix: Solid
Analysis Batch: 53450

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 53469

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	907.1		mg/Kg		88	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	1064		mg/Kg		104	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*112*		*70 - 130*
o-Terphenyl	*127*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-53473/1-A
Matrix: Solid
Analysis Batch: 53587

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			05/18/23 01:50	1

QC Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4661-1
SDG: 03C1558139

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-53473/2-A
Matrix: Solid
Analysis Batch: 53587

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	263.3		mg/Kg		105	90 - 110		

Lab Sample ID: LCSD 880-53473/3-A
Matrix: Solid
Analysis Batch: 53587

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	264.6		mg/Kg		106	90 - 110	0	20

Lab Sample ID: 890-4661-1 MS
Matrix: Solid
Analysis Batch: 53587

Client Sample ID: SW01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	413		1240	1755		mg/Kg		108	90 - 110		

Lab Sample ID: 890-4661-1 MSD
Matrix: Solid
Analysis Batch: 53587

Client Sample ID: SW01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	413		1240	1756		mg/Kg		108	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4661-1
SDG: 03C1558139

GC VOA

Prep Batch: 53606

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4661-1	SW01	Total/NA	Solid	5035	
890-4661-2	SW02	Total/NA	Solid	5035	
890-4661-3	FS01	Total/NA	Solid	5035	
890-4661-4	FS02	Total/NA	Solid	5035	
890-4661-5	FS03	Total/NA	Solid	5035	
890-4661-6	FS04	Total/NA	Solid	5035	
890-4661-7	BH01	Total/NA	Solid	5035	
890-4661-8	BH01A	Total/NA	Solid	5035	
890-4661-9	BH01B	Total/NA	Solid	5035	
890-4661-10	BH01C	Total/NA	Solid	5035	
MB 880-53606/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-53606/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-53606/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4661-1 MS	SW01	Total/NA	Solid	5035	
890-4661-1 MSD	SW01	Total/NA	Solid	5035	

Analysis Batch: 53790

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4661-1	SW01	Total/NA	Solid	8021B	53606
890-4661-2	SW02	Total/NA	Solid	8021B	53606
890-4661-3	FS01	Total/NA	Solid	8021B	53606
890-4661-4	FS02	Total/NA	Solid	8021B	53606
890-4661-5	FS03	Total/NA	Solid	8021B	53606
890-4661-6	FS04	Total/NA	Solid	8021B	53606
890-4661-7	BH01	Total/NA	Solid	8021B	53606
890-4661-8	BH01A	Total/NA	Solid	8021B	53606
890-4661-9	BH01B	Total/NA	Solid	8021B	53606
890-4661-10	BH01C	Total/NA	Solid	8021B	53606
MB 880-53606/5-A	Method Blank	Total/NA	Solid	8021B	53606
LCS 880-53606/1-A	Lab Control Sample	Total/NA	Solid	8021B	53606
LCSD 880-53606/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	53606
890-4661-1 MS	SW01	Total/NA	Solid	8021B	53606
890-4661-1 MSD	SW01	Total/NA	Solid	8021B	53606

Prep Batch: 53898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4661-7	BH01	Total/NA	Solid	5035	
MB 880-53898/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-53898/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-53898/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-28626-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
880-28626-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 53917

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4661-1	SW01	Total/NA	Solid	Total BTEX	
890-4661-2	SW02	Total/NA	Solid	Total BTEX	
890-4661-3	FS01	Total/NA	Solid	Total BTEX	
890-4661-4	FS02	Total/NA	Solid	Total BTEX	
890-4661-5	FS03	Total/NA	Solid	Total BTEX	
890-4661-6	FS04	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4661-1
SDG: 03C1558139

GC VOA (Continued)

Analysis Batch: 53917 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4661-7	BH01	Total/NA	Solid	Total BTEX	
890-4661-8	BH01A	Total/NA	Solid	Total BTEX	
890-4661-9	BH01B	Total/NA	Solid	Total BTEX	
890-4661-10	BH01C	Total/NA	Solid	Total BTEX	

Analysis Batch: 53944

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4661-7	BH01	Total/NA	Solid	8021B	53898
MB 880-53898/5-A	Method Blank	Total/NA	Solid	8021B	53898
MB 880-53946/5-A	Method Blank	Total/NA	Solid	8021B	53946
LCS 880-53898/1-A	Lab Control Sample	Total/NA	Solid	8021B	53898
LCSD 880-53898/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	53898
880-28626-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	53898
880-28626-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	53898

Prep Batch: 53946

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-53946/5-A	Method Blank	Total/NA	Solid	5035	

GC Semi VOA

Analysis Batch: 53450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4661-1	SW01	Total/NA	Solid	8015B NM	53469
890-4661-2	SW02	Total/NA	Solid	8015B NM	53469
890-4661-3	FS01	Total/NA	Solid	8015B NM	53469
890-4661-4	FS02	Total/NA	Solid	8015B NM	53469
890-4661-5	FS03	Total/NA	Solid	8015B NM	53469
890-4661-6	FS04	Total/NA	Solid	8015B NM	53469
890-4661-7	BH01	Total/NA	Solid	8015B NM	53469
890-4661-8	BH01A	Total/NA	Solid	8015B NM	53469
890-4661-9	BH01B	Total/NA	Solid	8015B NM	53469
890-4661-10	BH01C	Total/NA	Solid	8015B NM	53469
MB 880-53469/1-A	Method Blank	Total/NA	Solid	8015B NM	53469
LCS 880-53469/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	53469
LCSD 880-53469/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	53469
890-4659-A-9-C MS	Matrix Spike	Total/NA	Solid	8015B NM	53469
890-4659-A-9-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	53469

Prep Batch: 53469

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4661-1	SW01	Total/NA	Solid	8015NM Prep	
890-4661-2	SW02	Total/NA	Solid	8015NM Prep	
890-4661-3	FS01	Total/NA	Solid	8015NM Prep	
890-4661-4	FS02	Total/NA	Solid	8015NM Prep	
890-4661-5	FS03	Total/NA	Solid	8015NM Prep	
890-4661-6	FS04	Total/NA	Solid	8015NM Prep	
890-4661-7	BH01	Total/NA	Solid	8015NM Prep	
890-4661-8	BH01A	Total/NA	Solid	8015NM Prep	
890-4661-9	BH01B	Total/NA	Solid	8015NM Prep	
890-4661-10	BH01C	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4661-1
SDG: 03C1558139

GC Semi VOA (Continued)

Prep Batch: 53469 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-53469/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-53469/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-53469/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4659-A-9-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4659-A-9-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 53596

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4661-1	SW01	Total/NA	Solid	8015 NM	
890-4661-2	SW02	Total/NA	Solid	8015 NM	
890-4661-3	FS01	Total/NA	Solid	8015 NM	
890-4661-4	FS02	Total/NA	Solid	8015 NM	
890-4661-5	FS03	Total/NA	Solid	8015 NM	
890-4661-6	FS04	Total/NA	Solid	8015 NM	
890-4661-7	BH01	Total/NA	Solid	8015 NM	
890-4661-8	BH01A	Total/NA	Solid	8015 NM	
890-4661-9	BH01B	Total/NA	Solid	8015 NM	
890-4661-10	BH01C	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 53473

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4661-1	SW01	Soluble	Solid	DI Leach	
890-4661-2	SW02	Soluble	Solid	DI Leach	
890-4661-3	FS01	Soluble	Solid	DI Leach	
890-4661-4	FS02	Soluble	Solid	DI Leach	
890-4661-5	FS03	Soluble	Solid	DI Leach	
890-4661-6	FS04	Soluble	Solid	DI Leach	
890-4661-7	BH01	Soluble	Solid	DI Leach	
890-4661-8	BH01A	Soluble	Solid	DI Leach	
890-4661-9	BH01B	Soluble	Solid	DI Leach	
890-4661-10	BH01C	Soluble	Solid	DI Leach	
MB 880-53473/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-53473/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-53473/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4661-1 MS	SW01	Soluble	Solid	DI Leach	
890-4661-1 MSD	SW01	Soluble	Solid	DI Leach	

Analysis Batch: 53587

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4661-1	SW01	Soluble	Solid	300.0	53473
890-4661-2	SW02	Soluble	Solid	300.0	53473
890-4661-3	FS01	Soluble	Solid	300.0	53473
890-4661-4	FS02	Soluble	Solid	300.0	53473
890-4661-5	FS03	Soluble	Solid	300.0	53473
890-4661-6	FS04	Soluble	Solid	300.0	53473
890-4661-7	BH01	Soluble	Solid	300.0	53473
890-4661-8	BH01A	Soluble	Solid	300.0	53473
890-4661-9	BH01B	Soluble	Solid	300.0	53473
890-4661-10	BH01C	Soluble	Solid	300.0	53473

QC Association Summary

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4661-1
SDG: 03C1558139

HPLC/IC (Continued)

Analysis Batch: 53587 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-53473/1-A	Method Blank	Soluble	Solid	300.0	53473
LCS 880-53473/2-A	Lab Control Sample	Soluble	Solid	300.0	53473
LCSD 880-53473/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	53473
890-4661-1 MS	SW01	Soluble	Solid	300.0	53473
890-4661-1 MSD	SW01	Soluble	Solid	300.0	53473

Lab Chronicle

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4661-1
SDG: 03C1558139

Client Sample ID: SW01
Date Collected: 05/12/23 11:35
Date Received: 05/15/23 09:36

Lab Sample ID: 890-4661-1
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	53606	05/17/23 15:10	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53790	05/19/23 19:53	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53917	05/22/23 16:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			53596	05/17/23 12:07	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	53469	05/16/23 11:47	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53450	05/17/23 01:27	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	53473	05/16/23 11:58	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	53587	05/18/23 02:06	CH	EET MID

Client Sample ID: SW02
Date Collected: 05/12/23 13:20
Date Received: 05/15/23 09:36

Lab Sample ID: 890-4661-2
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	53606	05/17/23 15:10	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53790	05/19/23 20:19	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53917	05/22/23 16:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			53596	05/17/23 12:07	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	53469	05/16/23 11:47	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53450	05/17/23 01:49	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	53473	05/16/23 11:58	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	53587	05/18/23 02:22	CH	EET MID

Client Sample ID: FS01
Date Collected: 05/12/23 11:30
Date Received: 05/15/23 09:36

Lab Sample ID: 890-4661-3
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	53606	05/17/23 15:10	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53790	05/19/23 20:45	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53917	05/22/23 16:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			53596	05/17/23 12:07	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	53469	05/16/23 11:47	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53450	05/17/23 02:10	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	53473	05/16/23 11:58	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	53587	05/18/23 02:28	CH	EET MID

Client Sample ID: FS02
Date Collected: 05/12/23 13:35
Date Received: 05/15/23 09:36

Lab Sample ID: 890-4661-4
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	53606	05/17/23 15:10	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53790	05/19/23 21:10	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53917	05/22/23 16:14	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4661-1
SDG: 03C1558139

Client Sample ID: FS02
Date Collected: 05/12/23 13:35
Date Received: 05/15/23 09:36

Lab Sample ID: 890-4661-4
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			53596	05/17/23 12:07	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	53469	05/16/23 11:47	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53450	05/17/23 02:32	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	53473	05/16/23 11:58	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	53587	05/18/23 02:33	CH	EET MID

Client Sample ID: FS03
Date Collected: 05/12/23 13:40
Date Received: 05/15/23 09:36

Lab Sample ID: 890-4661-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	53606	05/17/23 15:10	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53790	05/19/23 21:36	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53917	05/22/23 16:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			53596	05/17/23 12:07	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	53469	05/16/23 11:47	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53450	05/17/23 02:53	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	53473	05/16/23 11:58	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	53587	05/18/23 02:38	CH	EET MID

Client Sample ID: FS04
Date Collected: 05/12/23 13:45
Date Received: 05/15/23 09:36

Lab Sample ID: 890-4661-6
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			4.97 g	5 mL	53606	05/17/23 15:10	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53790	05/19/23 22:01	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53917	05/22/23 16:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			53596	05/17/23 12:07	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	53469	05/16/23 11:47	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53450	05/17/23 03:15	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	53473	05/16/23 11:58	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	53587	05/18/23 02:55	CH	EET MID

Client Sample ID: BH01
Date Collected: 05/12/23 08:15
Date Received: 05/15/23 09:36

Lab Sample ID: 890-4661-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	53898	05/22/23 15:02	MNR	EET MID
Total/NA	Analysis	8021B		50	5 mL	5 mL	53944	05/23/23 22:39	MNR	EET MID
Total/NA	Prep	5035			4.99 g	5 mL	53606	05/17/23 15:10	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53790	05/19/23 22:27	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53917	05/22/23 16:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			53596	05/17/23 12:07	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4661-1
SDG: 03C1558139

Client Sample ID: BH01
Date Collected: 05/12/23 08:15
Date Received: 05/15/23 09:36

Lab Sample ID: 890-4661-7
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	8015NM Prep			10.04 g	10 mL	53469	05/16/23 11:47	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53450	05/17/23 03:36	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	53473	05/16/23 11:58	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53587	05/18/23 03:00	CH	EET MID

Client Sample ID: BH01A
Date Collected: 05/12/23 08:20
Date Received: 05/15/23 09:36

Lab Sample ID: 890-4661-8
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			5.02 g	5 mL	53606	05/17/23 15:10	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53790	05/19/23 22:52	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53917	05/22/23 16:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			53596	05/17/23 12:07	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	53469	05/16/23 11:47	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53450	05/17/23 03:58	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	53473	05/16/23 11:58	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	53587	05/18/23 03:05	CH	EET MID

Client Sample ID: BH01B
Date Collected: 05/12/23 08:25
Date Received: 05/15/23 09:36

Lab Sample ID: 890-4661-9
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			5.05 g	5 mL	53606	05/17/23 15:10	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53790	05/19/23 23:18	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53917	05/22/23 16:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			53596	05/17/23 12:07	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	53469	05/16/23 11:47	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53450	05/17/23 04:20	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	53473	05/16/23 11:58	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53587	05/18/23 03:11	CH	EET MID

Client Sample ID: BH01C
Date Collected: 05/12/23 08:50
Date Received: 05/15/23 09:36

Lab Sample ID: 890-4661-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	53606	05/17/23 15:10	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53790	05/19/23 23:43	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53917	05/22/23 16:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			53596	05/17/23 12:07	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	53469	05/16/23 11:47	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53450	05/17/23 04:41	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4661-1
SDG: 03C1558139

Client Sample ID: BH01C
Date Collected: 05/12/23 08:50
Date Received: 05/15/23 09:36

Lab Sample ID: 890-4661-10
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	53473	05/16/23 11:58	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53587	05/18/23 08:47	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4661-1
SDG: 03C1558139

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4661-1
SDG: 03C1558139

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4661-1
SDG: 03C1558139

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4661-1	SW01	Solid	05/12/23 11:35	05/15/23 09:36	0-2'
890-4661-2	SW02	Solid	05/12/23 13:20	05/15/23 09:36	0-2'
890-4661-3	FS01	Solid	05/12/23 11:30	05/15/23 09:36	2'
890-4661-4	FS02	Solid	05/12/23 13:35	05/15/23 09:36	2'
890-4661-5	FS03	Solid	05/12/23 13:40	05/15/23 09:36	2'
890-4661-6	FS04	Solid	05/12/23 13:45	05/15/23 09:36	2'
890-4661-7	BH01	Solid	05/12/23 08:15	05/15/23 09:36	0.5'
890-4661-8	BH01A	Solid	05/12/23 08:20	05/15/23 09:36	1.0'
890-4661-9	BH01B	Solid	05/12/23 08:25	05/15/23 09:36	2.0'
890-4661-10	BH01C	Solid	05/12/23 08:50	05/15/23 09:36	3.0'

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy
Address:	3122 National Parks HWY	Address:	3104 E. Greene St.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	9703194364	Email:	Garrett.Green@ExxonMobile.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:	ROSS DRAW 3031	Turn Around	
Project Number:	03C 1558139	☒ Routine ☐ Rush	
Project Location:	32.00075, -103.91531	Due Date:	5 days
Sampler's Name:	Mariana O'Dell	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	TM-007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	2.2
Total Containers:		Corrected Temperature:	2.0

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Chlorides	TPH	BTEX	Sample Comments
SW01	S	05/12/23	11:35	0-2'	C	1	X	X	X	API:
SW02			13:20	0-2'	C					30-015-45121
FS01			11:30	2'	C					
FS02			13:35	2'	C					Incident #:
FS03			13:40	2'	C					nAPP2227244441
FS04			13:45	2'	C					NAPP2300442748
BH01			8:15	0.5'	G					
BH01A			8:20	1.0'	G					tmorrissey@ensolum.com
BH01B			8:25	2.0'	G					
BH01C			8:50	3.0'	G					

890-4661 Chain of Custody

Preservative Codes

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			2		
3	Amanda Stepp	5/15/23 0930			
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:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Greene St.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	9703194310 4	Email:	Garrett.Green@ExxonMobile.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:	ROSS DRAW 3031	Turn Around	
Project Number:	03C1558139	☒ Routine ☐ Rush	
Project Location:	32.00075, -103.91531	Due Date: 5 days	
Sampler's Name:	Mariana O'Dell	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:	91	
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	TPH	BTEX	ANALYSIS REQUEST	Sample Comments
BH01D	S	05/12/23	8:55	3.5'	G	1		X	X	X	* put on hold *	API: 30-015-45121
												Incident #: nAPP2227244441 NAPP2300442748
												tmorrissey@ensolum.com

Parameters

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	Amanda Stafford	5/15/23 0936	4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4661-1
SDG Number: 03C1558139

Login Number: 4661
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4661-1
SDG Number: 03C1558139

Login Number: 4661
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 05/16/23 10:43 AM

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

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 5/22/2023 4:58:12 PM

JOB DESCRIPTION

Ross Draw 3031
SDG NUMBER 03C1558139

JOB NUMBER

890-4670-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

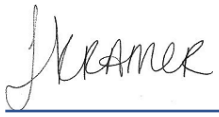
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Authorization



Generated
5/22/2023 4:58:12 PM

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

Client: Ensolum
Project/Site: Ross Draw 3031

Laboratory Job ID: 890-4670-1
SDG: 03C1558139

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4670-1
SDG: 03C1558139

Qualifiers

GC 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.

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4670-1
SDG: 03C1558139

Job ID: 890-4670-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4670-1

Receipt
The samples were received on 5/16/2023 10:47 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.6°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: FS05 (890-4670-1), SW03 (890-4670-2), SW04 (890-4670-3), FS06 (890-4670-4), SW05 (890-4670-5) and SW06 (890-4670-6).

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: SW03 (890-4670-2), SW05 (890-4670-5) and (CCV 880-53724/52). 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: (890-4678-A-1-B MSD). 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: SW04 (890-4670-3). 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.

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-53601 and analytical batch 880-53548 was outside the upper control limits.

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-53630 and analytical batch 880-53625 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (880-28483-A-33-B). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: SW06 (890-4670-6). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-53630 and analytical batch 880-53625 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

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: Ross Draw 3031

Job ID: 890-4670-1
SDG: 03C1558139

Client Sample ID: FS05

Lab Sample ID: 890-4670-1
Matrix: Solid
Date Collected: 05/15/23 12:55
Date Received: 05/16/23 10:47
Sample Depth: 3'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/19/23 11:17	05/20/23 03:22	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/19/23 11:17	05/20/23 03:22	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/19/23 11:17	05/20/23 03:22	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/19/23 11:17	05/20/23 03:22	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/19/23 11:17	05/20/23 03:22	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/19/23 11:17	05/20/23 03:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*05/19/23 11:17*	*05/20/23 03:22*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*05/19/23 11:17*	*05/20/23 03:22*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/22/23 15:52	1

Method: SW846 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			05/18/23 09:29	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/17/23 12:38	05/17/23 21:09	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/17/23 12:38	05/17/23 21:09	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/17/23 12:38	05/17/23 21:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*05/17/23 12:38*	*05/17/23 21:09*	*1*
o-Terphenyl	*101*		*70 - 130*	*05/17/23 12:38*	*05/17/23 21:09*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**71.6**		4.96		mg/Kg			05/19/23 01:39	1

Client Sample ID: SW03

Lab Sample ID: 890-4670-2
Matrix: Solid
Date Collected: 05/15/23 13:00
Date Received: 05/16/23 10:47
Sample Depth: 0-3'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/19/23 11:17	05/20/23 03:43	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/19/23 11:17	05/20/23 03:43	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/19/23 11:17	05/20/23 03:43	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/19/23 11:17	05/20/23 03:43	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/19/23 11:17	05/20/23 03:43	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/19/23 11:17	05/20/23 03:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*147*	*S1+*	*70 - 130*	*05/19/23 11:17*	*05/20/23 03:43*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4670-1
SDG: 03C1558139

Client Sample ID: SW03

Lab Sample ID: 890-4670-2
Matrix: Solid
Date Collected: 05/15/23 13:00
Date Received: 05/16/23 10:47
Sample Depth: 0-3'

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*	*05/19/23 11:17*	*05/20/23 03:43*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			05/22/23 15:52	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**404**		50.0	mg/Kg			05/18/23 09:29	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/17/23 12:38	05/17/23 22:12	1
Diesel Range Organics (Over C10-C28)	**404**		50.0	mg/Kg		05/17/23 12:38	05/17/23 22:12	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/17/23 12:38	05/17/23 22:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*05/17/23 12:38*	*05/17/23 22:12*	*1*
o-Terphenyl	*91*		*70 - 130*	*05/17/23 12:38*	*05/17/23 22:12*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**123**		5.03	mg/Kg			05/19/23 01:44	1

Client Sample ID: SW04

Lab Sample ID: 890-4670-3
Matrix: Solid
Date Collected: 05/15/23 13:05
Date Received: 05/16/23 10:47
Sample Depth: 0-3'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/19/23 11:17	05/20/23 04:03	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/19/23 11:17	05/20/23 04:03	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/19/23 11:17	05/20/23 04:03	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		05/19/23 11:17	05/20/23 04:03	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/19/23 11:17	05/20/23 04:03	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/19/23 11:17	05/20/23 04:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*05/19/23 11:17*	*05/20/23 04:03*	*1*
1,4-Difluorobenzene (Surr)	*69*	*S1-*	*70 - 130*	*05/19/23 11:17*	*05/20/23 04:03*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			05/22/23 15:52	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			05/18/23 09:29	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4670-1
SDG: 03C1558139

Client Sample ID: SW04

Lab Sample ID: 890-4670-3
Matrix: Solid
Date Collected: 05/15/23 13:05
Date Received: 05/16/23 10:47
Sample Depth: 0-3'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/17/23 12:38	05/17/23 22:33	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/17/23 12:38	05/17/23 22:33	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/17/23 12:38	05/17/23 22:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*84*		*70 - 130*	*05/17/23 12:38*	*05/17/23 22:33*	*1*
o-Terphenyl	*82*		*70 - 130*	*05/17/23 12:38*	*05/17/23 22:33*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**120**		5.02		mg/Kg			05/19/23 01:50	1

Client Sample ID: FS06

Lab Sample ID: 890-4670-4
Matrix: Solid
Date Collected: 05/15/23 13:55
Date Received: 05/16/23 10:47
Sample Depth: 3'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/19/23 11:17	05/20/23 04:24	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/19/23 11:17	05/20/23 04:24	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/19/23 11:17	05/20/23 04:24	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		05/19/23 11:17	05/20/23 04:24	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/19/23 11:17	05/20/23 04:24	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		05/19/23 11:17	05/20/23 04:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*05/19/23 11:17*	*05/20/23 04:24*	*1*
1,4-Difluorobenzene (Surr)	*80*		*70 - 130*	*05/19/23 11:17*	*05/20/23 04:24*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			05/22/23 15:52	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**52.6**		49.9		mg/Kg			05/18/23 09:29	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/17/23 12:38	05/17/23 22:55	1
Diesel Range Organics (Over C10-C28)	**52.6**		49.9		mg/Kg		05/17/23 12:38	05/17/23 22:55	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/17/23 12:38	05/17/23 22:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*05/17/23 12:38*	*05/17/23 22:55*	*1*
o-Terphenyl	*97*		*70 - 130*	*05/17/23 12:38*	*05/17/23 22:55*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4670-1
SDG: 03C1558139

Client Sample ID: FS06

Lab Sample ID: 890-4670-4
Matrix: Solid
Date Collected: 05/15/23 13:55
Date Received: 05/16/23 10:47
Sample Depth: 3'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	63.9		4.99		mg/Kg			05/19/23 01:55	1

Client Sample ID: SW05

Lab Sample ID: 890-4670-5
Matrix: Solid
Date Collected: 05/15/23 14:10
Date Received: 05/16/23 10:47
Sample Depth: 0-3'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/19/23 11:17	05/20/23 04:44	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/19/23 11:17	05/20/23 04:44	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/19/23 11:17	05/20/23 04:44	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/19/23 11:17	05/20/23 04:44	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/19/23 11:17	05/20/23 04:44	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/19/23 11:17	05/20/23 04:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*05/19/23 11:17*	*05/20/23 04:44*	*1*
1,4-Difluorobenzene (Surr)	*70*		*70 - 130*	*05/19/23 11:17*	*05/20/23 04:44*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/22/23 15:52	1

Method: SW846 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			05/18/23 09:29	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/17/23 12:38	05/17/23 23:16	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/17/23 12:38	05/17/23 23:16	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/17/23 12:38	05/17/23 23:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*05/17/23 12:38*	*05/17/23 23:16*	*1*
o-Terphenyl	*105*		*70 - 130*	*05/17/23 12:38*	*05/17/23 23:16*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	90.7		4.98		mg/Kg			05/19/23 02:00	1

Client Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4670-1
SDG: 03C1558139

Client Sample ID: SW06

Date Collected: 05/15/23 14:15
Date Received: 05/16/23 10:47
Sample Depth: 0-3'

Lab Sample ID: 890-4670-6

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/19/23 11:17	05/20/23 05:04	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/19/23 11:17	05/20/23 05:04	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/19/23 11:17	05/20/23 05:04	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/19/23 11:17	05/20/23 05:04	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/19/23 11:17	05/20/23 05:04	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/19/23 11:17	05/20/23 05:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*05/19/23 11:17*	*05/20/23 05:04*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*05/19/23 11:17*	*05/20/23 05:04*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/22/23 15:52	1

Method: SW846 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			05/19/23 10:11	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/18/23 08:49	05/18/23 19:45	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/18/23 08:49	05/18/23 19:45	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/18/23 08:49	05/18/23 19:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*134*	*S1+*	*70 - 130*	*05/18/23 08:49*	*05/18/23 19:45*	*1*
o-Terphenyl	*103*		*70 - 130*	*05/18/23 08:49*	*05/18/23 19:45*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**83.3**		5.00		mg/Kg			05/19/23 02:06	1

Surrogate Summary

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4670-1
SDG: 03C1558139

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)										
880-28389-A-7-B MB	Method Blank	71	80										
890-4670-1	FS05	109	93										
890-4670-2	SW03	147 S1+	81										
890-4670-3	SW04	109	69 S1-										
890-4670-4	FS06	109	80										
890-4670-5	SW05	106	70										
890-4670-6	SW06	116	106										
890-4678-A-1-A MS	Matrix Spike	125	109										
890-4678-A-1-B MSD	Matrix Spike Duplicate	135 S1+	109										
LCS 880-53768/1-A	Lab Control Sample	123	110										
LCSD 880-53768/2-A	Lab Control Sample Dup	123	104										
MB 880-53768/5-A	Method Blank	90	100										

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)										
880-28483-A-33-C MS	Matrix Spike	124	85										
880-28483-A-33-D MSD	Matrix Spike Duplicate	127	86										
890-4670-1	FS05	98	101										
890-4670-1 MS	FS05	88	81										
890-4670-1 MSD	FS05	87	80										
890-4670-2	SW03	89	91										
890-4670-3	SW04	84	82										
890-4670-4	FS06	92	97										
890-4670-5	SW05	100	105										
890-4670-6	SW06	134 S1+	103										
LCS 880-53601/2-A	Lab Control Sample	86	79										
LCS 880-53630/2-A	Lab Control Sample	100	77										
LCSD 880-53601/3-A	Lab Control Sample Dup	86	84										
LCSD 880-53630/3-A	Lab Control Sample Dup	100	76										
MB 880-53601/1-A	Method Blank	133 S1+	125										
MB 880-53630/1-A	Method Blank	214 S1+	171 S1+										

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4670-1
SDG: 03C1558139

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: 880-28389-A-7-B MB
Matrix: Solid
Analysis Batch: 53724

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53707

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/19/23 08:45	05/19/23 19:52	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/19/23 08:45	05/19/23 19:52	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/19/23 08:45	05/19/23 19:52	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/19/23 08:45	05/19/23 19:52	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/19/23 08:45	05/19/23 19:52	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/19/23 08:45	05/19/23 19:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*71*		*70 - 130*	*05/19/23 08:45*	*05/19/23 19:52*	*1*
1,4-Difluorobenzene (Surr)	*80*		*70 - 130*	*05/19/23 08:45*	*05/19/23 19:52*	*1*

Lab Sample ID: MB 880-53768/5-A
Matrix: Solid
Analysis Batch: 53724

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53768

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/19/23 11:17	05/19/23 22:14	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/19/23 11:17	05/19/23 22:14	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/19/23 11:17	05/19/23 22:14	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/19/23 11:17	05/19/23 22:14	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/19/23 11:17	05/19/23 22:14	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/19/23 11:17	05/19/23 22:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*05/19/23 11:17*	*05/19/23 22:14*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*05/19/23 11:17*	*05/19/23 22:14*	*1*

Lab Sample ID: LCS 880-53768/1-A
Matrix: Solid
Analysis Batch: 53724

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53768

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1107		mg/Kg		111	70 - 130		
Toluene			0.100	0.1048		mg/Kg		105	70 - 130		
Ethylbenzene			0.100	0.1141		mg/Kg		114	70 - 130		
m-Xylene & p-Xylene			0.200	0.2436		mg/Kg		122	70 - 130		
o-Xylene			0.100	0.1244		mg/Kg		124	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

Lab Sample ID: LCSD 880-53768/2-A
Matrix: Solid
Analysis Batch: 53724

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53768

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1024		mg/Kg		102	70 - 130	8	35

QC Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4670-1
SDG: 03C1558139

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

Lab Sample ID: LCSD 880-53768/2-A
Matrix: Solid
Analysis Batch: 53724

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53768

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.09553		mg/Kg		96	70 - 130	9	35
Ethylbenzene			0.100	0.1061		mg/Kg		106	70 - 130	7	35
m-Xylene & p-Xylene			0.200	0.2225		mg/Kg		111	70 - 130	9	35
o-Xylene			0.100	0.1143		mg/Kg		114	70 - 130	8	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: 890-4678-A-1-A MS
Matrix: Solid
Analysis Batch: 53724

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 53768

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00198	U	0.0998	0.1115		mg/Kg		112	70 - 130
Toluene	<0.00198	U	0.0998	0.1042		mg/Kg		104	70 - 130
Ethylbenzene	<0.00198	U	0.0998	0.1175		mg/Kg		118	70 - 130
m-Xylene & p-Xylene	<0.00396	U	0.200	0.2478		mg/Kg		124	70 - 130
o-Xylene	<0.00198	U	0.0998	0.1252		mg/Kg		125	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: 890-4678-A-1-B MSD
Matrix: Solid
Analysis Batch: 53724

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 53768

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	0.1037		mg/Kg		103	70 - 130	7	35
Toluene	<0.00198	U	0.100	0.1016		mg/Kg		101	70 - 130	3	35
Ethylbenzene	<0.00198	U	0.100	0.1174		mg/Kg		117	70 - 130	0	35
m-Xylene & p-Xylene	<0.00396	U	0.201	0.2503		mg/Kg		125	70 - 130	1	35
o-Xylene	<0.00198	U	0.100	0.1270		mg/Kg		127	70 - 130	1	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*135*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

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

Lab Sample ID: MB 880-53601/1-A
Matrix: Solid
Analysis Batch: 53548

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53601

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		05/17/23 12:38	05/17/23 20:05	1

QC Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4670-1
SDG: 03C1558139

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

Lab Sample ID: MB 880-53601/1-A
Matrix: Solid
Analysis Batch: 53548

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53601

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/17/23 12:38	05/17/23 20:05	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/17/23 12:38	05/17/23 20:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*133*	*S1+*	*70 - 130*	*05/17/23 12:38*	*05/17/23 20:05*	*1*
o-Terphenyl	*125*		*70 - 130*	*05/17/23 12:38*	*05/17/23 20:05*	*1*

Lab Sample ID: LCS 880-53601/2-A
Matrix: Solid
Analysis Batch: 53548

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53601

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	828.8		mg/Kg		83	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	933.7		mg/Kg		93	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*86*		*70 - 130*
o-Terphenyl	*79*		*70 - 130*

Lab Sample ID: LCSD 880-53601/3-A
Matrix: Solid
Analysis Batch: 53548

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53601

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	867.1		mg/Kg		87	70 - 130	5	20
Diesel Range Organics (Over C10-C28)			1000	1030		mg/Kg		103	70 - 130	10	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*86*		*70 - 130*
o-Terphenyl	*84*		*70 - 130*

Lab Sample ID: 890-4670-1 MS
Matrix: Solid
Analysis Batch: 53548

Client Sample ID: FS05
Prep Type: Total/NA
Prep Batch: 53601

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	876.3		mg/Kg		86	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	998	845.8		mg/Kg		83	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*88*		*70 - 130*
o-Terphenyl	*81*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4670-1
SDG: 03C1558139

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

Lab Sample ID: 890-4670-1 MSD — **Client Sample ID: FS05**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 53548 — **Prep Batch: 53601**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	997	865.4		mg/Kg		85	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<50.0	U	997	841.9		mg/Kg		83	70 - 130	0	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*87*		*70 - 130*
o-Terphenyl	*80*		*70 - 130*

Lab Sample ID: MB 880-53630/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 53625 — **Prep Batch: 53630**

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		05/18/23 08:00	05/18/23 08:37	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/18/23 08:00	05/18/23 08:37	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/18/23 08:00	05/18/23 08:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*214*	*S1+*	*70 - 130*	*05/18/23 08:00*	*05/18/23 08:37*	*1*
o-Terphenyl	*171*	*S1+*	*70 - 130*	*05/18/23 08:00*	*05/18/23 08:37*	*1*

Lab Sample ID: LCS 880-53630/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 53625 — **Prep Batch: 53630**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	824.0		mg/Kg		82	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	854.6		mg/Kg		85	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*100*		*70 - 130*
o-Terphenyl	*77*		*70 - 130*

Lab Sample ID: LCSD 880-53630/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 53625 — **Prep Batch: 53630**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	825.3		mg/Kg		83	70 - 130	0	20
Diesel Range Organics (Over C10-C28)			1000	803.9		mg/Kg		80	70 - 130	6	20

QC Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4670-1
SDG: 03C1558139

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

Lab Sample ID: LCSD 880-53630/3-A
Matrix: Solid
Analysis Batch: 53625

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53630

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	100		70 - 130
o-Terphenyl	76		70 - 130

Lab Sample ID: 880-28483-A-33-C MS
Matrix: Solid
Analysis Batch: 53625

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 53630

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	999	1643	F1	mg/Kg		165	70 - 130
Diesel Range Organics (Over C10-C28)	108		999	939.9		mg/Kg		83	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	124		70 - 130
o-Terphenyl	85		70 - 130

Lab Sample ID: 880-28483-A-33-D MSD
Matrix: Solid
Analysis Batch: 53625

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 53630

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	999	1673	F1	mg/Kg		167	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	108		999	953.5		mg/Kg		85	70 - 130	1	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	127		70 - 130
o-Terphenyl	86		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-53569/1-A
Matrix: Solid
Analysis Batch: 53680

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			05/18/23 23:30	1

Lab Sample ID: LCS 880-53569/2-A
Matrix: Solid
Analysis Batch: 53680

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride			250	242.9		mg/Kg		97	90 - 110

QC Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4670-1
SDG: 03C1558139

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 880-53569/3-A
Matrix: Solid
Analysis Batch: 53680

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	243.6		mg/Kg		97	90 - 110	0	20

Lab Sample ID: 880-28520-A-3-B MS
Matrix: Solid
Analysis Batch: 53680

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	84.9		252	332.6		mg/Kg		98	90 - 110		

Lab Sample ID: 880-28520-A-3-C MSD
Matrix: Solid
Analysis Batch: 53680

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	84.9		252	333.3		mg/Kg		99	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4670-1
SDG: 03C1558139

GC VOA

Prep Batch: 53707

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-28389-A-7-B MB	Method Blank	Total/NA	Solid	5030B	

Analysis Batch: 53724

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4670-1	FS05	Total/NA	Solid	8021B	53768
890-4670-2	SW03	Total/NA	Solid	8021B	53768
890-4670-3	SW04	Total/NA	Solid	8021B	53768
890-4670-4	FS06	Total/NA	Solid	8021B	53768
890-4670-5	SW05	Total/NA	Solid	8021B	53768
890-4670-6	SW06	Total/NA	Solid	8021B	53768
880-28389-A-7-B MB	Method Blank	Total/NA	Solid	8021B	53707
MB 880-53768/5-A	Method Blank	Total/NA	Solid	8021B	53768
LCS 880-53768/1-A	Lab Control Sample	Total/NA	Solid	8021B	53768
LCSD 880-53768/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	53768
890-4678-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	53768
890-4678-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	53768

Prep Batch: 53768

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4670-1	FS05	Total/NA	Solid	5035	
890-4670-2	SW03	Total/NA	Solid	5035	
890-4670-3	SW04	Total/NA	Solid	5035	
890-4670-4	FS06	Total/NA	Solid	5035	
890-4670-5	SW05	Total/NA	Solid	5035	
890-4670-6	SW06	Total/NA	Solid	5035	
MB 880-53768/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-53768/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-53768/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4678-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
890-4678-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 53913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4670-1	FS05	Total/NA	Solid	Total BTEX	
890-4670-2	SW03	Total/NA	Solid	Total BTEX	
890-4670-3	SW04	Total/NA	Solid	Total BTEX	
890-4670-4	FS06	Total/NA	Solid	Total BTEX	
890-4670-5	SW05	Total/NA	Solid	Total BTEX	
890-4670-6	SW06	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 53548

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4670-1	FS05	Total/NA	Solid	8015B NM	53601
890-4670-2	SW03	Total/NA	Solid	8015B NM	53601
890-4670-3	SW04	Total/NA	Solid	8015B NM	53601
890-4670-4	FS06	Total/NA	Solid	8015B NM	53601
890-4670-5	SW05	Total/NA	Solid	8015B NM	53601
MB 880-53601/1-A	Method Blank	Total/NA	Solid	8015B NM	53601
LCS 880-53601/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	53601

QC Association Summary

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4670-1
SDG: 03C1558139

GC Semi VOA (Continued)

Analysis Batch: 53548 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-53601/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	53601
890-4670-1 MS	FS05	Total/NA	Solid	8015B NM	53601
890-4670-1 MSD	FS05	Total/NA	Solid	8015B NM	53601

Prep Batch: 53601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4670-1	FS05	Total/NA	Solid	8015NM Prep	
890-4670-2	SW03	Total/NA	Solid	8015NM Prep	
890-4670-3	SW04	Total/NA	Solid	8015NM Prep	
890-4670-4	FS06	Total/NA	Solid	8015NM Prep	
890-4670-5	SW05	Total/NA	Solid	8015NM Prep	
MB 880-53601/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-53601/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-53601/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4670-1 MS	FS05	Total/NA	Solid	8015NM Prep	
890-4670-1 MSD	FS05	Total/NA	Solid	8015NM Prep	

Analysis Batch: 53625

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4670-6	SW06	Total/NA	Solid	8015B NM	53630
MB 880-53630/1-A	Method Blank	Total/NA	Solid	8015B NM	53630
LCS 880-53630/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	53630
LCSD 880-53630/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	53630
880-28483-A-33-C MS	Matrix Spike	Total/NA	Solid	8015B NM	53630
880-28483-A-33-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	53630

Prep Batch: 53630

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4670-6	SW06	Total/NA	Solid	8015NM Prep	
MB 880-53630/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-53630/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-53630/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-28483-A-33-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-28483-A-33-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 53650

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4670-1	FS05	Total/NA	Solid	8015 NM	
890-4670-2	SW03	Total/NA	Solid	8015 NM	
890-4670-3	SW04	Total/NA	Solid	8015 NM	
890-4670-4	FS06	Total/NA	Solid	8015 NM	
890-4670-5	SW05	Total/NA	Solid	8015 NM	
890-4670-6	SW06	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 53569

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4670-1	FS05	Soluble	Solid	DI Leach	
890-4670-2	SW03	Soluble	Solid	DI Leach	
890-4670-3	SW04	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4670-1
SDG: 03C1558139

HPLC/IC (Continued)

Leach Batch: 53569 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4670-4	FS06	Soluble	Solid	DI Leach	
890-4670-5	SW05	Soluble	Solid	DI Leach	
890-4670-6	SW06	Soluble	Solid	DI Leach	
MB 880-53569/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-53569/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-53569/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-28520-A-3-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-28520-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 53680

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4670-1	FS05	Soluble	Solid	300.0	53569
890-4670-2	SW03	Soluble	Solid	300.0	53569
890-4670-3	SW04	Soluble	Solid	300.0	53569
890-4670-4	FS06	Soluble	Solid	300.0	53569
890-4670-5	SW05	Soluble	Solid	300.0	53569
890-4670-6	SW06	Soluble	Solid	300.0	53569
MB 880-53569/1-A	Method Blank	Soluble	Solid	300.0	53569
LCS 880-53569/2-A	Lab Control Sample	Soluble	Solid	300.0	53569
LCSD 880-53569/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	53569
880-28520-A-3-B MS	Matrix Spike	Soluble	Solid	300.0	53569
880-28520-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	53569

Lab Chronicle

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4670-1
SDG: 03C1558139

Client Sample ID: FS05
Date Collected: 05/15/23 12:55
Date Received: 05/16/23 10:47

Lab Sample ID: 890-4670-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	53768	05/19/23 11:17	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53724	05/20/23 03:22	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53913	05/22/23 15:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			53650	05/18/23 09:29	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	53601	05/17/23 12:38	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53548	05/17/23 21:09	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	53569	05/17/23 10:18	KS	EET MID
Soluble	Analysis	300.0		1			53680	05/19/23 01:39	CH	EET MID

Client Sample ID: SW03
Date Collected: 05/15/23 13:00
Date Received: 05/16/23 10:47

Lab Sample ID: 890-4670-2
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	53768	05/19/23 11:17	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53724	05/20/23 03:43	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53913	05/22/23 15:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			53650	05/18/23 09:29	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	53601	05/17/23 12:38	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53548	05/17/23 22:12	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	53569	05/17/23 10:18	KS	EET MID
Soluble	Analysis	300.0		1			53680	05/19/23 01:44	CH	EET MID

Client Sample ID: SW04
Date Collected: 05/15/23 13:05
Date Received: 05/16/23 10:47

Lab Sample ID: 890-4670-3
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	53768	05/19/23 11:17	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53724	05/20/23 04:03	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53913	05/22/23 15:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			53650	05/18/23 09:29	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	53601	05/17/23 12:38	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53548	05/17/23 22:33	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	53569	05/17/23 10:18	KS	EET MID
Soluble	Analysis	300.0		1			53680	05/19/23 01:50	CH	EET MID

Client Sample ID: FS06
Date Collected: 05/15/23 13:55
Date Received: 05/16/23 10:47

Lab Sample ID: 890-4670-4
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	53768	05/19/23 11:17	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53724	05/20/23 04:24	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53913	05/22/23 15:52	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4670-1
SDG: 03C1558139

Client Sample ID: FS06
Date Collected: 05/15/23 13:55
Date Received: 05/16/23 10:47

Lab Sample ID: 890-4670-4
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			53650	05/18/23 09:29	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	53601	05/17/23 12:38	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53548	05/17/23 22:55	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	53569	05/17/23 10:18	KS	EET MID
Soluble	Analysis	300.0		1			53680	05/19/23 01:55	CH	EET MID

Client Sample ID: SW05
Date Collected: 05/15/23 14:10
Date Received: 05/16/23 10:47

Lab Sample ID: 890-4670-5
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			5.02 g	5 mL	53768	05/19/23 11:17	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53724	05/20/23 04:44	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53913	05/22/23 15:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			53650	05/18/23 09:29	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	53601	05/17/23 12:38	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53548	05/17/23 23:16	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	53569	05/17/23 10:18	KS	EET MID
Soluble	Analysis	300.0		1			53680	05/19/23 02:00	CH	EET MID

Client Sample ID: SW06
Date Collected: 05/15/23 14:15
Date Received: 05/16/23 10:47

Lab Sample ID: 890-4670-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	53768	05/19/23 11:17	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53724	05/20/23 05:04	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53913	05/22/23 15:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			53650	05/19/23 10:11	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	53630	05/18/23 08:49	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53625	05/18/23 19:45	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	53569	05/17/23 10:18	KS	EET MID
Soluble	Analysis	300.0		1			53680	05/19/23 02:06	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4670-1
SDG: 03C1558139

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4670-1
SDG: 03C1558139

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4670-1
SDG: 03C1558139

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4670-1	FS05	Solid	05/15/23 12:55	05/16/23 10:47	3'
890-4670-2	SW03	Solid	05/15/23 13:00	05/16/23 10:47	0-3'
890-4670-3	SW04	Solid	05/15/23 13:05	05/16/23 10:47	0-3'
890-4670-4	FS06	Solid	05/15/23 13:55	05/16/23 10:47	3'
890-4670-5	SW05	Solid	05/15/23 14:10	05/16/23 10:47	0-3'
890-4670-6	SW06	Solid	05/15/23 14:15	05/16/23 10:47	0-3'

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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:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy
Address:	3122 National Parks HWY	Address:	3104 E. Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	9703194364	Email:	Garrett.Green@ExxonMobile.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:	ROSS DRAW 3031	Turn Around	
Project Number:	03C1558139	☒ Routine ☐ Rush	
Project Location:	32.00075, -103.91531	Due Date:	5 days
Sampler's Name:	Mariaha O'Dell	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:	1.8	
Total Containers:		Corrected Temperature:	1.6	

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	Chlorides	TPH	BTEX	Sample Comments
FS05	S	05/15/23	12:55	3'	G	1	X	X	X	Incident #'S:
SW03			13:00	0-3'						nAPP2227244441X
SW04			13:05	0-3'						nAPP2300442748
FS06			13:55	3'						
SW05			14:10	0-3'						API:
SW06			14:15	0-3'						30-015-45121
										tmorrissey@ensolum.com

890-4670 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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	M. O'Dell		5/16/23 10:40	2		
3		Amanda Estep	5/16/23 1047	4		
5				6		

Revised Date: 08/25/2020 Rev: 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4670-1
SDG Number: 03C1558139

Login Number: 4670
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4670-1
SDG Number: 03C1558139

Login Number: 4670
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 05/17/23 10:46 AM

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

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 5/23/2023 10:34:49 AM

JOB DESCRIPTION

ROSS DRAW 3031
SDG NUMBER 32.00075,-103.91531

JOB NUMBER

890-4682-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

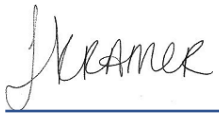
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Authorization



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5/23/2023 10:34:49 AM

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

Client: Ensolum
Project/Site: ROSS DRAW 3031

Laboratory Job ID: 890-4682-1
SDG: 32.00075,-103.91531

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-4682-1
Project/Site: ROSS DRAW 3031 SDG: 32.00075,-103.91531

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
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: ROSS DRAW 3031

Job ID: 890-4682-1
SDG: 32.00075,-103.91531

Job ID: 890-4682-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4682-1

Receipt
The samples were received on 5/18/2023 9:35 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 4.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: BH02 (890-4682-1) and BH02A (890-4682-2).

GC VOA
Method 8021B: The matrix spike (MS) and/or matrix spike duplicate (MSD) recovery for preparation batch 880-53609 and analytical batch 880-53830 was outside control limits for the following analyte(s): Benzene. Results may be biased high because this analyte is a common laboratory solvent and contaminant.

Method 8021B: Surrogate recovery for the following samples were outside control limits: BH02 (890-4682-1), BH02A (890-4682-2) and (890-4669-A-1-G). 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: (890-4669-A-1-E MS). 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 880-53720 and analytical batch 880-53715 was outside the upper control limits.

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-53847 and analytical batch 880-53828 was outside the upper control limits.

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

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

Client Sample Results

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4682-1
SDG: 32.00075,-103.91531

Client Sample ID: BH02

Date Collected: 05/17/23 10:50
Date Received: 05/18/23 09:35
Sample Depth: 0.5

Lab Sample ID: 890-4682-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	0.000386	mg/Kg		05/19/23 15:42	05/22/23 20:32	1
Toluene	<0.00200	U	0.00200	0.000457	mg/Kg		05/19/23 15:42	05/22/23 20:32	1
Ethylbenzene	<0.00200	U	0.00200	0.000566	mg/Kg		05/19/23 15:42	05/22/23 20:32	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	0.00101	mg/Kg		05/19/23 15:42	05/22/23 20:32	1
o-Xylene	<0.00200	U	0.00200	0.000345	mg/Kg		05/19/23 15:42	05/22/23 20:32	1
Xylenes, Total	<0.00401	U	0.00401	0.00101	mg/Kg		05/19/23 15:42	05/22/23 20:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*157*	*S1+*	*70 - 130*	*05/19/23 15:42*	*05/22/23 20:32*	*1*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*	*05/19/23 15:42*	*05/22/23 20:32*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	0.00101	mg/Kg			05/23/23 09:03	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**154**		50.0	15.0	mg/Kg			05/23/23 10:13	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**49.5**	**J**	50.0	15.0	mg/Kg		05/22/23 09:25	05/22/23 11:30	1
Diesel Range Organics (Over C10-C28)	**104**		50.0	15.0	mg/Kg		05/22/23 09:25	05/22/23 11:30	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	15.0	mg/Kg		05/22/23 09:25	05/22/23 11:30	1
Total TPH	**154**		50.0	15.0	mg/Kg		05/22/23 09:25	05/22/23 11:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*107*		*70 - 130*	*05/22/23 09:25*	*05/22/23 11:30*	*1*
o-Terphenyl	*125*		*70 - 130*	*05/22/23 09:25*	*05/22/23 11:30*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2970**		25.1	1.98	mg/Kg			05/22/23 17:37	5

Client Sample ID: BH02A

Date Collected: 05/17/23 11:05
Date Received: 05/18/23 09:35
Sample Depth: 3.0

Lab Sample ID: 890-4682-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	0.000383	mg/Kg		05/19/23 15:42	05/22/23 20:59	1
Toluene	<0.00199	U	0.00199	0.000454	mg/Kg		05/19/23 15:42	05/22/23 20:59	1
Ethylbenzene	<0.00199	U	0.00199	0.000563	mg/Kg		05/19/23 15:42	05/22/23 20:59	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	0.00101	mg/Kg		05/19/23 15:42	05/22/23 20:59	1
o-Xylene	<0.00199	U	0.00199	0.000343	mg/Kg		05/19/23 15:42	05/22/23 20:59	1
Xylenes, Total	<0.00398	U	0.00398	0.00101	mg/Kg		05/19/23 15:42	05/22/23 20:59	1

Client Sample Results

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4682-1
SDG: 32.00075,-103.91531

Client Sample ID: BH02A

Date Collected: 05/17/23 11:05
Date Received: 05/18/23 09:35
Sample Depth: 3.0

Lab Sample ID: 890-4682-2

Matrix: Solid

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*150*	*S1+*	*70 - 130*	*05/19/23 15:42*	*05/22/23 20:59*	*1*
1,4-Difluorobenzene (Surr)	*71*		*70 - 130*	*05/19/23 15:42*	*05/22/23 20:59*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	0.00101	mg/Kg			05/23/23 09:03	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**47.7**	**J**	50.0	15.0	mg/Kg			05/22/23 09:17	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**15.3**	**J**	50.0	15.0	mg/Kg		05/19/23 07:57	05/19/23 19:09	1
Diesel Range Organics (Over C10-C28)	**32.4**	**J**	50.0	15.0	mg/Kg		05/19/23 07:57	05/19/23 19:09	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	15.0	mg/Kg		05/19/23 07:57	05/19/23 19:09	1
Total TPH	**47.7**	**J**	50.0	15.0	mg/Kg		05/19/23 07:57	05/19/23 19:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*05/19/23 07:57*	*05/19/23 19:09*	*1*
o-Terphenyl	*99*		*70 - 130*	*05/19/23 07:57*	*05/19/23 19:09*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**326**		4.98	0.393	mg/Kg			05/22/23 17:42	1

Surrogate Summary

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4682-1
SDG: 32.00075,-103.91531

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)
890-4669-A-1-E MS	Matrix Spike	132 S1+	92
890-4669-A-1-F MSD	Matrix Spike Duplicate	113	87
890-4682-1	BH02	157 S1+	77
890-4682-2	BH02A	150 S1+	71
LCS 880-53609/1-A	Lab Control Sample	107	90
LCSD 880-53609/2-A	Lab Control Sample Dup	101	79
MB 880-53609/5-A	Method Blank	85	82

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)
880-28597-A-1-E MS	Matrix Spike	90	82
880-28597-A-1-F MSD	Matrix Spike Duplicate	89	80
890-4682-1	BH02	107	125
890-4682-1 MS	BH02	121	127
890-4682-1 MSD	BH02	105	115
890-4682-2	BH02A	94	99
LCS 880-53720/2-A	Lab Control Sample	72	71
LCS 880-53847/2-A	Lab Control Sample	96	106
LCSD 880-53720/3-A	Lab Control Sample Dup	77	74
LCSD 880-53847/3-A	Lab Control Sample Dup	111	124
MB 880-53720/1-A	Method Blank	160 S1+	171 S1+
MB 880-53847/1-A	Method Blank	179 S1+	218 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4682-1
SDG: 32.00075,-103.91531

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-53609/5-A
Matrix: Solid
Analysis Batch: 53830

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53609

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	0.000385	mg/Kg		05/17/23 15:42	05/22/23 11:52	1
Toluene	<0.00200	U	0.00200	0.000456	mg/Kg		05/17/23 15:42	05/22/23 11:52	1
Ethylbenzene	<0.00200	U	0.00200	0.000565	mg/Kg		05/17/23 15:42	05/22/23 11:52	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	0.00101	mg/Kg		05/17/23 15:42	05/22/23 11:52	1
o-Xylene	<0.00200	U	0.00200	0.000344	mg/Kg		05/17/23 15:42	05/22/23 11:52	1
Xylenes, Total	<0.00400	U	0.00400	0.00101	mg/Kg		05/17/23 15:42	05/22/23 11:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*	*05/17/23 15:42*	*05/22/23 11:52*	*1*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*	*05/17/23 15:42*	*05/22/23 11:52*	*1*

Lab Sample ID: LCS 880-53609/1-A
Matrix: Solid
Analysis Batch: 53830

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53609

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1272		mg/Kg		127	70 - 130		
Toluene			0.100	0.1152		mg/Kg		115	70 - 130		
Ethylbenzene			0.100	0.1144		mg/Kg		114	70 - 130		
m-Xylene & p-Xylene			0.200	0.2419		mg/Kg		121	70 - 130		
o-Xylene			0.100	0.1144		mg/Kg		114	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*

Lab Sample ID: LCSD 880-53609/2-A
Matrix: Solid
Analysis Batch: 53830

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53609

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1212		mg/Kg		121	70 - 130	5	35
Toluene			0.100	0.1074		mg/Kg		107	70 - 130	7	35
Ethylbenzene			0.100	0.1072		mg/Kg		107	70 - 130	7	35
m-Xylene & p-Xylene			0.200	0.2266		mg/Kg		113	70 - 130	7	35
o-Xylene			0.100	0.1095		mg/Kg		109	70 - 130	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*79*		*70 - 130*

Lab Sample ID: 890-4669-A-1-E MS
Matrix: Solid
Analysis Batch: 53830

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 53609

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U F1	0.0992	0.1399	F1	mg/Kg		141	70 - 130		
Toluene	<0.00200	U	0.0992	0.1207		mg/Kg		122	70 - 130		

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QC Sample Results

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4682-1
SDG: 32.00075,-103.91531

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

Lab Sample ID: 890-4669-A-1-E MS | **Client Sample ID: Matrix Spike**
Matrix: Solid | **Prep Type: Total/NA**
Analysis Batch: 53830 | **Prep Batch: 53609**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.0992	0.1074		mg/Kg		108	70 - 130
m-Xylene & p-Xylene	<0.00401	U	0.198	0.2236		mg/Kg		113	70 - 130
o-Xylene	<0.00200	U	0.0992	0.1099		mg/Kg		111	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*132*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*

Lab Sample ID: 890-4669-A-1-F MSD | **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid | **Prep Type: Total/NA**
Analysis Batch: 53830 | **Prep Batch: 53609**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U F1	0.0990	0.1225		mg/Kg		124	70 - 130	13	35
Toluene	<0.00200	U	0.0990	0.09770		mg/Kg		99	70 - 130	21	35
Ethylbenzene	<0.00200	U	0.0990	0.09780		mg/Kg		99	70 - 130	9	35
m-Xylene & p-Xylene	<0.00401	U	0.198	0.2045		mg/Kg		103	70 - 130	9	35
o-Xylene	<0.00200	U	0.0990	0.09723		mg/Kg		98	70 - 130	12	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*

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

Lab Sample ID: MB 880-53720/1-A | **Client Sample ID: Method Blank**
Matrix: Solid | **Prep Type: Total/NA**
Analysis Batch: 53715 | **Prep Batch: 53720**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	15.0	mg/Kg		05/19/23 07:57	05/19/23 08:23	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	15.0	mg/Kg		05/19/23 07:57	05/19/23 08:23	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	15.0	mg/Kg		05/19/23 07:57	05/19/23 08:23	1
Total TPH	<50.0	U	50.0	15.0	mg/Kg		05/19/23 07:57	05/19/23 08:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*160*	*S1+*	*70 - 130*	*05/19/23 07:57*	*05/19/23 08:23*	*1*
o-Terphenyl	*171*	*S1+*	*70 - 130*	*05/19/23 07:57*	*05/19/23 08:23*	*1*

Lab Sample ID: LCS 880-53720/2-A | **Client Sample ID: Lab Control Sample**
Matrix: Solid | **Prep Type: Total/NA**
Analysis Batch: 53715 | **Prep Batch: 53720**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	862.7		mg/Kg		86	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4682-1
SDG: 32.00075,-103.91531

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

Lab Sample ID: LCS 880-53720/2-A
Matrix: Solid
Analysis Batch: 53715

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53720

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics (Over C10-C28)			1000	823.8		mg/Kg		82	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*72*		*70 - 130*
o-Terphenyl	*71*		*70 - 130*

Lab Sample ID: LCSD 880-53720/3-A
Matrix: Solid
Analysis Batch: 53715

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53720

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	773.4		mg/Kg		77	70 - 130	11	20
Diesel Range Organics (Over C10-C28)			1000	807.4		mg/Kg		81	70 - 130	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*77*		*70 - 130*
o-Terphenyl	*74*		*70 - 130*

Lab Sample ID: 880-28597-A-1-E MS
Matrix: Solid
Analysis Batch: 53715

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 53720

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	999	881.1		mg/Kg		88	70 - 130		
Diesel Range Organics (Over C10-C28)	28.4	J	999	936.4		mg/Kg		91	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*90*		*70 - 130*
o-Terphenyl	*82*		*70 - 130*

Lab Sample ID: 880-28597-A-1-F MSD
Matrix: Solid
Analysis Batch: 53715

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 53720

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	951.5		mg/Kg		95	70 - 130	8	20
Diesel Range Organics (Over C10-C28)	28.4	J	999	915.9		mg/Kg		89	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*89*		*70 - 130*
o-Terphenyl	*80*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4682-1
SDG: 32.00075,-103.91531

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

Lab Sample ID: MB 880-53847/1-A
Matrix: Solid
Analysis Batch: 53828

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53847

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	15.0	mg/Kg		05/22/23 08:00	05/22/23 08:26	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	15.0	mg/Kg		05/22/23 08:00	05/22/23 08:26	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	15.0	mg/Kg		05/22/23 08:00	05/22/23 08:26	1
Total TPH	<50.0	U	50.0	15.0	mg/Kg		05/22/23 08:00	05/22/23 08:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*179*	*S1+*	*70 - 130*	*05/22/23 08:00*	*05/22/23 08:26*	*1*
o-Terphenyl	*218*	*S1+*	*70 - 130*	*05/22/23 08:00*	*05/22/23 08:26*	*1*

Lab Sample ID: LCS 880-53847/2-A
Matrix: Solid
Analysis Batch: 53828

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53847

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	899.0		mg/Kg		90	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	884.1		mg/Kg		88	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*96*		*70 - 130*
o-Terphenyl	*106*		*70 - 130*

Lab Sample ID: LCSD 880-53847/3-A
Matrix: Solid
Analysis Batch: 53828

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53847

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	999.0		mg/Kg		100	70 - 130	11	20
Diesel Range Organics (Over C10-C28)			1000	1018		mg/Kg		102	70 - 130	14	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*111*		*70 - 130*
o-Terphenyl	*124*		*70 - 130*

Lab Sample ID: 890-4682-1 MS
Matrix: Solid
Analysis Batch: 53828

Client Sample ID: BH02
Prep Type: Total/NA
Prep Batch: 53847

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	49.5	J	998	1131		mg/Kg		108	70 - 130		
Diesel Range Organics (Over C10-C28)	104		998	1181		mg/Kg		108	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4682-1
SDG: 32.00075,-103.91531

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

Lab Sample ID: 890-4682-1 MS
Matrix: Solid
Analysis Batch: 53828

Client Sample ID: BH02
Prep Type: Total/NA
Prep Batch: 53847

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*121*		*70 - 130*
o-Terphenyl	*127*		*70 - 130*

Lab Sample ID: 890-4682-1 MSD
Matrix: Solid
Analysis Batch: 53828

Client Sample ID: BH02
Prep Type: Total/NA
Prep Batch: 53847

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	49.5	J	999	940.5		mg/Kg		89	70 - 130	18	20
Diesel Range Organics (Over C10-C28)	104		999	1032		mg/Kg		93	70 - 130	13	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*105*		*70 - 130*
o-Terphenyl	*115*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-53742/1-A
Matrix: Solid
Analysis Batch: 53795

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	0.395	mg/Kg			05/22/23 15:07	1

Lab Sample ID: LCS 880-53742/2-A
Matrix: Solid
Analysis Batch: 53795

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	249.2		mg/Kg		100	90 - 110		

Lab Sample ID: LCSD 880-53742/3-A
Matrix: Solid
Analysis Batch: 53795

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	250.9		mg/Kg		100	90 - 110	1	20

Lab Sample ID: 890-4680-A-20-B MS
Matrix: Solid
Analysis Batch: 53795

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	39.3		250	291.7		mg/Kg		101	90 - 110		

QC Sample Results

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4682-1
SDG: 32.00075,-103.91531

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-4680-A-20-C MSD
Matrix: Solid
Analysis Batch: 53795

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	39.3		250	292.2		mg/Kg		101	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4682-1
SDG: 32.00075,-103.91531

GC VOA

Prep Batch: 53609

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4682-1	BH02	Total/NA	Solid	5035	
890-4682-2	BH02A	Total/NA	Solid	5035	
MB 880-53609/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-53609/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-53609/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4669-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
890-4669-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 53830

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4682-1	BH02	Total/NA	Solid	8021B	53609
890-4682-2	BH02A	Total/NA	Solid	8021B	53609
MB 880-53609/5-A	Method Blank	Total/NA	Solid	8021B	53609
LCS 880-53609/1-A	Lab Control Sample	Total/NA	Solid	8021B	53609
LCSD 880-53609/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	53609
890-4669-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	53609
890-4669-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	53609

Analysis Batch: 53964

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4682-1	BH02	Total/NA	Solid	Total BTEX	
890-4682-2	BH02A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 53715

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4682-2	BH02A	Total/NA	Solid	8015B NM	53720
MB 880-53720/1-A	Method Blank	Total/NA	Solid	8015B NM	53720
LCS 880-53720/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	53720
LCSD 880-53720/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	53720
880-28597-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	53720
880-28597-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	53720

Prep Batch: 53720

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4682-2	BH02A	Total/NA	Solid	8015NM Prep	
MB 880-53720/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-53720/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-53720/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-28597-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-28597-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 53828

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4682-1	BH02	Total/NA	Solid	8015B NM	53847
MB 880-53847/1-A	Method Blank	Total/NA	Solid	8015B NM	53847
LCS 880-53847/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	53847
LCSD 880-53847/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	53847
890-4682-1 MS	BH02	Total/NA	Solid	8015B NM	53847
890-4682-1 MSD	BH02	Total/NA	Solid	8015B NM	53847

QC Association Summary

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4682-1
SDG: 32.00075,-103.91531

GC Semi VOA

Prep Batch: 53847

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4682-1	BH02	Total/NA	Solid	8015NM Prep	
MB 880-53847/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-53847/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-53847/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4682-1 MS	BH02	Total/NA	Solid	8015NM Prep	
890-4682-1 MSD	BH02	Total/NA	Solid	8015NM Prep	

Analysis Batch: 53853

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4682-1	BH02	Total/NA	Solid	8015 NM	
890-4682-2	BH02A	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 53742

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4682-1	BH02	Soluble	Solid	DI Leach	
890-4682-2	BH02A	Soluble	Solid	DI Leach	
MB 880-53742/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-53742/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-53742/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4680-A-20-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-4680-A-20-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 53795

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4682-1	BH02	Soluble	Solid	300.0	53742
890-4682-2	BH02A	Soluble	Solid	300.0	53742
MB 880-53742/1-A	Method Blank	Soluble	Solid	300.0	53742
LCS 880-53742/2-A	Lab Control Sample	Soluble	Solid	300.0	53742
LCSD 880-53742/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	53742
890-4680-A-20-B MS	Matrix Spike	Soluble	Solid	300.0	53742
890-4680-A-20-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	53742

Lab Chronicle

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4682-1
SDG: 32.00075,-103.91531

Client Sample ID: BH02

Date Collected: 05/17/23 10:50
Date Received: 05/18/23 09:35

Lab Sample ID: 890-4682-1

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	53609	05/19/23 15:42	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53830	05/22/23 20:32	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53964	05/23/23 09:03	SM	EET MID
Total/NA	Analysis	8015 NM		1			53853	05/23/23 10:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	53847	05/22/23 09:25	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53828	05/22/23 11:30	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	53742	05/19/23 09:47	CH	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	53795	05/22/23 17:37	CH	EET MID

Client Sample ID: BH02A

Date Collected: 05/17/23 11:05
Date Received: 05/18/23 09:35

Lab Sample ID: 890-4682-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	53609	05/19/23 15:42	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53830	05/22/23 20:59	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53964	05/23/23 09:03	SM	EET MID
Total/NA	Analysis	8015 NM		1			53853	05/22/23 09:17	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	53720	05/19/23 07:57	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53715	05/19/23 19:09	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	53742	05/19/23 09:47	CH	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53795	05/22/23 17:42	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4682-1
SDG: 32.00075,-103.91531

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4682-1
SDG: 32.00075,-103.91531

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4682-1
SDG: 32.00075,-103.91531

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4682-1	BH02	Solid	05/17/23 10:50	05/18/23 09:35	0.5
890-4682-2	BH02A	Solid	05/17/23 11:05	05/18/23 09:35	3.0

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Greene, St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	9703194364	Email:	Garrett.Green@ExxonMobil.com

Work Order Comments

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

Project Name:	ROSS DRAW 3031	Turn Around	
Project Number:	03C 155 9139	☒ Routine ☐ Rush	
Project Location:	32.00075, -103.91531	Due Date:	5 days
Sampler's Name:	Mariana O'Dell	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#007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	4.2
Total Containers:		Corrected Temperature:	4.0

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	TPH	BTEX	Sample Comments
BH02	S	5/17/23	10:50	0.5'	G	1		X	X	X	Incident #'s
BH02A	↓	↓	11:05	3.0'	↓	↓		↓	↓	↓	nAPP2227244478
											nAPP2300442748
											API:
											30-015-45121
											tmorrissey@ensolum.com

890-4682 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			5.18.23 935			
3				4		
5				6		

Revised Date: 08/25/2020 Rev: 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4682-1
SDG Number: 32.00075,-103.91531

Login Number: 4682
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4682-1
SDG Number: 32.00075,-103.91531

Login Number: 4682
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 05/19/23 10:35 AM

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

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ANALYTICAL REPORT

PREPARED FOR

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

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JOB DESCRIPTION

ROSS DRAW 3031
SDG NUMBER 32.00075,-103.91533

JOB NUMBER

890-4683-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

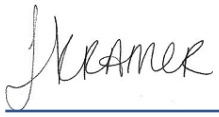
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Authorization



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

Client: Ensolum
Project/Site: ROSS DRAW 3031

Laboratory Job ID: 890-4683-1
SDG: 32.00075,-103.91533

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-4683-1
Project/Site: ROSS DRAW 3031 SDG: 32.00075,-103.91533

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
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: ROSS DRAW 3031

Job ID: 890-4683-1
SDG: 32.00075,-103.91533

Job ID: 890-4683-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4683-1

Receipt
The samples were received on 5/18/2023 9:35 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 4.0°C

Receipt Exceptions
The container label for the following samples did not match the information listed on the Chain-of-Custody (COC): SW14 (890-4683-1), SW10 (890-4683-2), SW11 (890-4683-3), FS16 (890-4683-4), FS17 (890-4683-5), FS18 (890-4683-6), FS19 (890-4683-7), SW12 (890-4683-8) and SW13 (890-4683-9). The container labels list 890-4683 while the COC lists #2 #3 The client was contacted, and the lab was instructed to <EXPLANATION_REQUIRED>.
COC- SW10 5-16-23 15:20 0-3
JAR- SW10 5-16-23 8:45 0-3

COC- SW11 5-17-23 8:45 0-3
JAR- SW11 5-17-23 15:20 0-2

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: SW14 (890-4683-1), FS17 (890-4683-5), FS18 (890-4683-6) and SW12 (890-4683-8). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-53721 and analytical batch 880-53716 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-53716/5), (LCS 880-53721/2-A) and (LCSD 880-53721/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (880-28573-A-1-E MS) and (880-28573-A-1-F MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The laboratory control sample (LCS) associated with preparation batch 880-53721 and analytical batch 880-53716 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.

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-53722 and analytical batch 880-53718 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: FS19 (890-4683-7) and (880-28573-A-11-D). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: SW10 (890-4683-2), SW11 (890-4683-3) and FS16 (890-4683-4). 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

Case Narrative

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4683-1
SDG: 32.00075,-103.91533

Job ID: 890-4683-1 (Continued)

Laboratory: Eurofins Carlsbad (Continued)

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: ROSS DRAW 3031

Job ID: 890-4683-1
SDG: 32.00075,-103.91533

Client Sample ID: SW14

Date Collected: 05/17/23 15:20
Date Received: 05/18/23 09:35
Sample Depth: 0 - 3'

Lab Sample ID: 890-4683-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/19/23 10:45	05/19/23 12:14	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/19/23 10:45	05/19/23 12:14	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/19/23 10:45	05/19/23 12:14	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/19/23 10:45	05/19/23 12:14	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/19/23 10:45	05/19/23 12:14	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/19/23 10:45	05/19/23 12:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*05/19/23 10:45*	*05/19/23 12:14*	*1*
1,4-Difluorobenzene (Surr)	*69*	*S1-*	*70 - 130*	*05/19/23 10:45*	*05/19/23 12:14*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/19/23 14:56	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**79.5**		50.0		mg/Kg			05/19/23 14:54	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *-	50.0		mg/Kg		05/19/23 08:05	05/19/23 12:41	1
Diesel Range Organics (Over C10-C28)	**79.5**	***-**	50.0		mg/Kg		05/19/23 08:05	05/19/23 12:41	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/19/23 08:05	05/19/23 12:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*05/19/23 08:05*	*05/19/23 12:41*	*1*
o-Terphenyl	*74*		*70 - 130*	*05/19/23 08:05*	*05/19/23 12:41*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**201**		5.05		mg/Kg			05/19/23 12:44	1

Client Sample ID: SW10

Date Collected: 05/16/23 15:20
Date Received: 05/18/23 09:35
Sample Depth: 0 - 3'

Lab Sample ID: 890-4683-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/19/23 10:45	05/19/23 12:34	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/19/23 10:45	05/19/23 12:34	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/19/23 10:45	05/19/23 12:34	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/19/23 10:45	05/19/23 12:34	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/19/23 10:45	05/19/23 12:34	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/19/23 10:45	05/19/23 12:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*05/19/23 10:45*	*05/19/23 12:34*	*1*

Client Sample Results

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4683-1
SDG: 32.00075,-103.91533

Client Sample ID: SW10

Date Collected: 05/16/23 15:20
Date Received: 05/18/23 09:35
Sample Depth: 0 - 3'

Lab Sample ID: 890-4683-2

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*05/19/23 10:45*	*05/19/23 12:34*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			05/19/23 14:56	1

Method: SW846 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			05/19/23 14:54	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *-	50.0	mg/Kg		05/19/23 08:05	05/19/23 13:03	1
Diesel Range Organics (Over C10-C28)	<50.0	U *-	50.0	mg/Kg		05/19/23 08:05	05/19/23 13:03	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/19/23 08:05	05/19/23 13:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*05/19/23 08:05*	*05/19/23 13:03*	*1*
o-Terphenyl	*69*	*S1-*	*70 - 130*	*05/19/23 08:05*	*05/19/23 13:03*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**697**		25.1	mg/Kg			05/19/23 12:49	5

Client Sample ID: SW11

Date Collected: 05/17/23 08:45
Date Received: 05/18/23 09:35
Sample Depth: 0 - 2'

Lab Sample ID: 890-4683-3

Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		05/19/23 10:45	05/19/23 12:55	1
Toluene	<0.00201	U	0.00201	mg/Kg		05/19/23 10:45	05/19/23 12:55	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/19/23 10:45	05/19/23 12:55	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		05/19/23 10:45	05/19/23 12:55	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		05/19/23 10:45	05/19/23 12:55	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/19/23 10:45	05/19/23 12:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*05/19/23 10:45*	*05/19/23 12:55*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*05/19/23 10:45*	*05/19/23 12:55*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			05/19/23 14:56	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			05/19/23 14:54	1

Client Sample Results

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4683-1
SDG: 32.00075,-103.91533

Client Sample ID: SW11

Lab Sample ID: 890-4683-3
Matrix: Solid
Date Collected: 05/17/23 08:45
Date Received: 05/18/23 09:35
Sample Depth: 0 - 2'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *-	49.9		mg/Kg		05/19/23 08:05	05/19/23 13:24	1
Diesel Range Organics (Over C10-C28)	<49.9	U *-	49.9		mg/Kg		05/19/23 08:05	05/19/23 13:24	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/19/23 08:05	05/19/23 13:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*05/19/23 08:05*	*05/19/23 13:24*	*1*
o-Terphenyl	*67*	*S1-*	*70 - 130*	*05/19/23 08:05*	*05/19/23 13:24*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**576**		25.0		mg/Kg			05/19/23 12:54	5

Client Sample ID: FS16

Lab Sample ID: 890-4683-4
Matrix: Solid
Date Collected: 05/17/23 13:25
Date Received: 05/18/23 09:35
Sample Depth: 3 - 0'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		05/19/23 10:45	05/19/23 13:15	1
Toluene	<0.00201	U	0.00201		mg/Kg		05/19/23 10:45	05/19/23 13:15	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		05/19/23 10:45	05/19/23 13:15	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		05/19/23 10:45	05/19/23 13:15	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		05/19/23 10:45	05/19/23 13:15	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		05/19/23 10:45	05/19/23 13:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*05/19/23 10:45*	*05/19/23 13:15*	*1*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*	*05/19/23 10:45*	*05/19/23 13:15*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			05/19/23 14:56	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			05/19/23 14:54	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *-	49.9		mg/Kg		05/19/23 08:05	05/19/23 13:46	1
Diesel Range Organics (Over C10-C28)	<49.9	U *-	49.9		mg/Kg		05/19/23 08:05	05/19/23 13:46	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/19/23 08:05	05/19/23 13:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*05/19/23 08:05*	*05/19/23 13:46*	*1*
o-Terphenyl	*68*	*S1-*	*70 - 130*	*05/19/23 08:05*	*05/19/23 13:46*	*1*

Client Sample Results

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4683-1
SDG: 32.00075,-103.91533

Client Sample ID: FS16

Lab Sample ID: 890-4683-4
Matrix: Solid
Date Collected: 05/17/23 13:25
Date Received: 05/18/23 09:35
Sample Depth: 3 - 0'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	83.8		4.97		mg/Kg			05/19/23 13:10	1

Client Sample ID: FS17

Lab Sample ID: 890-4683-5
Matrix: Solid
Date Collected: 05/17/23 11:40
Date Received: 05/18/23 09:35
Sample Depth: 1 - 0'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/19/23 10:45	05/19/23 13:36	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/19/23 10:45	05/19/23 13:36	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/19/23 10:45	05/19/23 13:36	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/19/23 10:45	05/19/23 13:36	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/19/23 10:45	05/19/23 13:36	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/19/23 10:45	05/19/23 13:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*05/19/23 10:45*	*05/19/23 13:36*	*1*
1,4-Difluorobenzene (Surr)	*63*	*S1-*	*70 - 130*	*05/19/23 10:45*	*05/19/23 13:36*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/19/23 14:56	1

Method: SW846 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			05/19/23 14:54	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U *-	49.8		mg/Kg		05/19/23 08:05	05/19/23 14:08	1
Diesel Range Organics (Over C10-C28)	<49.8	U *-	49.8		mg/Kg		05/19/23 08:05	05/19/23 14:08	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/19/23 08:05	05/19/23 14:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*05/19/23 08:05*	*05/19/23 14:08*	*1*
o-Terphenyl	*70*		*70 - 130*	*05/19/23 08:05*	*05/19/23 14:08*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	335		25.3		mg/Kg			05/19/23 13:16	5

Client Sample Results

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4683-1
SDG: 32.00075,-103.91533

Client Sample ID: FS18

Date Collected: 05/17/23 13:00
Date Received: 05/18/23 09:35
Sample Depth: 2 - 0'

Lab Sample ID: 890-4683-6
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/19/23 10:45	05/19/23 13:56	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/19/23 10:45	05/19/23 13:56	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/19/23 10:45	05/19/23 13:56	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/19/23 10:45	05/19/23 13:56	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/19/23 10:45	05/19/23 13:56	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/19/23 10:45	05/19/23 13:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*05/19/23 10:45*	*05/19/23 13:56*	*1*
1,4-Difluorobenzene (Surr)	*64*	*S1-*	*70 - 130*	*05/19/23 10:45*	*05/19/23 13:56*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/19/23 14:56	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			05/19/23 14:54	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *-	49.9		mg/Kg		05/19/23 08:05	05/19/23 14:30	1
Diesel Range Organics (Over C10-C28)	<49.9	U *-	49.9		mg/Kg		05/19/23 08:05	05/19/23 14:30	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/19/23 08:05	05/19/23 14:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*05/19/23 08:05*	*05/19/23 14:30*	*1*
o-Terphenyl	*74*		*70 - 130*	*05/19/23 08:05*	*05/19/23 14:30*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**92.6**		5.02		mg/Kg			05/19/23 13:21	1

Client Sample ID: FS19

Date Collected: 05/17/23 15:15
Date Received: 05/18/23 09:35
Sample Depth: 3 - 0'

Lab Sample ID: 890-4683-7
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/19/23 10:45	05/19/23 14:17	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/19/23 10:45	05/19/23 14:17	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/19/23 10:45	05/19/23 14:17	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/19/23 10:45	05/19/23 14:17	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/19/23 10:45	05/19/23 14:17	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/19/23 10:45	05/19/23 14:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*05/19/23 10:45*	*05/19/23 14:17*	*1*

Client Sample Results

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4683-1
SDG: 32.00075,-103.91533

Client Sample ID: FS19

Lab Sample ID: 890-4683-7
Matrix: Solid
Date Collected: 05/17/23 15:15
Date Received: 05/18/23 09:35
Sample Depth: 3 - 0'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*05/19/23 10:45*	*05/19/23 14:17*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			05/19/23 14:56	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			05/19/23 13:14	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/19/23 08:09	05/19/23 12:41	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/19/23 08:09	05/19/23 12:41	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/19/23 08:09	05/19/23 12:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*121*		*70 - 130*	*05/19/23 08:09*	*05/19/23 12:41*	*1*
o-Terphenyl	*134*	*S1+*	*70 - 130*	*05/19/23 08:09*	*05/19/23 12:41*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**103**		5.03	mg/Kg			05/19/23 13:26	1

Client Sample ID: SW12

Lab Sample ID: 890-4683-8
Matrix: Solid
Date Collected: 05/17/23 11:55
Date Received: 05/18/23 09:35
Sample Depth: 0 - 2'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		05/19/23 10:45	05/19/23 14:37	1
Toluene	<0.00201	U	0.00201	mg/Kg		05/19/23 10:45	05/19/23 14:37	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/19/23 10:45	05/19/23 14:37	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		05/19/23 10:45	05/19/23 14:37	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		05/19/23 10:45	05/19/23 14:37	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/19/23 10:45	05/19/23 14:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*05/19/23 10:45*	*05/19/23 14:37*	*1*
1,4-Difluorobenzene (Surr)	*66*	*S1-*	*70 - 130*	*05/19/23 10:45*	*05/19/23 14:37*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			05/19/23 14:56	1

Method: SW846 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			05/19/23 14:47	1

Client Sample Results

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4683-1
SDG: 32.00075,-103.91533

Client Sample ID: SW12

Lab Sample ID: 890-4683-8
Matrix: Solid
Date Collected: 05/17/23 11:55
Date Received: 05/18/23 09:35
Sample Depth: 0 - 2'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/19/23 08:09	05/19/23 13:03	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/19/23 08:09	05/19/23 13:03	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/19/23 08:09	05/19/23 13:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*117*		*70 - 130*	*05/19/23 08:09*	*05/19/23 13:03*	*1*
o-Terphenyl	*127*		*70 - 130*	*05/19/23 08:09*	*05/19/23 13:03*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**132**		5.05		mg/Kg			05/19/23 13:32	1

Client Sample ID: SW13

Lab Sample ID: 890-4683-9
Matrix: Solid
Date Collected: 05/17/23 13:15
Date Received: 05/18/23 09:35
Sample Depth: 0 - 3'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/19/23 10:45	05/19/23 16:07	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/19/23 10:45	05/19/23 16:07	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/19/23 10:45	05/19/23 16:07	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		05/19/23 10:45	05/19/23 16:07	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/19/23 10:45	05/19/23 16:07	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		05/19/23 10:45	05/19/23 16:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*05/19/23 10:45*	*05/19/23 16:07*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*05/19/23 10:45*	*05/19/23 16:07*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			05/19/23 16:30	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			05/19/23 14:47	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/19/23 08:09	05/19/23 13:24	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/19/23 08:09	05/19/23 13:24	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/19/23 08:09	05/19/23 13:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*05/19/23 08:09*	*05/19/23 13:24*	*1*
o-Terphenyl	*110*		*70 - 130*	*05/19/23 08:09*	*05/19/23 13:24*	*1*

Client Sample Results

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4683-1
SDG: 32.00075,-103.91533

Client Sample ID: SW13
Date Collected: 05/17/23 13:15
Date Received: 05/18/23 09:35
Sample Depth: 0 - 3'

Lab Sample ID: 890-4683-9
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	114		4.99		mg/Kg			05/19/23 13:37	1

Surrogate Summary

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4683-1
SDG: 32.00075,-103.91533

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)										
880-28597-A-1-A MS	Matrix Spike	118	109										
880-28597-A-1-B MSD	Matrix Spike Duplicate	90	117										
890-4683-1	SW14	106	69 S1-										
890-4683-2	SW10	93	92										
890-4683-3	SW11	109	107										
890-4683-4	FS16	113	108										
890-4683-5	FS17	100	63 S1-										
890-4683-6	FS18	97	64 S1-										
890-4683-7	FS19	107	87										
890-4683-8	SW12	94	66 S1-										
890-4683-9	SW13	99	91										
LCS 880-53707/1-A	Lab Control Sample	109	111										
LCSD 880-53707/2-A	Lab Control Sample Dup	114	113										
MB 880-53707/5-A	Method Blank	70	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)										
880-28573-A-1-E MS	Matrix Spike	95	66 S1-										
880-28573-A-1-F MSD	Matrix Spike Duplicate	90	63 S1-										
880-28573-A-11-E MS	Matrix Spike	120	120										
880-28573-A-11-F MSD	Matrix Spike Duplicate	105	107										
890-4683-1	SW14	96	74										
890-4683-2	SW10	89	69 S1-										
890-4683-3	SW11	88	67 S1-										
890-4683-4	FS16	88	68 S1-										
890-4683-5	FS17	92	70										
890-4683-6	FS18	96	74										
890-4683-7	FS19	121	134 S1+										
890-4683-8	SW12	117	127										
890-4683-9	SW13	98	110										
LCS 880-53721/2-A	Lab Control Sample	74	58 S1-										
LCS 880-53722/2-A	Lab Control Sample	94	107										
LCSD 880-53721/3-A	Lab Control Sample Dup	79	60 S1-										
LCSD 880-53722/3-A	Lab Control Sample Dup	108	120										
MB 880-53721/1-A	Method Blank	225 S1+	182 S1+										
MB 880-53722/1-A	Method Blank	172 S1+	202 S1+										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4683-1
SDG: 32.00075,-103.91533

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-53707/5-A
Matrix: Solid
Analysis Batch: 53724

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53707

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/18/23 16:48	05/19/23 11:11	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/18/23 16:48	05/19/23 11:11	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/18/23 16:48	05/19/23 11:11	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/18/23 16:48	05/19/23 11:11	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/18/23 16:48	05/19/23 11:11	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/18/23 16:48	05/19/23 11:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*70*		*70 - 130*	*05/18/23 16:48*	*05/19/23 11:11*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*05/18/23 16:48*	*05/19/23 11:11*	*1*

Lab Sample ID: LCS 880-53707/1-A
Matrix: Solid
Analysis Batch: 53724

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53707

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1244		mg/Kg		124	70 - 130		
Toluene			0.100	0.1051		mg/Kg		105	70 - 130		
Ethylbenzene			0.100	0.1088		mg/Kg		109	70 - 130		
m-Xylene & p-Xylene			0.200	0.2307		mg/Kg		115	70 - 130		
o-Xylene			0.100	0.1149		mg/Kg		115	70 - 130		

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

Lab Sample ID: LCSD 880-53707/2-A
Matrix: Solid
Analysis Batch: 53724

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53707

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1269		mg/Kg		127	70 - 130	2	35
Toluene			0.100	0.1180		mg/Kg		118	70 - 130	12	35
Ethylbenzene			0.100	0.1192		mg/Kg		119	70 - 130	9	35
m-Xylene & p-Xylene			0.200	0.2533		mg/Kg		127	70 - 130	9	35
o-Xylene			0.100	0.1265		mg/Kg		127	70 - 130	10	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*

Lab Sample ID: 880-28597-A-1-A MS
Matrix: Solid
Analysis Batch: 53724

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 53707

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U	0.0990	0.1088		mg/Kg		110	70 - 130		
Toluene	<0.00200	U	0.0990	0.09163		mg/Kg		93	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4683-1
SDG: 32.00075,-103.91533

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

Lab Sample ID: 880-28597-A-1-A MS | **Client Sample ID: Matrix Spike**
Matrix: Solid | **Prep Type: Total/NA**
Analysis Batch: 53724 | **Prep Batch: 53707**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.0990	0.09878		mg/Kg		100	70 - 130
m-Xylene & p-Xylene	<0.00401	U	0.198	0.2031		mg/Kg		103	70 - 130
o-Xylene	<0.00200	U	0.0990	0.1025		mg/Kg		103	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: 880-28597-A-1-B MSD | **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid | **Prep Type: Total/NA**
Analysis Batch: 53724 | **Prep Batch: 53707**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0992	0.1102		mg/Kg		111	70 - 130	1	35
Toluene	<0.00200	U	0.0992	0.08210		mg/Kg		83	70 - 130	11	35
Ethylbenzene	<0.00200	U	0.0992	0.07490		mg/Kg		75	70 - 130	28	35
m-Xylene & p-Xylene	<0.00401	U	0.198	0.1460		mg/Kg		74	70 - 130	33	35
o-Xylene	<0.00200	U	0.0992	0.07384		mg/Kg		74	70 - 130	32	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*
1,4-Difluorobenzene (Surr)	*117*		*70 - 130*

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

Lab Sample ID: MB 880-53721/1-A | **Client Sample ID: Method Blank**
Matrix: Solid | **Prep Type: Total/NA**
Analysis Batch: 53716 | **Prep Batch: 53721**

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		05/19/23 08:05	05/19/23 08:16	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/19/23 08:05	05/19/23 08:16	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/19/23 08:05	05/19/23 08:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*225*	*S1+*	*70 - 130*	*05/19/23 08:05*	*05/19/23 08:16*	*1*
o-Terphenyl	*182*	*S1+*	*70 - 130*	*05/19/23 08:05*	*05/19/23 08:16*	*1*

Lab Sample ID: LCS 880-53721/2-A | **Client Sample ID: Lab Control Sample**
Matrix: Solid | **Prep Type: Total/NA**
Analysis Batch: 53716 | **Prep Batch: 53721**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	622.9	*-	mg/Kg		62	70 - 130
Diesel Range Organics (Over C10-C28)	1000	656.3	*-	mg/Kg		66	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4683-1
SDG: 32.00075,-103.91533

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

Lab Sample ID: LCS 880-53721/2-A
Matrix: Solid
Analysis Batch: 53716

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53721

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	74		70 - 130
o-Terphenyl	58	S1-	70 - 130

Lab Sample ID: LCSD 880-53721/3-A
Matrix: Solid
Analysis Batch: 53716

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53721

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	673.0	*-	mg/Kg		67	70 - 130	8	20
Diesel Range Organics (Over C10-C28)			1000	675.7	*-	mg/Kg		68	70 - 130	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	79		70 - 130
o-Terphenyl	60	S1-	70 - 130

Lab Sample ID: 880-28573-A-1-E MS
Matrix: Solid
Analysis Batch: 53716

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 53721

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *-	999	930.1		mg/Kg		91	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U *-	999	756.2		mg/Kg		76	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	95		70 - 130
o-Terphenyl	66	S1-	70 - 130

Lab Sample ID: 880-28573-A-1-F MSD
Matrix: Solid
Analysis Batch: 53716

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 53721

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 *-	1000	881.0		mg/Kg		86	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<49.9	U *-	1000	717.5		mg/Kg		72	70 - 130	5	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	90		70 - 130
o-Terphenyl	63	S1-	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4683-1
SDG: 32.00075,-103.91533

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

Lab Sample ID: MB 880-53722/1-A
Matrix: Solid
Analysis Batch: 53718

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53722

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		05/19/23 08:09	05/19/23 08:16	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/19/23 08:09	05/19/23 08:16	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/19/23 08:09	05/19/23 08:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*172*	*S1+*	*70 - 130*	*05/19/23 08:09*	*05/19/23 08:16*	*1*
o-Terphenyl	*202*	*S1+*	*70 - 130*	*05/19/23 08:09*	*05/19/23 08:16*	*1*

Lab Sample ID: LCS 880-53722/2-A
Matrix: Solid
Analysis Batch: 53718

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53722

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1120		mg/Kg		112	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	885.7		mg/Kg		89	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*94*		*70 - 130*
o-Terphenyl	*107*		*70 - 130*

Lab Sample ID: LCSD 880-53722/3-A
Matrix: Solid
Analysis Batch: 53718

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53722

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	920.1		mg/Kg		92	70 - 130	20	20
Diesel Range Organics (Over C10-C28)			1000	985.2		mg/Kg		99	70 - 130	11	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*108*		*70 - 130*
o-Terphenyl	*120*		*70 - 130*

Lab Sample ID: 880-28573-A-11-E MS
Matrix: Solid
Analysis Batch: 53718

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 53722

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	997	1110		mg/Kg		108	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	997	1185		mg/Kg		119	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4683-1
SDG: 32.00075,-103.91533

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

Lab Sample ID: 880-28573-A-11-E MS
Matrix: Solid
Analysis Batch: 53718

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 53722

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	120		70 - 130
o-Terphenyl	120		70 - 130

Lab Sample ID: 880-28573-A-11-F MSD
Matrix: Solid
Analysis Batch: 53718

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 53722

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	923.7		mg/Kg		90	70 - 130	18	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	1035		mg/Kg		104	70 - 130	13	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	105		70 - 130
o-Terphenyl	107		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-53737/1-A
Matrix: Solid
Analysis Batch: 53773

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			05/19/23 12:06	1

Lab Sample ID: LCS 880-53737/2-A
Matrix: Solid
Analysis Batch: 53773

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	252.1		mg/Kg		101	90 - 110		

Lab Sample ID: LCSD 880-53737/3-A
Matrix: Solid
Analysis Batch: 53773

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	254.0		mg/Kg		102	90 - 110	1	20

Lab Sample ID: 890-4683-9 MS
Matrix: Solid
Analysis Batch: 53773

Client Sample ID: SW13
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	114		250	361.2		mg/Kg		99	90 - 110		

QC Sample Results

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4683-1
SDG: 32.00075,-103.91533

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-4683-9 MSD
Matrix: Solid
Analysis Batch: 53773

Client Sample ID: SW13
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	114		250	361.5		mg/Kg		99	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4683-1
SDG: 32.00075,-103.91533

GC VOA

Prep Batch: 53707

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4683-1	SW14	Total/NA	Solid	5035	
890-4683-2	SW10	Total/NA	Solid	5035	
890-4683-3	SW11	Total/NA	Solid	5035	
890-4683-4	FS16	Total/NA	Solid	5035	
890-4683-5	FS17	Total/NA	Solid	5035	
890-4683-6	FS18	Total/NA	Solid	5035	
890-4683-7	FS19	Total/NA	Solid	5035	
890-4683-8	SW12	Total/NA	Solid	5035	
890-4683-9	SW13	Total/NA	Solid	5035	
MB 880-53707/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-53707/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-53707/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-28597-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-28597-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 53724

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4683-1	SW14	Total/NA	Solid	8021B	53707
890-4683-2	SW10	Total/NA	Solid	8021B	53707
890-4683-3	SW11	Total/NA	Solid	8021B	53707
890-4683-4	FS16	Total/NA	Solid	8021B	53707
890-4683-5	FS17	Total/NA	Solid	8021B	53707
890-4683-6	FS18	Total/NA	Solid	8021B	53707
890-4683-7	FS19	Total/NA	Solid	8021B	53707
890-4683-8	SW12	Total/NA	Solid	8021B	53707
890-4683-9	SW13	Total/NA	Solid	8021B	53707
MB 880-53707/5-A	Method Blank	Total/NA	Solid	8021B	53707
LCS 880-53707/1-A	Lab Control Sample	Total/NA	Solid	8021B	53707
LCSD 880-53707/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	53707
880-28597-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	53707
880-28597-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	53707

Analysis Batch: 53787

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4683-1	SW14	Total/NA	Solid	Total BTEX	
890-4683-2	SW10	Total/NA	Solid	Total BTEX	
890-4683-3	SW11	Total/NA	Solid	Total BTEX	
890-4683-4	FS16	Total/NA	Solid	Total BTEX	
890-4683-5	FS17	Total/NA	Solid	Total BTEX	
890-4683-6	FS18	Total/NA	Solid	Total BTEX	
890-4683-7	FS19	Total/NA	Solid	Total BTEX	
890-4683-8	SW12	Total/NA	Solid	Total BTEX	
890-4683-9	SW13	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 53716

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4683-1	SW14	Total/NA	Solid	8015B NM	53721
890-4683-2	SW10	Total/NA	Solid	8015B NM	53721
890-4683-3	SW11	Total/NA	Solid	8015B NM	53721

QC Association Summary

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4683-1
SDG: 32.00075,-103.91533

GC Semi VOA (Continued)

Analysis Batch: 53716 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4683-4	FS16	Total/NA	Solid	8015B NM	53721
890-4683-5	FS17	Total/NA	Solid	8015B NM	53721
890-4683-6	FS18	Total/NA	Solid	8015B NM	53721
MB 880-53721/1-A	Method Blank	Total/NA	Solid	8015B NM	53721
LCS 880-53721/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	53721
LCSD 880-53721/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	53721
880-28573-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	53721
880-28573-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	53721

Analysis Batch: 53718

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4683-7	FS19	Total/NA	Solid	8015B NM	53722
890-4683-8	SW12	Total/NA	Solid	8015B NM	53722
890-4683-9	SW13	Total/NA	Solid	8015B NM	53722
MB 880-53722/1-A	Method Blank	Total/NA	Solid	8015B NM	53722
LCS 880-53722/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	53722
LCSD 880-53722/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	53722
880-28573-A-11-E MS	Matrix Spike	Total/NA	Solid	8015B NM	53722
880-28573-A-11-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	53722

Prep Batch: 53721

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4683-1	SW14	Total/NA	Solid	8015NM Prep	
890-4683-2	SW10	Total/NA	Solid	8015NM Prep	
890-4683-3	SW11	Total/NA	Solid	8015NM Prep	
890-4683-4	FS16	Total/NA	Solid	8015NM Prep	
890-4683-5	FS17	Total/NA	Solid	8015NM Prep	
890-4683-6	FS18	Total/NA	Solid	8015NM Prep	
MB 880-53721/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-53721/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-53721/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-28573-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-28573-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Prep Batch: 53722

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4683-7	FS19	Total/NA	Solid	8015NM Prep	
890-4683-8	SW12	Total/NA	Solid	8015NM Prep	
890-4683-9	SW13	Total/NA	Solid	8015NM Prep	
MB 880-53722/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-53722/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-53722/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-28573-A-11-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-28573-A-11-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 53781

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4683-1	SW14	Total/NA	Solid	8015 NM	
890-4683-2	SW10	Total/NA	Solid	8015 NM	
890-4683-3	SW11	Total/NA	Solid	8015 NM	
890-4683-4	FS16	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4683-1
SDG: 32.00075,-103.91533

GC Semi VOA (Continued)

Analysis Batch: 53781 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4683-5	FS17	Total/NA	Solid	8015 NM	
890-4683-6	FS18	Total/NA	Solid	8015 NM	
890-4683-7	FS19	Total/NA	Solid	8015 NM	
890-4683-8	SW12	Total/NA	Solid	8015 NM	
890-4683-9	SW13	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 53737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4683-1	SW14	Soluble	Solid	DI Leach	
890-4683-2	SW10	Soluble	Solid	DI Leach	
890-4683-3	SW11	Soluble	Solid	DI Leach	
890-4683-4	FS16	Soluble	Solid	DI Leach	
890-4683-5	FS17	Soluble	Solid	DI Leach	
890-4683-6	FS18	Soluble	Solid	DI Leach	
890-4683-7	FS19	Soluble	Solid	DI Leach	
890-4683-8	SW12	Soluble	Solid	DI Leach	
890-4683-9	SW13	Soluble	Solid	DI Leach	
MB 880-53737/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-53737/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-53737/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4683-9 MS	SW13	Soluble	Solid	DI Leach	
890-4683-9 MSD	SW13	Soluble	Solid	DI Leach	

Analysis Batch: 53773

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4683-1	SW14	Soluble	Solid	300.0	53737
890-4683-2	SW10	Soluble	Solid	300.0	53737
890-4683-3	SW11	Soluble	Solid	300.0	53737
890-4683-4	FS16	Soluble	Solid	300.0	53737
890-4683-5	FS17	Soluble	Solid	300.0	53737
890-4683-6	FS18	Soluble	Solid	300.0	53737
890-4683-7	FS19	Soluble	Solid	300.0	53737
890-4683-8	SW12	Soluble	Solid	300.0	53737
890-4683-9	SW13	Soluble	Solid	300.0	53737
MB 880-53737/1-A	Method Blank	Soluble	Solid	300.0	53737
LCS 880-53737/2-A	Lab Control Sample	Soluble	Solid	300.0	53737
LCSD 880-53737/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	53737
890-4683-9 MS	SW13	Soluble	Solid	300.0	53737
890-4683-9 MSD	SW13	Soluble	Solid	300.0	53737

Lab Chronicle

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4683-1
SDG: 32.00075,-103.91533

Client Sample ID: SW14

Date Collected: 05/17/23 15:20
Date Received: 05/18/23 09:35

Lab Sample ID: 890-4683-1
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	53707	05/19/23 10:45	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53724	05/19/23 12:14	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53787	05/19/23 14:56	SM	EET MID
Total/NA	Analysis	8015 NM		1			53781	05/19/23 14:54	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	53721	05/19/23 08:05	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53716	05/19/23 12:41	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	53737	05/19/23 09:29	CH	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53773	05/19/23 12:44	CH	EET MID

Client Sample ID: SW10

Date Collected: 05/16/23 15:20
Date Received: 05/18/23 09:35

Lab Sample ID: 890-4683-2
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	53707	05/19/23 10:45	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53724	05/19/23 12:34	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53787	05/19/23 14:56	SM	EET MID
Total/NA	Analysis	8015 NM		1			53781	05/19/23 14:54	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	53721	05/19/23 08:05	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53716	05/19/23 13:03	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	53737	05/19/23 09:29	CH	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	53773	05/19/23 12:49	CH	EET MID

Client Sample ID: SW11

Date Collected: 05/17/23 08:45
Date Received: 05/18/23 09:35

Lab Sample ID: 890-4683-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	53707	05/19/23 10:45	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53724	05/19/23 12:55	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53787	05/19/23 14:56	SM	EET MID
Total/NA	Analysis	8015 NM		1			53781	05/19/23 14:54	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	53721	05/19/23 08:05	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53716	05/19/23 13:24	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	53737	05/19/23 09:29	CH	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	53773	05/19/23 12:54	CH	EET MID

Client Sample ID: FS16

Date Collected: 05/17/23 13:25
Date Received: 05/18/23 09:35

Lab Sample ID: 890-4683-4
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			4.98 g	5 mL	53707	05/19/23 10:45	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53724	05/19/23 13:15	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53787	05/19/23 14:56	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4683-1
SDG: 32.00075,-103.91533

Client Sample ID: FS16

Date Collected: 05/17/23 13:25
Date Received: 05/18/23 09:35

Lab Sample ID: 890-4683-4
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			53781	05/19/23 14:54	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	53721	05/19/23 08:05	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53716	05/19/23 13:46	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	53737	05/19/23 09:29	CH	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53773	05/19/23 13:10	CH	EET MID

Client Sample ID: FS17

Date Collected: 05/17/23 11:40
Date Received: 05/18/23 09:35

Lab Sample ID: 890-4683-5
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			5.02 g	5 mL	53707	05/19/23 10:45	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53724	05/19/23 13:36	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53787	05/19/23 14:56	SM	EET MID
Total/NA	Analysis	8015 NM		1			53781	05/19/23 14:54	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	53721	05/19/23 08:05	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53716	05/19/23 14:08	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	53737	05/19/23 09:29	CH	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	53773	05/19/23 13:16	CH	EET MID

Client Sample ID: FS18

Date Collected: 05/17/23 13:00
Date Received: 05/18/23 09:35

Lab Sample ID: 890-4683-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	53707	05/19/23 10:45	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53724	05/19/23 13:56	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53787	05/19/23 14:56	SM	EET MID
Total/NA	Analysis	8015 NM		1			53781	05/19/23 14:54	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	53721	05/19/23 08:05	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53716	05/19/23 14:30	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	53737	05/19/23 09:29	CH	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53773	05/19/23 13:21	CH	EET MID

Client Sample ID: FS19

Date Collected: 05/17/23 15:15
Date Received: 05/18/23 09:35

Lab Sample ID: 890-4683-7
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	53707	05/19/23 10:45	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53724	05/19/23 14:17	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53787	05/19/23 14:56	SM	EET MID
Total/NA	Analysis	8015 NM		1			53781	05/19/23 13:14	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	53722	05/19/23 08:09	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53718	05/19/23 12:41	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4683-1
SDG: 32.00075,-103.91533

Client Sample ID: FS19

Date Collected: 05/17/23 15:15
Date Received: 05/18/23 09:35

Lab Sample ID: 890-4683-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.97 g	50 mL	53737	05/19/23 09:29	CH	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53773	05/19/23 13:26	CH	EET MID

Client Sample ID: SW12

Date Collected: 05/17/23 11:55
Date Received: 05/18/23 09:35

Lab Sample ID: 890-4683-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	53707	05/19/23 10:45	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53724	05/19/23 14:37	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53787	05/19/23 14:56	SM	EET MID
Total/NA	Analysis	8015 NM		1			53781	05/19/23 14:47	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	53722	05/19/23 08:09	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53718	05/19/23 13:03	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	53737	05/19/23 09:29	CH	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53773	05/19/23 13:32	CH	EET MID

Client Sample ID: SW13

Date Collected: 05/17/23 13:15
Date Received: 05/18/23 09:35

Lab Sample ID: 890-4683-9
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	53707	05/19/23 10:45	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53724	05/19/23 16:07	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53787	05/19/23 16:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			53781	05/19/23 14:47	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	53722	05/19/23 08:09	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53718	05/19/23 13:24	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	53737	05/19/23 09:29	CH	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53773	05/19/23 13:37	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4683-1
SDG: 32.00075,-103.91533

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4683-1
SDG: 32.00075,-103.91533

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: ROSS DRAW 3031

Job ID: 890-4683-1
SDG: 32.00075,-103.91533

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4683-1	SW14	Solid	05/17/23 15:20	05/18/23 09:35	0 - 3'
890-4683-2	SW10	Solid	05/16/23 15:20	05/18/23 09:35	0 - 3'
890-4683-3	SW11	Solid	05/17/23 08:45	05/18/23 09:35	0 - 2'
890-4683-4	FS16	Solid	05/17/23 13:25	05/18/23 09:35	3 - 0'
890-4683-5	FS17	Solid	05/17/23 11:40	05/18/23 09:35	1 - 0'
890-4683-6	FS18	Solid	05/17/23 13:00	05/18/23 09:35	2 - 0'
890-4683-7	FS19	Solid	05/17/23 15:15	05/18/23 09:35	3 - 0'
890-4683-8	SW12	Solid	05/17/23 11:55	05/18/23 09:35	0 - 2'
890-4683-9	SW13	Solid	05/17/23 13:15	05/18/23 09:35	0 - 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:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy
Address:	3122 National Parks HWY	Address:	3104 E. Greenlest
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	9703194364	Email:	Garrett.Green@ExxonMobile.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:	ROSS Draw 3031	Turn Around	
Project Number:	03C1558139	☐ Routine ☒ Rush	
Project Location:	32.00075, -103.91531	Due Date:	24 hr
Sampler's Name:	Mariana O'Dell	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 #007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	4.2
Total Containers:		Corrected Temperature:	4.0

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	TPH	BTEX
SW14	S	5/17/23	15:20	0-3'	C	1		X	X	X
SW10		5/17/23	15:20	0-3'						
SW11		5/17/23	8:45	0-2'						
FS16			13:25	3.0'						
FS17			11:40	1.0'						
FS18			13:00	2.0'						
FS19			15:15	3.0'						
SW12			11:55	0-2'						
SW13			13:15	0-3'						

890-4683 Chain of Custody

Sample Comments

Incident #'s:
NAPP2300442748
nAPP2227244441

API:
30-015-45121

tmorrissey@ensolum.com

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			5.18.23 935			
3						
5				6		

Revised Date: 08/25/2020 Rev: 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4683-1
SDG Number: 32.00075,-103.91533

Login Number: 4683
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4683-1
SDG Number: 32.00075,-103.91533

Login Number: 4683
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 05/19/23 10:35 AM

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

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 5/26/2023 4:41:49 PM

JOB DESCRIPTION

Ross Draw 3031
SDG NUMBER 32.00075-103.91531

JOB NUMBER

890-4697-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

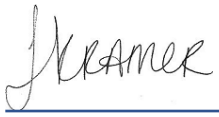
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Authorization



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

Client: Ensolum
Project/Site: Ross Draw 3031

Laboratory Job ID: 890-4697-1
SDG: 32.00075-103.91531

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-4697-1
Project/Site: Ross Draw 3031 SDG: 32.00075-103.91531

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4697-1
SDG: 32.00075-103.91531

Job ID: 890-4697-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4697-1

Receipt
The samples were received on 5/19/2023 2:45 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.6°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: BH03 (890-4697-1), BH03A (890-4697-2), BH04A (890-4697-3), BH04 (890-4697-4), BH05 (890-4697-5) and BH05A (890-4697-6).

GC VOA
Method 8021B: Surrogate recovery for the following sample was outside control limits: (MB 880-53970/5-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: The surrogate recovery for the blank associated with preparation batch 880-53947 and analytical batch 880-53936 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: BH04A (890-4697-3), BH05 (890-4697-5) and BH05A (890-4697-6). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-53947 and analytical batch 880-53936 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample duplicate (LCSD) recovery is within acceptance limits.

Method 8015MOD_NM: LCS biased high for Diesel Range Organics (Over C10-C28). Since only an acceptable LCS or LCSD is required per the method, the LCSD shows recovery for the batch and the data has been qualified and reported.(LCS 880-53947/2-A)

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: Ross Draw 3031

Job ID: 890-4697-1
SDG: 32.00075-103.91531

Client Sample ID: BH03

Date Collected: 05/19/23 08:35
Date Received: 05/19/23 14:45
Sample Depth: 0.5'

Lab Sample ID: 890-4697-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/23/23 11:11	05/25/23 11:33	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/23/23 11:11	05/25/23 11:33	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/23/23 11:11	05/25/23 11:33	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/23/23 11:11	05/25/23 11:33	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/23/23 11:11	05/25/23 11:33	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/23/23 11:11	05/25/23 11:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*05/23/23 11:11*	*05/25/23 11:33*	*1*
1,4-Difluorobenzene (Surr)	*80*		*70 - 130*	*05/23/23 11:11*	*05/25/23 11:33*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/26/23 17:23	1

Method: SW846 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			05/24/23 09:55	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/23/23 08:48	05/23/23 15:50	1
Diesel Range Organics (Over C10-C28)	<50.0	U *+	50.0		mg/Kg		05/23/23 08:48	05/23/23 15:50	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/23/23 08:48	05/23/23 15:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*108*		*70 - 130*	*05/23/23 08:48*	*05/23/23 15:50*	*1*
o-Terphenyl	*125*		*70 - 130*	*05/23/23 08:48*	*05/23/23 15:50*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**398**		24.8		mg/Kg			05/23/23 18:11	5

Client Sample ID: BH03A

Date Collected: 05/19/23 09:05
Date Received: 05/19/23 14:45
Sample Depth: 4.0'

Lab Sample ID: 890-4697-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/23/23 11:11	05/25/23 11:53	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/23/23 11:11	05/25/23 11:53	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/23/23 11:11	05/25/23 11:53	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/23/23 11:11	05/25/23 11:53	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/23/23 11:11	05/25/23 11:53	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/23/23 11:11	05/25/23 11:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*05/23/23 11:11*	*05/25/23 11:53*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4697-1
SDG: 32.00075-103.91531

Client Sample ID: BH03A

Date Collected: 05/19/23 09:05
Date Received: 05/19/23 14:45
Sample Depth: 4.0'

Lab Sample ID: 890-4697-2

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*	*05/23/23 11:11*	*05/25/23 11:53*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			05/26/23 17:23	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			05/24/23 09:55	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/23/23 08:48	05/23/23 16:37	1
Diesel Range Organics (Over C10-C28)	<49.9	U *+	49.9	mg/Kg		05/23/23 08:48	05/23/23 16:37	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/23/23 08:48	05/23/23 16:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*114*		*70 - 130*	*05/23/23 08:48*	*05/23/23 16:37*	*1*
o-Terphenyl	*130*		*70 - 130*	*05/23/23 08:48*	*05/23/23 16:37*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**114**		5.03	mg/Kg			05/23/23 18:28	1

Client Sample ID: BH04A

Date Collected: 05/19/23 11:20
Date Received: 05/19/23 14:45
Sample Depth: 3.0'

Lab Sample ID: 890-4697-3

Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		05/23/23 11:11	05/25/23 12:14	1
Toluene	<0.00201	U	0.00201	mg/Kg		05/23/23 11:11	05/25/23 12:14	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/23/23 11:11	05/25/23 12:14	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		05/23/23 11:11	05/25/23 12:14	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		05/23/23 11:11	05/25/23 12:14	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/23/23 11:11	05/25/23 12:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*05/23/23 11:11*	*05/25/23 12:14*	*1*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*	*05/23/23 11:11*	*05/25/23 12:14*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			05/26/23 17:23	1

Method: SW846 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			05/24/23 09:55	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4697-1
SDG: 32.00075-103.91531

Client Sample ID: BH04A

Lab Sample ID: 890-4697-3
Matrix: Solid
Date Collected: 05/19/23 11:20
Date Received: 05/19/23 14:45
Sample Depth: 3.0'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/23/23 08:48	05/23/23 16:58	1
Diesel Range Organics (Over C10-C28)	<50.0	U *+	50.0		mg/Kg		05/23/23 08:48	05/23/23 16:58	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/23/23 08:48	05/23/23 16:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*137*	*S1+*	*70 - 130*	*05/23/23 08:48*	*05/23/23 16:58*	*1*
o-Terphenyl	*153*	*S1+*	*70 - 130*	*05/23/23 08:48*	*05/23/23 16:58*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**334**		25.0		mg/Kg			05/23/23 18:33	5

Client Sample ID: BH04

Lab Sample ID: 890-4697-4
Matrix: Solid
Date Collected: 05/19/23 11:10
Date Received: 05/19/23 14:45
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		05/23/23 11:11	05/25/23 12:34	1
Toluene	<0.00202	U	0.00202		mg/Kg		05/23/23 11:11	05/25/23 12:34	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		05/23/23 11:11	05/25/23 12:34	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		05/23/23 11:11	05/25/23 12:34	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		05/23/23 11:11	05/25/23 12:34	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		05/23/23 11:11	05/25/23 12:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*	*05/23/23 11:11*	*05/25/23 12:34*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*05/23/23 11:11*	*05/25/23 12:34*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			05/26/23 17:23	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			05/24/23 09:55	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/23/23 08:48	05/23/23 17:20	1
Diesel Range Organics (Over C10-C28)	<49.9	U *+	49.9		mg/Kg		05/23/23 08:48	05/23/23 17:20	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/23/23 08:48	05/23/23 17:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*05/23/23 08:48*	*05/23/23 17:20*	*1*
o-Terphenyl	*125*		*70 - 130*	*05/23/23 08:48*	*05/23/23 17:20*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4697-1
SDG: 32.00075-103.91531

Client Sample ID: BH04

Lab Sample ID: 890-4697-4
Matrix: Solid
Date Collected: 05/19/23 11:10
Date Received: 05/19/23 14:45
Sample Depth: 0.5'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	450		24.9		mg/Kg			05/23/23 18:49	5

Client Sample ID: BH05

Lab Sample ID: 890-4697-5
Matrix: Solid
Date Collected: 05/19/23 12:25
Date Received: 05/19/23 14:45
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/23/23 11:11	05/25/23 12:55	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/23/23 11:11	05/25/23 12:55	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/23/23 11:11	05/25/23 12:55	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/23/23 11:11	05/25/23 12:55	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/23/23 11:11	05/25/23 12:55	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/23/23 11:11	05/25/23 12:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*05/23/23 11:11*	*05/25/23 12:55*	*1*
1,4-Difluorobenzene (Surr)	*78*		*70 - 130*	*05/23/23 11:11*	*05/25/23 12:55*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/26/23 17:23	1

Method: SW846 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			05/24/23 09:55	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		05/23/23 08:48	05/23/23 17:42	1
Diesel Range Organics (Over C10-C28)	<49.8	U *+	49.8		mg/Kg		05/23/23 08:48	05/23/23 17:42	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/23/23 08:48	05/23/23 17:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*05/23/23 08:48*	*05/23/23 17:42*	*1*
o-Terphenyl	*131*	*S1+*	*70 - 130*	*05/23/23 08:48*	*05/23/23 17:42*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	384		24.9		mg/Kg			05/23/23 18:55	5

Client Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4697-1
SDG: 32.00075-103.91531

Client Sample ID: BH05A

Date Collected: 05/19/23 12:40
Date Received: 05/19/23 14:45
Sample Depth: 3.0'

Lab Sample ID: 890-4697-6

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/23/23 11:11	05/25/23 13:15	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/23/23 11:11	05/25/23 13:15	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/23/23 11:11	05/25/23 13:15	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/23/23 11:11	05/25/23 13:15	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/23/23 11:11	05/25/23 13:15	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/23/23 11:11	05/25/23 13:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*05/23/23 11:11*	*05/25/23 13:15*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*05/23/23 11:11*	*05/25/23 13:15*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/26/23 17:23	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			05/24/23 09:55	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/23/23 08:48	05/23/23 18:03	1
Diesel Range Organics (Over C10-C28)	<49.9	U *+	49.9		mg/Kg		05/23/23 08:48	05/23/23 18:03	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/23/23 08:48	05/23/23 18:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*05/23/23 08:48*	*05/23/23 18:03*	*1*
o-Terphenyl	*133*	*S1+*	*70 - 130*	*05/23/23 08:48*	*05/23/23 18:03*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**100**		5.03		mg/Kg			05/23/23 19:00	1

Surrogate Summary

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4697-1
SDG: 32.00075-103.91531

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)
890-4697-1	BH03	94	80
890-4697-1 MS	BH03	113	103
890-4697-1 MSD	BH03	115	103
890-4697-2	BH03A	106	77
890-4697-3	BH04A	105	81
890-4697-4	BH04	92	87
890-4697-5	BH05	107	78
890-4697-6	BH05A	94	84
LCS 880-53970/1-A	Lab Control Sample	107	91
LCSD 880-53970/2-A	Lab Control Sample Dup	117	99
MB 880-53970/5-A	Method Blank	69 S1-	80

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)
890-4697-1	BH03	108	125
890-4697-2	BH03A	114	130
890-4697-3	BH04A	137 S1+	153 S1+
890-4697-4	BH04	109	125
890-4697-5	BH05	112	131 S1+
890-4697-6	BH05A	111	133 S1+
890-4700-A-21-B MS	Matrix Spike	115	107
890-4700-A-21-C MSD	Matrix Spike Duplicate	109	98
LCS 880-53947/2-A	Lab Control Sample	91	99
LCSD 880-53947/3-A	Lab Control Sample Dup	91	98
MB 880-53947/1-A	Method Blank	168 S1+	195 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4697-1
SDG: 32.00075-103.91531

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-53970/5-A
Matrix: Solid
Analysis Batch: 54128

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53970

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/23/23 11:11	05/25/23 11:11	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/23/23 11:11	05/25/23 11:11	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/23/23 11:11	05/25/23 11:11	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/23/23 11:11	05/25/23 11:11	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/23/23 11:11	05/25/23 11:11	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/23/23 11:11	05/25/23 11:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*69*	*S1-*	*70 - 130*	*05/23/23 11:11*	*05/25/23 11:11*	*1*
1,4-Difluorobenzene (Surr)	*80*		*70 - 130*	*05/23/23 11:11*	*05/25/23 11:11*	*1*

Lab Sample ID: LCS 880-53970/1-A
Matrix: Solid
Analysis Batch: 54128

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53970

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1073		mg/Kg		107	70 - 130		
Toluene			0.100	0.09785		mg/Kg		98	70 - 130		
Ethylbenzene			0.100	0.1007		mg/Kg		101	70 - 130		
m-Xylene & p-Xylene			0.200	0.2080		mg/Kg		104	70 - 130		
o-Xylene			0.100	0.1051		mg/Kg		105	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*

Lab Sample ID: LCSD 880-53970/2-A
Matrix: Solid
Analysis Batch: 54128

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53970

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1172		mg/Kg		117	70 - 130	9	35
Toluene			0.100	0.1015		mg/Kg		101	70 - 130	4	35
Ethylbenzene			0.100	0.1084		mg/Kg		108	70 - 130	7	35
m-Xylene & p-Xylene			0.200	0.2291		mg/Kg		115	70 - 130	10	35
o-Xylene			0.100	0.1165		mg/Kg		117	70 - 130	10	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 890-4697-1 MS
Matrix: Solid
Analysis Batch: 54128

Client Sample ID: BH03
Prep Type: Total/NA
Prep Batch: 53970

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U	0.0998	0.1171		mg/Kg		117	70 - 130		
Toluene	<0.00199	U	0.0998	0.1083		mg/Kg		108	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4697-1
SDG: 32.00075-103.91531

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

Lab Sample ID: 890-4697-1 MS
Matrix: Solid
Analysis Batch: 54128

Client Sample ID: BH03
Prep Type: Total/NA
Prep Batch: 53970

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U	0.0998	0.1155		mg/Kg		116	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.200	0.2391		mg/Kg		120	70 - 130
o-Xylene	<0.00199	U	0.0998	0.1196		mg/Kg		120	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: 890-4697-1 MSD
Matrix: Solid
Analysis Batch: 54128

Client Sample ID: BH03
Prep Type: Total/NA
Prep Batch: 53970

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.100	0.1131		mg/Kg		113	70 - 130	3	35
Toluene	<0.00199	U	0.100	0.1023		mg/Kg		102	70 - 130	6	35
Ethylbenzene	<0.00199	U	0.100	0.1112		mg/Kg		111	70 - 130	4	35
m-Xylene & p-Xylene	<0.00398	U	0.200	0.2290		mg/Kg		114	70 - 130	4	35
o-Xylene	<0.00199	U	0.100	0.1151		mg/Kg		115	70 - 130	4	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

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

Lab Sample ID: MB 880-53947/1-A
Matrix: Solid
Analysis Batch: 53936

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53947

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		05/23/23 08:48	05/23/23 08:52	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/23/23 08:48	05/23/23 08:52	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/23/23 08:48	05/23/23 08:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*168*	*S1+*	*70 - 130*	*05/23/23 08:48*	*05/23/23 08:52*	*1*
o-Terphenyl	*195*	*S1+*	*70 - 130*	*05/23/23 08:48*	*05/23/23 08:52*	*1*

Lab Sample ID: LCS 880-53947/2-A
Matrix: Solid
Analysis Batch: 53936

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53947

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1061		mg/Kg		106	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1399	*+	mg/Kg		140	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4697-1
SDG: 32.00075-103.91531

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

Lab Sample ID: LCS 880-53947/2-A
Matrix: Solid
Analysis Batch: 53936

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53947

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	91		70 - 130
o-Terphenyl	99		70 - 130

Lab Sample ID: LCSD 880-53947/3-A
Matrix: Solid
Analysis Batch: 53936

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53947

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1007		mg/Kg		101	70 - 130	5	20
Diesel Range Organics (Over C10-C28)			1000	1300		mg/Kg		130	70 - 130	7	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	91		70 - 130
o-Terphenyl	98		70 - 130

Lab Sample ID: 890-4700-A-21-B MS
Matrix: Solid
Analysis Batch: 53936

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 53947

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	1085		mg/Kg		106	70 - 130
Diesel Range Organics (Over C10-C28)	2390	*+ F1	1000	2847	F1	mg/Kg		46	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	115		70 - 130
o-Terphenyl	107		70 - 130

Lab Sample ID: 890-4700-A-21-C MSD
Matrix: Solid
Analysis Batch: 53936

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 53947

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	1053		mg/Kg		103	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	2390	*+ F1	998	2702	F1	mg/Kg		31	70 - 130	5	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	109		70 - 130
o-Terphenyl	98		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4697-1
SDG: 32.00075-103.91531

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-53879/1-A
Matrix: Solid
Analysis Batch: 53997

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			05/23/23 16:39	1

Lab Sample ID: LCS 880-53879/2-A
Matrix: Solid
Analysis Batch: 53997

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	254.0		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-53879/3-A
Matrix: Solid
Analysis Batch: 53997

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	253.7		mg/Kg		101	90 - 110	0	20

Lab Sample ID: 890-4697-1 MS
Matrix: Solid
Analysis Batch: 53997

Client Sample ID: BH03
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	398		1240	1586		mg/Kg		96	90 - 110		

Lab Sample ID: 890-4697-1 MSD
Matrix: Solid
Analysis Batch: 53997

Client Sample ID: BH03
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	398		1240	1554		mg/Kg		93	90 - 110	2	20

QC Association Summary

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4697-1
SDG: 32.00075-103.91531

GC VOA

Prep Batch: 53970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4697-1	BH03	Total/NA	Solid	5035	
890-4697-2	BH03A	Total/NA	Solid	5035	
890-4697-3	BH04A	Total/NA	Solid	5035	
890-4697-4	BH04	Total/NA	Solid	5035	
890-4697-5	BH05	Total/NA	Solid	5035	
890-4697-6	BH05A	Total/NA	Solid	5035	
MB 880-53970/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-53970/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-53970/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4697-1 MS	BH03	Total/NA	Solid	5035	
890-4697-1 MSD	BH03	Total/NA	Solid	5035	

Analysis Batch: 54128

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4697-1	BH03	Total/NA	Solid	8021B	53970
890-4697-2	BH03A	Total/NA	Solid	8021B	53970
890-4697-3	BH04A	Total/NA	Solid	8021B	53970
890-4697-4	BH04	Total/NA	Solid	8021B	53970
890-4697-5	BH05	Total/NA	Solid	8021B	53970
890-4697-6	BH05A	Total/NA	Solid	8021B	53970
MB 880-53970/5-A	Method Blank	Total/NA	Solid	8021B	53970
LCS 880-53970/1-A	Lab Control Sample	Total/NA	Solid	8021B	53970
LCSD 880-53970/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	53970
890-4697-1 MS	BH03	Total/NA	Solid	8021B	53970
890-4697-1 MSD	BH03	Total/NA	Solid	8021B	53970

Analysis Batch: 54279

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4697-1	BH03	Total/NA	Solid	Total BTEX	
890-4697-2	BH03A	Total/NA	Solid	Total BTEX	
890-4697-3	BH04A	Total/NA	Solid	Total BTEX	
890-4697-4	BH04	Total/NA	Solid	Total BTEX	
890-4697-5	BH05	Total/NA	Solid	Total BTEX	
890-4697-6	BH05A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 53936

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4697-1	BH03	Total/NA	Solid	8015B NM	53947
890-4697-2	BH03A	Total/NA	Solid	8015B NM	53947
890-4697-3	BH04A	Total/NA	Solid	8015B NM	53947
890-4697-4	BH04	Total/NA	Solid	8015B NM	53947
890-4697-5	BH05	Total/NA	Solid	8015B NM	53947
890-4697-6	BH05A	Total/NA	Solid	8015B NM	53947
MB 880-53947/1-A	Method Blank	Total/NA	Solid	8015B NM	53947
LCS 880-53947/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	53947
LCSD 880-53947/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	53947
890-4700-A-21-B MS	Matrix Spike	Total/NA	Solid	8015B NM	53947
890-4700-A-21-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	53947

QC Association Summary

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4697-1
SDG: 32.00075-103.91531

GC Semi VOA

Prep Batch: 53947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4697-1	BH03	Total/NA	Solid	8015NM Prep	
890-4697-2	BH03A	Total/NA	Solid	8015NM Prep	
890-4697-3	BH04A	Total/NA	Solid	8015NM Prep	
890-4697-4	BH04	Total/NA	Solid	8015NM Prep	
890-4697-5	BH05	Total/NA	Solid	8015NM Prep	
890-4697-6	BH05A	Total/NA	Solid	8015NM Prep	
MB 880-53947/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-53947/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-53947/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4700-A-21-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4700-A-21-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 54054

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4697-1	BH03	Total/NA	Solid	8015 NM	
890-4697-2	BH03A	Total/NA	Solid	8015 NM	
890-4697-3	BH04A	Total/NA	Solid	8015 NM	
890-4697-4	BH04	Total/NA	Solid	8015 NM	
890-4697-5	BH05	Total/NA	Solid	8015 NM	
890-4697-6	BH05A	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 53879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4697-1	BH03	Soluble	Solid	DI Leach	
890-4697-2	BH03A	Soluble	Solid	DI Leach	
890-4697-3	BH04A	Soluble	Solid	DI Leach	
890-4697-4	BH04	Soluble	Solid	DI Leach	
890-4697-5	BH05	Soluble	Solid	DI Leach	
890-4697-6	BH05A	Soluble	Solid	DI Leach	
MB 880-53879/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-53879/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-53879/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4697-1 MS	BH03	Soluble	Solid	DI Leach	
890-4697-1 MSD	BH03	Soluble	Solid	DI Leach	

Analysis Batch: 53997

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4697-1	BH03	Soluble	Solid	300.0	53879
890-4697-2	BH03A	Soluble	Solid	300.0	53879
890-4697-3	BH04A	Soluble	Solid	300.0	53879
890-4697-4	BH04	Soluble	Solid	300.0	53879
890-4697-5	BH05	Soluble	Solid	300.0	53879
890-4697-6	BH05A	Soluble	Solid	300.0	53879
MB 880-53879/1-A	Method Blank	Soluble	Solid	300.0	53879
LCS 880-53879/2-A	Lab Control Sample	Soluble	Solid	300.0	53879
LCSD 880-53879/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	53879
890-4697-1 MS	BH03	Soluble	Solid	300.0	53879
890-4697-1 MSD	BH03	Soluble	Solid	300.0	53879

Lab Chronicle

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4697-1
SDG: 32.00075-103.91531

Client Sample ID: BH03
Date Collected: 05/19/23 08:35
Date Received: 05/19/23 14:45

Lab Sample ID: 890-4697-1
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	53970	05/23/23 11:11	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54128	05/25/23 11:33	SM	EET MID
Total/NA	Analysis	Total BTEX		1			54279	05/26/23 17:23	SM	EET MID
Total/NA	Analysis	8015 NM		1			54054	05/24/23 09:55	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	53947	05/23/23 08:48	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53936	05/23/23 15:50	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	53879	05/22/23 12:18	SMC	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	53997	05/23/23 18:11	SMC	EET MID

Client Sample ID: BH03A
Date Collected: 05/19/23 09:05
Date Received: 05/19/23 14:45

Lab Sample ID: 890-4697-2
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	53970	05/23/23 11:11	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54128	05/25/23 11:53	SM	EET MID
Total/NA	Analysis	Total BTEX		1			54279	05/26/23 17:23	SM	EET MID
Total/NA	Analysis	8015 NM		1			54054	05/24/23 09:55	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	53947	05/23/23 08:48	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53936	05/23/23 16:37	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	53879	05/22/23 12:18	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53997	05/23/23 18:28	SMC	EET MID

Client Sample ID: BH04A
Date Collected: 05/19/23 11:20
Date Received: 05/19/23 14:45

Lab Sample ID: 890-4697-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	53970	05/23/23 11:11	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54128	05/25/23 12:14	SM	EET MID
Total/NA	Analysis	Total BTEX		1			54279	05/26/23 17:23	SM	EET MID
Total/NA	Analysis	8015 NM		1			54054	05/24/23 09:55	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	53947	05/23/23 08:48	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53936	05/23/23 16:58	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	53879	05/22/23 12:18	SMC	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	53997	05/23/23 18:33	SMC	EET MID

Client Sample ID: BH04
Date Collected: 05/19/23 11:10
Date Received: 05/19/23 14:45

Lab Sample ID: 890-4697-4
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			4.95 g	5 mL	53970	05/23/23 11:11	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54128	05/25/23 12:34	SM	EET MID
Total/NA	Analysis	Total BTEX		1			54279	05/26/23 17:23	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4697-1
SDG: 32.00075-103.91531

Client Sample ID: BH04

Date Collected: 05/19/23 11:10
Date Received: 05/19/23 14:45

Lab Sample ID: 890-4697-4
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			54054	05/24/23 09:55	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	53947	05/23/23 08:48	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53936	05/23/23 17:20	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	53879	05/22/23 12:18	SMC	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	53997	05/23/23 18:49	SMC	EET MID

Client Sample ID: BH05

Date Collected: 05/19/23 12:25
Date Received: 05/19/23 14:45

Lab Sample ID: 890-4697-5
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			5.02 g	5 mL	53970	05/23/23 11:11	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54128	05/25/23 12:55	SM	EET MID
Total/NA	Analysis	Total BTEX		1			54279	05/26/23 17:23	SM	EET MID
Total/NA	Analysis	8015 NM		1			54054	05/24/23 09:55	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	53947	05/23/23 08:48	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53936	05/23/23 17:42	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	53879	05/22/23 12:18	SMC	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	53997	05/23/23 18:55	SMC	EET MID

Client Sample ID: BH05A

Date Collected: 05/19/23 12:40
Date Received: 05/19/23 14:45

Lab Sample ID: 890-4697-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	53970	05/23/23 11:11	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54128	05/25/23 13:15	SM	EET MID
Total/NA	Analysis	Total BTEX		1			54279	05/26/23 17:23	SM	EET MID
Total/NA	Analysis	8015 NM		1			54054	05/24/23 09:55	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	53947	05/23/23 08:48	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53936	05/23/23 18:03	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	53879	05/22/23 12:18	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53997	05/23/23 19:00	SMC	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4697-1
SDG: 32.00075-103.91531

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4697-1
SDG: 32.00075-103.91531

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Ross Draw 3031

Job ID: 890-4697-1
SDG: 32.00075-103.91531

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4697-1	BH03	Solid	05/19/23 08:35	05/19/23 14:45	0.5'
890-4697-2	BH03A	Solid	05/19/23 09:05	05/19/23 14:45	4.0'
890-4697-3	BH04A	Solid	05/19/23 11:20	05/19/23 14:45	3.0'
890-4697-4	BH04	Solid	05/19/23 11:10	05/19/23 14:45	0.5'
890-4697-5	BH05	Solid	05/19/23 12:25	05/19/23 14:45	0.5'
890-4697-6	BH05A	Solid	05/19/23 12:40	05/19/23 14:45	3.0'

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	9703194364	Email:	Garrett.Green@ExxonMobile.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:	ROSS DRAW 3032	Turn Around	
Project Number:	03C1558139	☒ Routine ☐ Rush	
Project Location:	32.00075 -103.91531	Due Date:	5 days
Sampler's Name:	Mariana O'Dell	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:	TMM007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	5.8
Total Containers:		Corrected Temperature:	5.6

ANALYSIS REQUEST

Pres. Code / Parameters: Chlorides; TPH; BTEX

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	Chlorides	TPH	BTEX	Sample Comments
BH03	S	5/19/23	8:35	0.5'	G	1	X	X	X	Incident #s:
BH03A			9:05	4.0'						nAPP2227244441
BH04A			11:20	3.0'						nAPP2300442748
BH04			11:10	0.5'						
BH05			12:25	0.5'						API:
BH05A			12:40	3.0'						30-015-45121
										tmorrissey@ensolum.com

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	M. O'Dell	Amanda Stuff	5/19/23 1445			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4697-1
SDG Number: 32.00075-103.91531

Login Number: 4697
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4697-1
SDG Number: 32.00075-103.91531

Login Number: 4697
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 05/23/23 10:47 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	

ENSOLUM

APPENDIX D

NMOCD Notifications

From: Green, Garrett J
To: Tacoma Morrissey
Subject: FW: XTO - Sampling Notification (Week of 11/21/22 - 11/25/22)
Date: Friday, November 18, 2022 3:38:40 PM

[**EXTERNAL EMAIL**]

From: Green, Garrett J
Sent: Friday, November 18, 2022 8:52 AM
To: 'ocd.enviro@emnrd.nm.gov' <ocd.enviro@emnrd.nm.gov>; 'Bratcher, Michael, EMNRD' <mike.bratcher@emnrd.nm.gov>; 'Hamlet, Robert, EMNRD' <Robert.Hamlet@emnrd.nm.gov>; 'Harimon, Jocelyn, EMNRD' <Jocelyn.Harimon@emnrd.nm.gov>
Cc: DelawareSpills /SM <DelawareSpills@exxonmobil.com>
Subject: XTO - Sampling Notification (Week of 11/21/22 - 11/25/22)

All,

XTO plans to complete final sampling activities at the following sites the week of Nov 21, 2022.

- JRU 17 CTB/ nAPP2226628060
- BEU 158 / nAPP2230548752
- Ross Draw 2531 TB FIRE/ nAPP2226646920
- Remuda 100 CTB / nAPP2226346738
- West Brushy Fed 33 1H/ nAPP2228753314
- Ross Draw 3031/ nAPP2227244441

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

Foust, Bryan Jacob

From: Foust, Bryan Jacob
Sent: Wednesday, January 11, 2023 9:28 AM
To: ocd.enviro@emnrd.nm.gov; Robert.Hamlet@emnrd.nm.gov; Bratcher, Michael, EMNRD
Cc: Green, Garrett J; DelawareSpills /SM
Subject: XTO -48 Hour liner inspection notification - Ross Draw 3031 battery - released 12/25/2022

Good morning,

This is sent as a 48-hour notification. XTO is scheduled to inspect the lined containment at Ross Draw 3031 battery, released 12/25/2022, on Friday, January 13 2023 at 9:30 AM. A 24 hour release notification was not sent since the release was less than 25 barrels in volume. Please call us with any questions or concerns.

GPS Coordinates: 32.000693, -103.915370

Thank you,

Jake Foust
SSHE Coordinator (environmental)
432-266-2663

Foust, Bryan Jacob

From: Foust, Bryan Jacob
Sent: Friday, January 13, 2023 1:23 PM
To: DelawareSpills /SM
Subject: Ross Draw 3031 liner inspection photos
Attachments: Ross Draw 3031 liner photo1.jpg; Ross Draw 3031 liner photo2.jpg; Ross Draw 3031 liner photo3.jpg

Inspection passed, no visible holes

Thank you,

Jake Foust
SSHE Coordinator (environmental)
432-266-2663

Collins, Melanie

From: Collins, Melanie
Sent: Tuesday, March 21, 2023 2:39 PM
To: ocd.enviro (ocd.enviro@emnrd.nm.gov); Bratcher, Michael, EMNRD (mike.bratcher@emnrd.nm.gov); Harimon, Jocelyn, EMNRD (Jocelyn.Harimon@emnrd.nm.gov); Hamlet, Robert, EMNRD (Robert.Hamlet@emnrd.nm.gov)
Cc: Green, Garrett J; DelawareSpills /SM; esessums@ntglobal.com
Subject: XTO Extension Request - NAPP2300442748 Ross Draw 3031 TB

All,

XTO is requesting an extension of the 03/25/23 deadline to submit a remediation plan/closure report to NMOCD for the 12/25/2022 release at the Ross Draw 3031 Tank Battery. In order to characterize and address the extent of the impact of this release, XTO requests a 90- day extension to June 23, 2023.

Thank you,

Melanie Collins

XTO ENERGY

Environmental Technician
melanie.collins@exxonmobil.com
432-556-3756

Tacoma Morrissey

From: Collins, Melanie <melanie.collins@exxonmobil.com>
Sent: Wednesday, April 26, 2023 4:05 PM
To: Green, Garrett J
Cc: Ashley Ager; Tacoma Morrissey
Subject: FW: The Oil Conservation Division (OCD) has rejected the application, Application ID: 166962

[**EXTERNAL EMAIL**]

Ross Draw 3031 9/15/22

From: OCDOnline@state.nm.us <OCDOnline@state.nm.us>
Sent: Wednesday, April 26, 2023 3:52 PM
To: Collins, Melanie <melanie.collins@exxonmobil.com>
Subject: The Oil Conservation Division (OCD) has rejected the application, Application ID: 166962

External Email - Think Before You Click

To whom it may concern (c/o Melanie Collins for XTO ENERGY, INC),

The OCD has rejected the submitted *Application for administrative approval of a release notification and corrective action* (C-141), for incident ID (n#) nAPP2227244441,
for the following reasons:

- **The Remediation Plan is Denied. This release is in a high karst area and will need to be remediated to the strictest closure criteria from Table 1 of the OCD Spill Rule. Due to the sensitive nature of the site (high karst), the variance request for 500 ft2 confirmation samples is denied. Please collect confirmation samples, representing no more than 200 ft2. Additionally, please make sure sidewall/edge samples are taken as close to the secondary containment as possible to ensure fluids didn't go underneath the containment. All samples must be analyzed for all constituents listed in Table I of 19.15.29.12 NMAC. Sidewall samples should be delineated/excavated to 600 mg/kg for chlorides and 100 mg/kg for TPH to define the edge of the release. The work will need to occur in 90 days after the work plan has been reviewed.**

The rejected C-141 can be found in the OCD Online: Permitting - Action Status, under the Application ID: 166962.
Please review and make the required correction(s) prior to resubmitting.
If you have any questions why this application was rejected or believe it was rejected in error, please contact me prior to submitting an additional C-141.

Thank you,
Robert Hamlet
575-748-1283
Robert.Hamlet@emnrd.nm.gov

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

From: Green, Garrett J
To: Tacoma Morrissey; Ben Belill
Subject: Fwd: [EXTERNAL] XTO - Sampling Notification (Week of 5/15/23 - 5/19/23)
Date: Friday, May 12, 2023 5:50:39 PM

[**EXTERNAL EMAIL**]

Sent from my iPhone

Begin forwarded message:

From: "Enviro, OCD, EMNRD" <OCD.Enviro@emnrd.nm.gov>
Date: May 12, 2023 at 4:02:13 PM MDT
To: "Green, Garrett J" <garrett.green@exxonmobil.com>
Cc: "Bratcher, Michael, EMNRD" <mike.bratcher@emnrd.nm.gov>, "Hamlet, Robert, EMNRD" <Robert.Hamlet@emnrd.nm.gov>
Subject: RE: [EXTERNAL] XTO - Sampling Notification (Week of 5/15/23 - 5/19/23)

External Email - Think Before You Click

Garrett,

Please be aware that notification requirements are **two business days**, per rule. When sampling at multiple sites, a more detailed schedule of days at each site should be provide. You may proceed on your schedule. This, and all correspondence, should be included in the closure report to insure inclusion in the project file.

JH

Jocelyn Harimon ● Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
1220 South St. Francis Drive | Santa Fe, NM 87505
(505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov
http:// **www.emnrd.nm.gov**

From: Green, Garrett J <garrett.green@exxonmobil.com>
Sent: Thursday, May 11, 2023 11:04 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: DelawareSpills /SM <DelawareSpills@exxonmobil.com>; Tacoma Morrissey <tmorrissey@ensolum.com>
Subject: [EXTERNAL] XTO - Sampling Notification (Week of 5/15/23 - 5/19/23)

All,

XTO plans to complete final sampling activities at the sites listed below for the week of May 15, 2023.

Monday
- Ross Draw 3031/ nAPP2227244441 & NAPP2300442748

Tuesday
- Ross Draw 3031/ nAPP2227244441 and NAPP2300442748
- Outrider Fed 28 Pad B / NAPP2306936047

Wednesday
- Outrider Fed 28 Pad B / NAPP2306936047

Thursday
- Outrider Fed 28 Pad B / NAPP2306936047
- PLU PC 17 BATTERY/ nAPP2233951574

Friday
- Sizzler 2H / NMAP1822337753
- PLU PC 17 BATTERY/ nAPP2233951574
- JRU 108 / nAPP2217931599

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 232199

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 232199
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	XTO's deferral requests deferral of final remediation for Incident Numbers NAPP2227244441 & NAPP2300442748 until the site is reconstructed, and/or the well pad is abandoned. Ensolum and XTO do not believe deferment will result in imminent risk to human health, the environment, or groundwater. The areas requested for deferral are the impacted soil, which include BH01 located under the lined containment, SW10 located immediately adjacent to active production equipment, and the deferral area (color orange) around the outside of the lined containment on figure 4 (June 23, 2023, Deferral Request Report). The areas have been delineated and documented in the report. At this time, OCD approves this request. The Deferral Request and C-141 will be accepted for record and marked accordingly. The release will remain open in OCD database files and reflect an open environmental issue.	11/29/2023