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	NAPP2317850727
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 32.27040 Longitude -103.93747

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Remuda 500 Tank Battery	Site Type Tank Battery
Date Release Discovered 06/20/2023	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
O	25	23S	29E	Eddy

Surface Owner: [x] 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)
[x] Produced Water	Volume Released (bbls) 12.01	Volume Recovered (bbls) 6.00
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	[x] Yes [ ] No
[ ] Condensate	Volume Released (bbls)	Volume Recovered (bbls)
[ ] Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
[ ] Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: Internal corrosion caused a hole on the main water line at the piperack to release fluids to soil. All free fluids were recovered. A third-party contractor has been retained for remediation purposes.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2317850727
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Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release? N/A
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? N/A	

Initial Response

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

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

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

NA

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

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

Printed Name: Garrett Green
Title: SSHE Coordinator

Signature: Garrett Green
Date: 6/26/2023

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

OCD Only

Received by: Shelly Wells
Date: 6/28/2023

Location:	Remuda 500 TB	
Spill Date:	6/20/2023	

Area 1		
Approximate Area =	366.00	sq. ft.
Average Saturation (or depth) of spill =	2.50	inches
Average Porosity Factor =	0.15	
VOLUME OF LEAK		
Total Crude Oil =	0.00	bbls
Total Produced Water =	2.04	bbls

Area 2		
Approximate Area =	1493.00	sq. ft.
Average Saturation (or depth) of spill =	1.00	inches
Average Porosity Factor =	0.03	
VOLUME OF LEAK		
Total Crude Oil =	0.00	bbls
Total Produced Water =	0.66	bbls

Area 3		
Approximate Area =	1039.00	sq. ft.
Average Saturation (or depth) of spill =	2.00	inches
Average Porosity Factor =	0.03	
VOLUME OF LEAK		
Total Crude Oil =	0.00	bbls
Total Produced Water =	0.93	bbls

Area 4		
Approximate Area =	3571.00	sq. ft.
Average Saturation (or depth) of spill =	1.50	inches
Average Porosity Factor =	0.03	
VOLUME OF LEAK		
Total Crude Oil =	0.00	bbls
Total Produced Water =	8.38	bbls

TOTAL VOLUME OF LEAK		
Total Crude Oil =	**0.00**	**bbls**
Total Produced Water =	**12.01**	**bbls**
TOTAL VOLUME RECOVERED		
Total Crude Oil =	**0.00**	**bbls**
Total Produced Water =	**6.00**	**bbls**

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

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

CONDITIONS

Action 233465

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 233465
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
scwells	None	6/28/2023

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2317850727
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?	>110 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☒ Yes ☐ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2317850727
District RP	
Facility ID	
Application ID	

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: 09/14/2023

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

OCD Only

Received by: _____ Date: _____

Incident ID	NAPP2317850727
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: _____ Date: 09/14/2023

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

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

ENSOLUM

September 14, 2023

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

Re: Deferral Request
Remuda 500 Tank Battery
Incident Number nAPP2317850727
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 assessment, delineation, excavation, and soil sampling activities at the Remuda 500 Tank Battery (Site). The purpose of the Site assessment and soil sampling activities was to assess for the presence or absence of impacts to soil following a release of produced water. Based on field observations and soil sample laboratory analytical results, XTO is submitting this *Deferral Request*, describing Site assessment, delineation, and excavation activities that have occurred and requesting deferral of final remediation for Incident Number nAPP2317850727 until the Site is reconstructed, and/or the well pad is abandoned.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit O, Section 25, Township 23 South, Range 29 East, in Eddy County, New Mexico (32.27040°, -103.93747°) and is associated with oil and gas exploration and production operations on state land managed by the New Mexico State Land Office (NMSLO).

On June 20, 2023, corrosion of a main produced water line resulted in the release of approximately 12.01 barrels (bbls) of produced water onto the surface of the well pad and around active production equipment and pipelines. A vacuum truck was immediately dispatched to the Site to recover the free-standing fluids; 6.0 bbls of produced water were recovered. XTO submitted a Release Notification Form C-141 (Form C-141) on June 26, 2023. The release was assigned Incident Number nAPP2317850727.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess the applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization.

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on a soil boring drilled for determination of regional groundwater depth. On January 5, 2021, a soil boring permitted by New Mexico Office of the State Engineer (NMOSE file number C-04494) was completed approximately 0.28 miles northwest of the Site utilizing a truck-mounted hollow-stem auger

rig. Soil boring C-04494 was drilled to a depth of 105 feet bgs. A field geologist logged and described soils continuously. No moisture or groundwater was encountered during drilling activities. The borehole was left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period without observing groundwater, it was confirmed that groundwater beneath the Site is greater than 105 feet bgs. The borehole was properly abandoned with drill cuttings and hydrated bentonite chips. The Well Log is included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is a dry wash, located approximately 99 feet west of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (medium potential karst designation area). Potential Site receptors are identified on Figure 1.

Based on the existence of a nearby significant watercourse, 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

CULTURAL RESOURCE SURVEY

Since the release remained on pad, an assessment of cultural properties had already been completed prior to the construction of the well pad and as such, the Cultural Properties Protection Rule (CPP) has been followed. No additional cultural resource surveys were completed in connection with this release.

SITE ASSESSMENT ACTIVITIES

On July 7, 2023, Ensolum personnel visited the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. Seven delineation soil samples (SS01 through SS07) were collected from a depth of approximately 0.5 feet bgs. SS01 through SS04 were collected within the release extent and SS05 through SS07 were collected outside the release extent to define the edge of the release. The delineation soil samples were field screened for volatile organic compounds (VOCs) and chloride utilizing a calibrated photoionization detector (PID) and Hach® QuanTab® chloride test strips, respectively. The release extent and delineation soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation is 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 (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-gasoline range organics (GRO), TPH-diesel range organics (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 Celsius required for shipment and long-term storage but are considered to have been received in acceptable condition by the laboratory.

Laboratory analytical results for soil samples SS01 through SS04, collected within the release extent, indicated concentrations of chloride exceeded the Closure Criteria. Soil samples collected outside of the release extent (SS05 through SS07) exhibited COC concentrations in compliance with the Closure Criteria and successfully defined the lateral extent of the release. Based on the elevated chloride concentrations detected within the release extent, additional delineation and excavation of impacted soil appeared warranted.

DELINEATION AND EXCAVATION SOIL SAMPLING ACTIVITIES

Following laboratory analytical results from the Site assessment, Ensolum returned to the Site between July 18 and July 20, 2023, to oversee delineation and excavation activities. Three potholes (PH01 through PH03) and three boreholes (BH01 through BH03) were advanced within and around the release extent by use of heavy equipment and hand auger, respectively, to assess the lateral and vertical definition of the release. Potholes PH01 through PH03 were advanced in the vicinity of delineation soil samples SS01 through SS03, respectively, and borehole BH03 was advanced in the vicinity of soil sample SS06. Discrete delineation soil samples were collected from each pothole and borehole at depths ranging from 0.5 feet to 3 feet bgs. The delineation soil samples were field screened, handled, and submitted for analysis for the same COCs as described above. Field screening results and observations for the potholes were logged on lithologic/soil sampling logs, which are included in Appendix C. All delineation soil sample locations are depicted on Figure 2.

Soil was excavated from the area represented by delineation soil samples SS01/PH01 through SS03/PH03 and SS04, all of which contained elevated chloride concentrations exceeding the Closure Criteria. Excavation activities were performed by use of heavy equipment. The entirety of the excavation occurred on the well pad. To direct excavation activities, Ensolum personnel screened soil as described above. Excavation of impacted soil was limited due to the presence of active production equipment and associated flowlines. As such, excavation activities were completed to the maximum extent practicable (MEP).

Following removal of accessible soil, Ensolum personnel collected 5-point composite soil samples representing up to 200 square feet from the floor and sidewalls of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples FS01 through FS12 were collected from the floor of the excavation at depths ranging from 2 feet to 4 feet bgs. Composite soil samples SW01 through SW04 were collected from the sidewalls of the excavation at depths ranging from the ground surface to 3.5 feet bgs. The excavation soil samples were handled and analyzed following the same procedures as described above. The excavation extent and excavation soil sample locations are presented on Figure 3.

The final excavation extent measured approximately 2,261 square feet. A total of approximately 260 cubic yards of impacted soil were removed during excavation activities. The impacted soil was transported and properly disposed of at the R360 Landfill Disposal Facility in Hobbs, New Mexico. After completion of confirmation sampling, the excavation area was secured with fencing.

LABORATORY ANALYTICAL RESULTS

Delineation soil samples BH01 and SS01 through SS04, collected from within the release extent at a depth of 0.5 feet bgs, and confirmation sidewall soil sample SW04 collected from ground surface to 3 feet bgs, contained chloride concentrations exceeding Site Closure Criteria. All soil samples with elevated chloride concentrations were removed during excavation activities except for borehole sample

BH01 (8,000 mg/kg) and sidewall soil sample SW04 (1,080 mg/kg). Due to active production equipment and pipelines present in the area, these soil samples could not be removed.

All other delineation soil samples and excavation confirmation soil samples collected were in compliance with the Site Closure Criteria for all COCs. The laboratory analytical results are summarized on the attached Table 1 and the complete laboratory analytical reports are included in Appendix D. All sampling notifications to NMOCD are included in Appendix E.

RECLAMATION PLAN

The release remained on the well pad that is currently in operation for oil and gas production purposes. As such, the release area is not expected to be reclaimed until the oil and gas well is plugged and abandoned (P&A'd) and the well pad is reclaimed. The Reclamation Plan for this release will default to the NMSLO-approved Reclamation Plan for the well pad per 19.2.100.67 NMAC. Specifics related to this release as they pertain to reclamation activities include:

- Approximately 260 cubic yards of impacted soil were excavated, transported, and properly disposed of at a State Of New Mexico permitted landfill;
- The excavation will be backfilled with locally sourced caliche to match the well pad's current grade;
- The backfilled area will not be seeded since it is within the active well pad;
- Erosion control management is not necessary since the backfilled area is within the active well pad; and
- Backfilling of the excavation is tentatively scheduled to be completed in the next few weeks.

Photographic documentation of backfilling will be provided to the NMSLO under a separate cover.

DEFERRAL REQUEST

XTO is requesting deferral of final remediation due to the presence of active production equipment and surface pipelines overlying some of the release and preventing full excavation of impacted soil. Further remediation in this area would require major facility deconstruction. The impacted soil remaining in place is delineated vertically by delineation soil samples BH01A collected at 3 feet bgs and laterally delineated north and east by delineation soil samples from boreholes BH02/BH02A and SS06/BH03, and laterally delineated west and south through excavation confirmation soil samples SW01 through SW03, and floor soil samples FS02, FS03, FS09, and FS10. The estimated area of remaining impacted soil measures approximately 1,767 square feet and, assuming a depth of 3 feet based on the soil sample results listed above, a total of approximately 196 cubic yards of chloride impacted soil remains in place. The deferral area and all delineation and excavation soil samples used to define the deferral area are presented on Figure 4.

The deferral area is limited to the immediate vicinity of production equipment and flowlines on the caliche well pad. The potential for residual impacts to encounter sensitive receptors is low. XTO does not believe deferment will result in imminent risk to human health, the environment, or groundwater. Depth to groundwater was determined to be greater than 100 feet bgs, and the impacted soil remaining in place is limited in areal and vertical extent.

Based on the presence of active production equipment and pipelines within the release area and the complete lateral and vertical delineation of impacted soil remaining in place, XTO requests deferral of

final remediation for Incident Number nAPP2317850727 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

Benjamin J. Belill
Project Geologist

Daniel Moir, PG
Senior Geologist

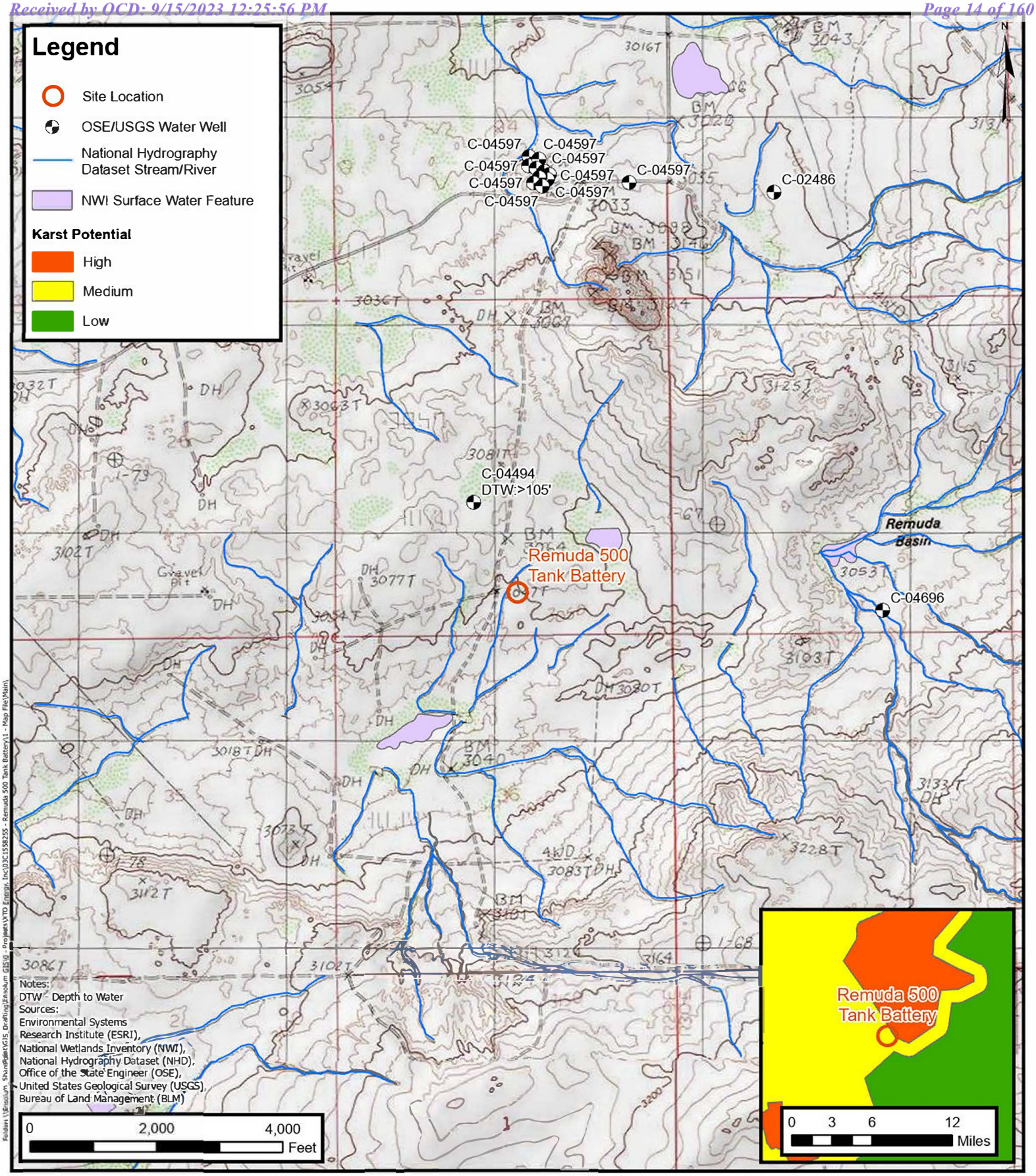
cc: Garrett Green, XTO
Tommee Lambert, XTO
NMSLO

Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Figure 4	Deferral Area Map
Table 1	Soil Sample Analytical Results
Appendix A	Referenced Well Records
Appendix B	Photographic Log
Appendix C	Lithologic / Soil Sampling Logs
Appendix D	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix E	NMOCD Email Notifications

ENSOLUM

FIGURES

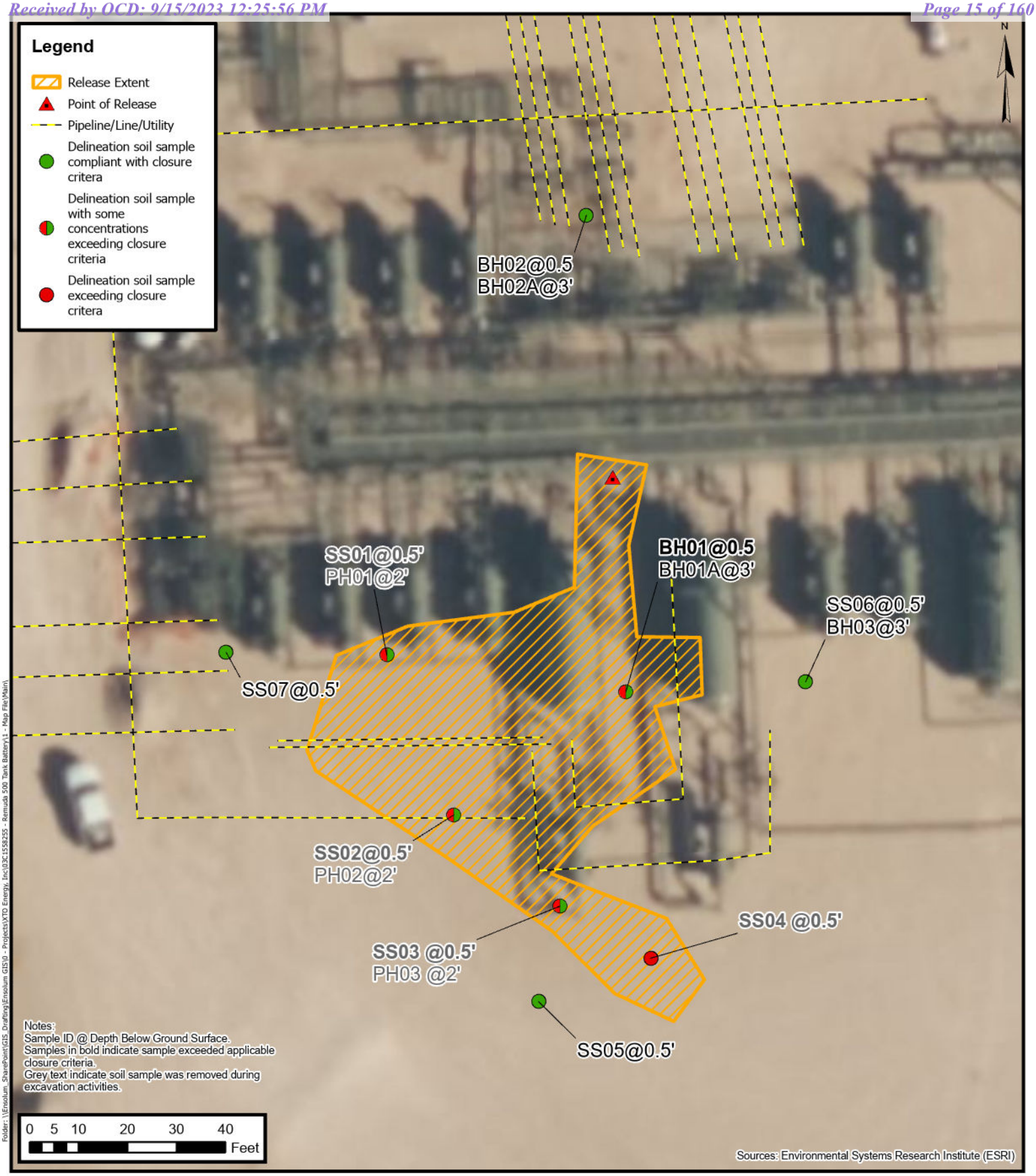


ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

XTO Energy, Inc
Remuda 500 Tank Battery
Incident Number: NAPP2317850727
Unit O, Sec 25, T23S, R29E
Eddy County, New Mexico

FIGURE 1



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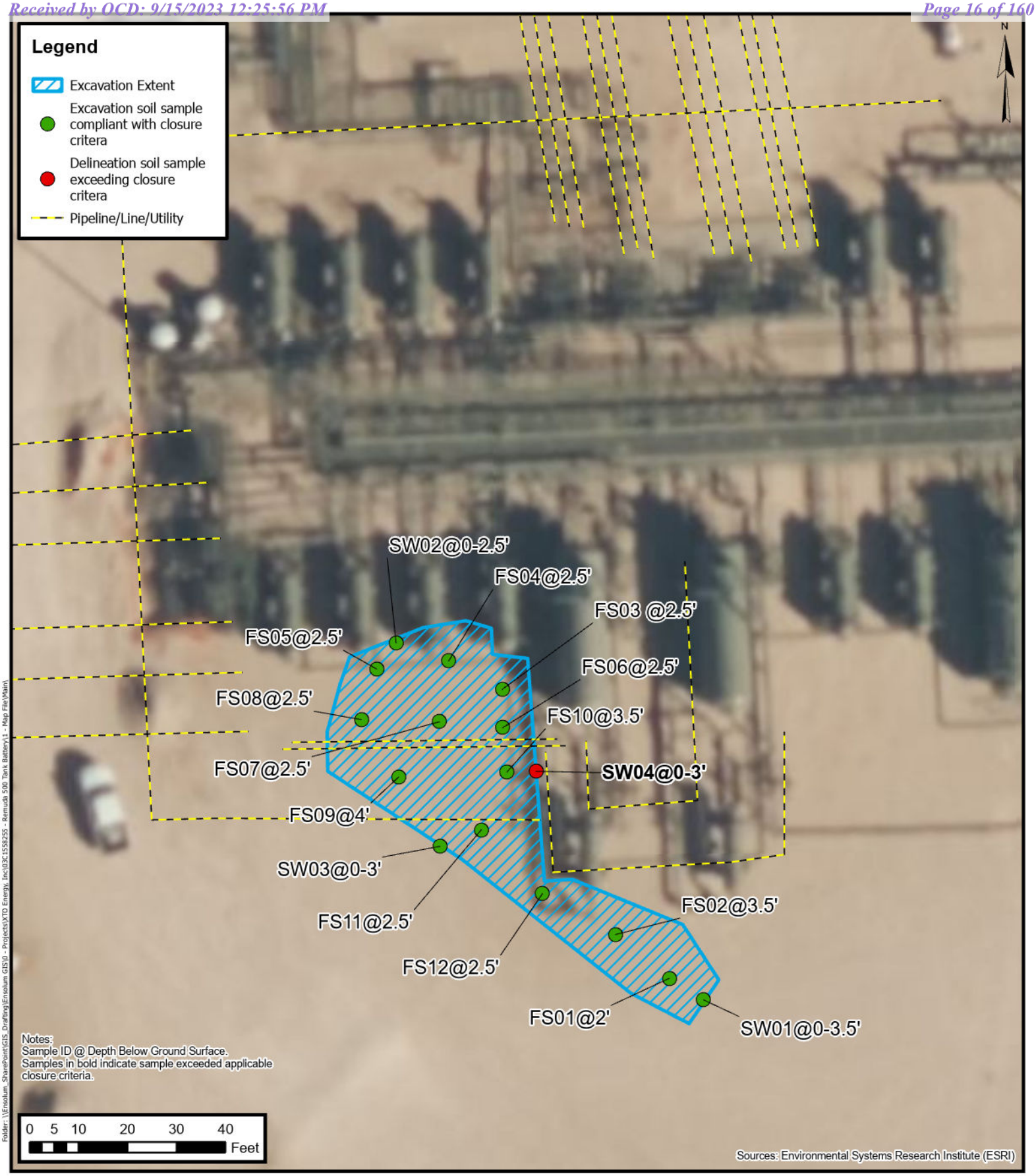
Delineation Soil Sample Locations

XTO Energy, Inc
Remuda 500 Tank Battery
Incident Number: NAPP2317850727
Unit O, Sec 25, T23S, R29E
Eddy County, New Mexico

FIGURE 2

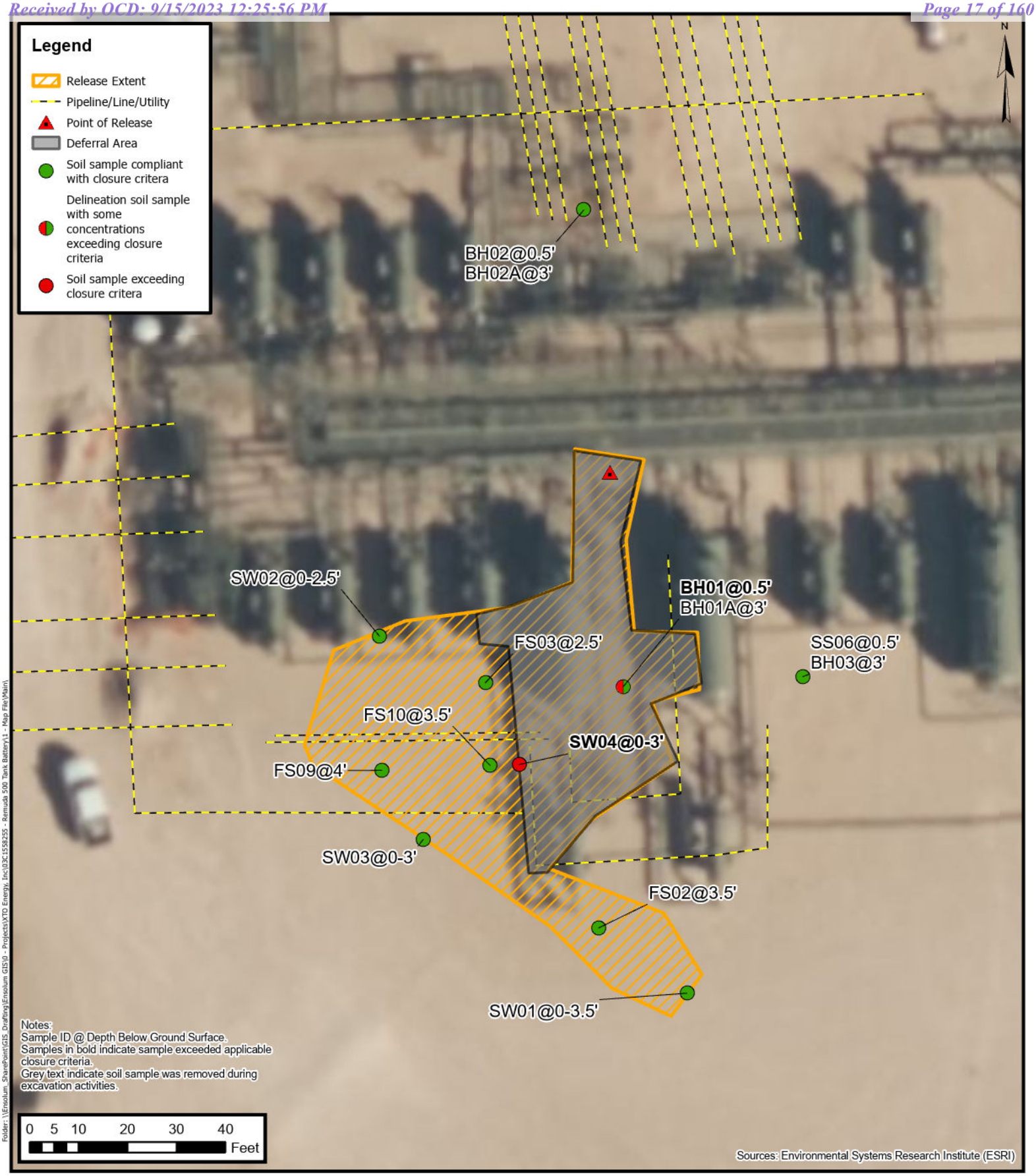


ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Excavation Soil Sample Locations

XTO Energy, Inc
Remuda 500 Tank Battery
Incident Number: NAPP2317850727
Unit O, Sec 25, T23S, R29E
Eddy County, New Mexico

FIGURE 3



ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Deferral Area Map

XTO Energy, Inc
Remuda 500 Tank Battery
Incident Number: NAPP2317850727
Unit O, Sec 25, T23S, R29E
Eddy County, New Mexico

FIGURE 4

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Remuda 500 Tank Battery
XTO Energy, Inc
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
Delineation Soil Samples										
~~SS01~~	~~07/07/2023~~	~~0.5~~	~~<0.00199~~	~~<0.00398~~	~~<50.5~~	~~<50.5~~	~~<50.5~~	~~<50.5~~	~~<50.5~~	~~**11,400**~~
~~PH01~~	~~07/18/2023~~	~~2~~	~~<0.00202~~	~~<0.00403~~	~~<49.8~~	~~<49.8~~	~~<49.8~~	~~<49.8~~	~~<49.8~~	~~293~~
~~SS02~~	~~07/07/2023~~	~~0.5~~	~~<0.00198~~	~~<0.00396~~	~~<50.3~~	~~<50.3~~	~~<50.3~~	~~<50.3~~	~~<50.3~~	~~**10,900**~~
~~PH02~~	~~07/18/2023~~	~~2~~	~~<0.00201~~	~~<0.00402~~	~~<49.6~~	~~<49.6~~	~~<49.6~~	~~<49.6~~	~~<49.6~~	~~407~~
~~SS03~~	~~07/07/2023~~	~~0.5~~	~~<0.00199~~	~~<0.00398~~	~~<49.7~~	~~<49.7~~	~~<49.7~~	~~<49.7~~	~~<49.7~~	~~**13,800**~~
~~PH03~~	~~07/18/2023~~	~~2~~	~~<0.00199~~	~~<0.00398~~	~~<49.6~~	~~<49.6~~	~~<49.6~~	~~<49.6~~	~~<49.6~~	~~275~~
~~SS04~~	~~07/07/2023~~	~~0.5~~	~~<0.00200~~	~~<0.00400~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~**1,810**~~
SS05	07/07/2023	0.5	<0.00202	<0.00403	<50.3	<50.3	<50.3	<50.3	<50.3	288
SS06	07/07/2023	0.5	<0.00200	<0.00401	<49.6	<49.6	<49.6	<49.6	<49.6	163
BH03	07/20/2023	3	<0.00202	<0.00403	<50.5	<50.5	<50.5	<50.5	<50.5	459
SS07	07/07/2023	0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	476
BH01	07/20/2023	0.5	<0.00198	<0.00396	<50.1	<50.1	<50.1	<50.1	<50.1	**8,000**
BH01A	07/20/2023	3	<0.00200	<0.00399	<49.7	<49.7	<49.7	<49.7	<49.7	379
BH02	07/20/2023	0.5	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	101
BH02A	07/20/2023	3	<0.00202	<0.00403	<49.8	<49.8	<49.8	<49.8	<49.8	212
Confirmation Soil Samples										
FS01	07/18/2023	2	<0.00200	<0.00401	<50.3	<50.3	<50.3	<50.3	<50.3	265
FS02	07/20/2023	3.5	<0.00201	<0.00402	<50.5	<50.5	<50.5	<50.5	<50.5	504
FS03	07/20/2023	2.5	<0.00202	<0.00404	<50.5	<50.5	<50.5	<50.5	<50.5	426
FS04	07/19/2023	2.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	457
FS05	07/19/2023	2.5	<0.00200	<0.00400	<49.8	<49.8	<49.8	<49.8	<49.8	444
FS06	07/20/2023	2.5	<0.00202	<0.00403	<49.6	<49.6	<49.6	<49.6	<49.6	448
FS07	07/20/2023	2.5	<0.00200	<0.00399	<49.7	<49.7	<49.7	<49.7	<49.7	561
FS08	07/20/2023	2.5	<0.00198	<0.00396	<49.6	<49.6	<49.6	<49.6	<49.6	562
FS09	07/20/2023	4	<0.00200	<0.00400	<50.2	<50.2	<50.2	<50.2	<50.2	572
FS10	07/20/2023	3.5	<0.00199	<0.00398	<50.2	<50.2	<50.2	<50.2	<50.2	442
FS11	07/20/2023	2.5	<0.00201	<0.00402	<50.2	<50.2	<50.2	<50.2	<50.2	465
FS12	07/20/2023	2.5	<0.00199	<0.00398	<50.3	<50.3	<50.3	<50.3	<50.3	436
SW01	07/19/2023	0 - 3.5	<0.00201	<0.00402	<50.4	64.9	<50.4	64.9	64.9	412
SW02	07/19/2023	0 - 2.5	<0.00202	<0.00403	<50.2	<50.2	<50.2	<50.2	<50.2	380
SW03	07/20/2023	0 - 3	<0.00198	<0.00397	<50.4	<50.4	<50.4	<50.4	<50.4	301
SW04	07/20/2023	0 - 3	<0.00200	<0.00399	<50.4	<50.4	<50.4	<50.4	<50.4	**1,080**

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

Concentrations in **bold** exceed the NMOCD Table I Closure Criteria

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

NMAC: New Mexico Administrative Code

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

ENSOLUM

APPENDIX A

Referenced Well Records

WSP USA

508 West Stevens Street
Carlsbad, New Mexico 88220

BH or PH Name: BH01 (C-04494)	Date: 11/18/2020, 12/02/20, 01/05/2021
Site Name: Remuda North 25 Observation Well	
RP or Incident Numbe	
LTE Job Number: TE012919039	
Logged By BB, LAD, FS	Method: Hollow Stem Auger, sonic
Lat/Long:	Field Screening:
Hole Diameter: 6.25", 4.25"	Total Depth: 105'

LITHOLOGIC / SOIL SAMPLING LOG

Comments:
Lithology remarks only. No field screenings: Dry hole

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D			N			1	SP-SC	
						2		0-1' : SAND, dry, brown, poorly graded, fine grain, Clay (10% clay), some roots, no stain, no odor
						3		
						4		1-4' : SAND, dry, reddish-light brown, poorly graded, very fine - fine grain, some rounded caliche pebbles, no stain, no odor
D			N			5	CCHE	
						6		4-9' : CALICHE, dry, light brown-tan, poorly consolidated, sub-rounded caliche pebbles and gravel, very silty, gradational
						7		
						8		9-14' : Abundent sub-round caliche gravel
						9		14-19' : Some sub-angular caliche gravel and pebbles
						10		19-24' : Abundant sub-angular caliche gravel and pebbles, moderately consolidated
						11		
						12		
						13		
						14		
						15		
						16		
						17		
						18		
						19		
						20		
						21		
						22		
						23		
						24		
D			N			25	CL	

WSP USA
508 West Stevens Street
Carlsbad, New Mexico 88220

BH or PH Name: BH01 (C-04494)	Date: 11/18/2020, 12/02/20, 01/05/2021
Site Name: Remuda North 25 Observation Well	
RP or Incident Numbe	
LTE Job Number: TE012919039	
Logged By BB, LAD, FS	Method: Hollow Stem Auger, sonic
Hole Diameter: 6.25", 4.25"	Total Depth: 105'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Comments:
Lithology remarks only. No field screenings: Dry hole

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D			N			26	CL	24-39' : MUDSTONE, dry, reddish-brown, low plasticity, well consolidated, cohesive, trace caliche sub-angular pebbles, no tain, no odor, sharp transition
						27		
						28		
						29		34-39' : Sub-angular calcium carbonate gravel with dissolution features (1-3mm), tan-light brown
						30		At 39' : Begin air rotory (4.25")
						31		39-42' : DOLOMETIC LIMESTONE, tan-light brown, dry, well consolidated, with dissolution features (1-3mm), sharp, no stain, no odor, light to moderate reaction with HCl
						32		
						33		42-45' : Some light gray dolomite with trace dissolution features (>1mm)
						34		At 48' : Stop due to air rotory refusal (11/18/20)
						35		48-56' : Advance borehole with new air rotary bit (12/02/20), DOLOMITE, white, well consolidated, dark gray-black banding, no stain , no odor
						36		
						37		
						38		
						39		
D			N			40	DOL	
						41		
						42		
						43		
						44		
						45		
						46		
						47		
						48		Refusal on 11/18/20
						49		Restart borehole on 12/02/20
						50		

WSP USA
508 West Stevens Street
Carlsbad, New Mexico 88220

BH or PH Name: BH01 (C-04494)	Date: 11/18/2020. 12/02/2020, 1/5/2021
Site Name: Remuda North 25 Observation Well	
RP or Incident Number:	
LTE Job Number: TE012919039	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By BB, LAD, FS / Method: Hollow Stem Auger, sonic
Lat/Long: / Field Screening:	Hole Diameter: 6.25", 4.25" / Total Depth: 105'

Comments:
Lithologic log only, no field screenings

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						51	DOL	48-56' : Advanced borehole with new air rotary bit (12/02/20), DOLOMITE, white, well consolidated, dark gray- banding, no stain no odor
						52		
						53		
						54		
						55		
						56		At 56' : Restarted borehole on 1/5/2021 with sonic rig
						57		56-65' : DOLOMITE, dry, light gray-gray, well consolidated, some calcium crystalline veins (<1mm), some dissolution features (2mm) with fine calcite crystalline, trace orange oxidation staining within dissolution features, no stain, no odor
						58		
						59		62' : Brown-pale yellow coarse crystalline dolomitic limestone stringer (2cm)
						60		63-65' : Abundant calcite crystalline veins (<1mm), pale green-gray, poorly consolidated
						61		
						62		65-69' : MUDSTONE, moist, reddish brown, poorly consolidated, high plasticity, cohesive, abundant coarse crystalline gypsum, few pale green-gray mottling, no stain, no odor
						63		
						64		69-81' : GYPSUM with Anhydrite, dry, greenish gray, some pale yellow, well consolidated, finr crystalline, 20% anhydrite, no stain, no odor
D			N			65	CH-S	
						66		
						67		
						68		
						69	GYP	
D			N			70		
						71		
						72		
						73		
						74		
						75		

WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220	BH or PH Name: BH01 (C-04494)	Date: 11/18/2020. 12/02/2020, 1/5/2021
	Site Name: Remuda North 25 Observation Well	
	RP or Incident Number:	
	LTE Job Number: TE012919039	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By BB, LAD, FS	Method: Hollow Stem Auger, sonic
Lat/Long:	Field Screening:	Hole Diameter: 6.25", 4.25" / Total Depth: 105'

Comments:
Lithologic log only, no field screenings

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						76	GYP	69-81' : GYPSUM with Anhydrite, dry, greenish gray, some pale yellow, well consolidated, finr crystalline, 20% anhydrite, no stain, no odor
						77		
						78		81-98' : MUDSTONE, moist, dark reddish brown, moderately consolidated, high plasticity, cohesive, trace coarse crystalline gypsum inclusions, no stain, no odor
						79		
						80		85-86.5' : greenish-gray well consolidated coarse crystalline gypsum/anhydrite stringer
						81		
D			N			82	CH-S	90-98' : Some fine grain brown sand
						83		At 97' : dark gray-gray gyspum stringer (4cm)
						84		98-99.5' : GYPSUM, dark gray-gray, some brown, dry, well consolidated, fine-coarse crystalline, no stain, no odor
						85		99.5-105' : Sandy SILTSTONE, moist, brown, some gray-dark gray, poorly consolidated, 20% very fine grain sand, no stain, no odor
						86		
						87		
						88		
						89		
						90		
						91		
						92		
						93		
						94		
						95		
						96		
						97		
						98		
D			N			99	GYP	
D			N			100	ML-S	

WSP USA
508 West Stevens Street
Carlsbad, New Mexico 88220

BH or PH Name: BH01 (C-04494)	Date: 11/18/2020. 12/02/2020, 1/5/2021
Site Name: Remuda North 25 Observation Well	
RP or Incident Number:	
LTE Job Number: TE012919039	

LITHOLOGIC / SOIL SAMPLING LOG

		Logged By BB, LAD, FS	Method: Hollow Stem Auger, sonic
Lat/Long:	Field Screening:	Hole Diameter: 6.25", 4.25"	Total Depth: 105'

Comments:
Lithologic log only, no field screenings

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D			N			101	ML-S	99.5-105' : Sandy SILTSTONE, moist, brown, some gray-dark gray, poorly consolidated, 20% very fine grain sand, no stain, no odor At 102' : Thin (<1mm) laminated black/gray well consolidated shale stringer (4cm thick)
						102		
						103		
						104		
						105		
						106		TD @ 105' bgs (1/5/2021)
						107		
						108		
						109		
						110		
						111		
						112		
						113		
						114		
						115		
						116		
						117		
						118		
						119		
						120		
						121		
						122		
						123		
						124		
						125		

ENSOLUM

APPENDIX B

Photographic Log

ENSOLUM

Photographic Log
XTO Energy, Inc
Remuda 500 Tank Battery
Incident Number nAPP2317850727

Photograph 1 Date: 7/7/2023
Description: Site assessment activities, release extent
View: North

Photograph 2 Date: 7/7/2023
Description: Site assessment activities, release extent
View: North

Photograph 3 Date: 7/19/2023
Description: Final excavation extent
View: North

Photograph 4 Date: 7/19/2023
Description: Final excavation extent
View: Southwest

ENSOLUM

APPENDIX C

Lithologic Soil Sampling Logs

ENSOLUM

	Sample Name: PH01	Date: 07/18/2023
	Site Name: Remuda 500 Tank Battery	
	Incident Number: nAPP2317850727	
	Job Number: 03C1558255	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Mariaha O'Dell	Method: Backhoe
Coordinates: 32.270410, -103.937592	Hole Diameter: N/A	Total Depth: 2'

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. All chloride screenings included with a + 40% correction factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	12,129	0.0	Y	SS01	0.5	0	CCHE	Caliche, fill.
D	1,725	0.0	N		1	1		
D	352.8	0.0	N	PH01	2	2	SW	Reddish brown sand, very fine to fine grained, well graded, traces of CCHE.

Total Depth @ 2' bgs.

ENSOLUM

	Sample Name: PH02	Date: 07/18/2023
	Site Name: Remuda 500 Tank Battery	
	Incident Number: nAPP2317850727	
	Job Number: 03C1558255	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Mariaha O'Dell	Method: Backhoe
Coordinates: 32.270319, -103.937549	Hole Diameter: N/A	Total Depth: 2'

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. All chloride screenings included with a + 40% correction factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	13,232	0.0	Y	SS02	0.5	0	CCHE	Caliche, fill.
D	1,982	0.0	N		1	1		
D	448	0.0	N	PH02	2	2	SW	Reddish brown sand, very fine to fine grained, well graded, traces of CCHE.

Total Depth @ 2' bgs.

ENSOLUM

	Sample Name: PH03	Date: 07/18/2023
	Site Name: Remuda 500 Tank Battery	
	Incident Number: nAPP2317850727	
	Job Number: 03C1558255	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Mariaha O'Dell	Method: Backhoe
Coordinates: 32.270241, -103.937431	Hole Diameter: N/A	Total Depth: 2'

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. All chloride screenings included with a + 40% correction factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	14,456	0.0	Y	SS03	0.5	0	CCHE	Caliche, fill.
D	<157	0.0	N		1	1		
D	268.8	0.0	N	PH03	2	2	SW	Reddish brown sand, very fine to fine grained, well graded, traces of CCHE.

Total Depth @ 2' bgs.

ENSOLUM

	Sample Name: BH01	Date: 07/20/2023
	Site Name: Remuda 500 Tank Battery	
	Incident Number: nAPP2317850727	
	Job Number: 03C1558255	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Connor Whitman	Method: Hand Auger
Coordinates: 32.270387, -103.937437	Hole Diameter: N/A	Total Depth: 3'

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. All chloride screenings included with a + 40% correction factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	CCHE	Caliche, fill.
D	7,392	0.0	Y	BH01	0.5			
D	1,397	0.0	N		1	1		
D	246	0.0	N		2	2	SW	Reddish brown sand, very fine to fine grained, well graded, traces of CCHE.
D	448	0.0	N	BH01A	3	3		

Total Depth @ 3' bgs.

ENSOLUM

	Sample Name: BH02	Date: 07/20/2023
	Site Name: Remuda 500 Tank Battery	
	Incident Number: nAPP2317850727	
	Job Number: 03C1558255	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Connor Whitman	Method: Hand Auger
Coordinates: 32.270656, -103.937466	Hole Diameter: N/A	Total Depth: 3'

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. All chloride screenings included with a + 40% correction factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	CCHE	Caliche, fill.
D	<168	0.0	Y	BH02	0.5			
D	<168	0.0	N		1	1		
D	<168	0.0	N		2	2	SW	Reddish brown sand, very fine to fine grained, well graded, traces of CCHE.
D	<168	0.0	N	BH02A	3	3		

Total Depth @ 3' bgs.

ENSOLUM

	Sample Name: BH03	Date: 07/20/2023
	Site Name: Remuda 500 Tank Battery	
	Incident Number: nAPP2317850727	
	Job Number: 03C1558255	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Connor Whitman	Method: Hand Auger
Coordinates: 32.270404, -103.937320	Hole Diameter: N/A	Total Depth: 3'

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. All chloride screenings included with a + 40% correction factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	CCHE	Caliche, fill.
D	<168	0.0	Y	SS06	0.5			
D	<168	0.0	N		1	1		
D	<168	0.0	N		2	2	SW	Reddish brown sand, very fine to fine grained, well graded, traces of CCHE.
D	<168	0.0	N	BH03	3	3		

Total Depth @ 3' bgs.

ENSOLUM

APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ben Belill
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 7/25/2023 11:10:24 AM

JOB DESCRIPTION

Remuda 500 Tank Battery
SDG NUMBER 03C1558255

JOB NUMBER

890-4927-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

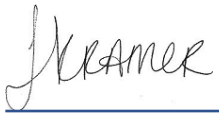
Eurofins Carlsbad

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
7/25/2023 11:10:24 AM

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

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Laboratory Job ID: 890-4927-1
SDG: 03C1558255

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4927-1
SDG: 03C1558255

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
S1-	Surrogate recovery exceeds control limits, low 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: Remuda 500 Tank Battery

Job ID: 890-4927-1
SDG: 03C1558255

Job ID: 890-4927-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4927-1

Receipt
The samples were received on 7/12/2023 8:35 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 2.6°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SS01 (890-4927-1), SS02 (890-4927-2), SS03 (890-4927-3), SS04 (890-4927-4), SS05 (890-4927-5), SS06 (890-4927-6) and SS07 (890-4927-7).

GC VOA
Method 8021B: The continuing calibration verification (CCV) associated with batch 880-57701 recovered above the upper control limit for Benzene, Toluene, Ethylbenzene, m-Xylene & p-Xylene and o-Xylene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 880-57701/64).

Method 8021B: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-57655 and analytical batch 880-57701 recovered outside control limits for the following analytes: Benzene.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-57701 recovered above the upper control limit for Benzene, Toluene, Ethylbenzene, m-Xylene & p-Xylene and o-Xylene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: (CCV 880-57701/82) and (CCV 880-57701/95).

Method 8021B: Surrogate recovery for the following samples were outside control limits: SS01 (890-4927-1), SS02 (890-4927-2), SS03 (890-4927-3), SS04 (890-4927-4), SS05 (890-4927-5), SS06 (890-4927-6), SS07 (890-4927-7), (LCS 880-57655/1-A), (LCSD 880-57655/2-A), (MB 880-57655/5-A), (890-4934-A-41-B MS) and (890-4934-A-41-C MSD). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (890-4934-A-41-D). Evidence of matrix interferences is not obvious.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (880-30795-A-64-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: SS01 (890-4927-1), SS03 (890-4927-3), SS04 (890-4927-4), SS05 (890-4927-5), SS06 (890-4927-6) and SS07 (890-4927-7). 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 880-57953 and analytical batch 880-58292 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
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-57587 and analytical batch 880-57704 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.

Case Narrative

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4927-1
SDG: 03C1558255

Job ID: 890-4927-1 (Continued)

Laboratory: Eurofins Carlsbad (Continued)

Client Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4927-1
SDG: 03C1558255

Client Sample ID: SS01

Lab Sample ID: 890-4927-1
Matrix: Solid
Date Collected: 07/07/23 09:50
Date Received: 07/12/23 08:35
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 *1	0.00199		mg/Kg		07/14/23 08:26	07/16/23 04:41	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/14/23 08:26	07/16/23 04:41	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/14/23 08:26	07/16/23 04:41	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/14/23 08:26	07/16/23 04:41	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/14/23 08:26	07/16/23 04:41	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/14/23 08:26	07/16/23 04:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*234*	*S1+*	*70 - 130*	*07/14/23 08:26*	*07/16/23 04:41*	*1*
1,4-Difluorobenzene (Surr)	*62*	*S1-*	*70 - 130*	*07/14/23 08:26*	*07/16/23 04:41*	*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			07/17/23 14:47	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			07/25/23 11:30	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	<50.5	U	50.5		mg/Kg		07/18/23 13:38	07/25/23 02:23	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		07/18/23 13:38	07/25/23 02:23	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		07/18/23 13:38	07/25/23 02:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*68*	*S1-*	*70 - 130*	*07/18/23 13:38*	*07/25/23 02:23*	*1*
o-Terphenyl	*74*		*70 - 130*	*07/18/23 13:38*	*07/25/23 02:23*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**11400**		99.8		mg/Kg			07/14/23 22:06	20

Client Sample ID: SS02

Lab Sample ID: 890-4927-2
Matrix: Solid
Date Collected: 07/07/23 09:55
Date Received: 07/12/23 08:35
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U *1	0.00198		mg/Kg		07/14/23 08:26	07/16/23 05:07	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/14/23 08:26	07/16/23 05:07	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		07/14/23 08:26	07/16/23 05:07	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		07/14/23 08:26	07/16/23 05:07	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		07/14/23 08:26	07/16/23 05:07	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		07/14/23 08:26	07/16/23 05:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*244*	*S1+*	*70 - 130*	*07/14/23 08:26*	*07/16/23 05:07*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4927-1
SDG: 03C1558255

Client Sample ID: SS02

Lab Sample ID: 890-4927-2
Matrix: Solid
Date Collected: 07/07/23 09:55
Date Received: 07/12/23 08:35
Sample Depth: 0.5

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*75*		*70 - 130*	*07/14/23 08:26*	*07/16/23 05:07*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396	mg/Kg			07/17/23 14:47	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3	mg/Kg			07/25/23 11:30	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	<50.3	U	50.3	mg/Kg		07/18/23 13:38	07/25/23 02:44	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3	mg/Kg		07/18/23 13:38	07/25/23 02:44	1
OII Range Organics (Over C28-C36)	<50.3	U	50.3	mg/Kg		07/18/23 13:38	07/25/23 02:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*70*		*70 - 130*	*07/18/23 13:38*	*07/25/23 02:44*	*1*
o-Terphenyl	*79*		*70 - 130*	*07/18/23 13:38*	*07/25/23 02:44*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10900**		99.0	mg/Kg			07/14/23 22:22	20

Client Sample ID: SS03

Lab Sample ID: 890-4927-3
Matrix: Solid
Date Collected: 07/07/23 10:00
Date Received: 07/12/23 08:35
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 *1	0.00199	mg/Kg		07/14/23 08:26	07/16/23 05:33	1
Toluene	<0.00199	U	0.00199	mg/Kg		07/14/23 08:26	07/16/23 05:33	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		07/14/23 08:26	07/16/23 05:33	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		07/14/23 08:26	07/16/23 05:33	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		07/14/23 08:26	07/16/23 05:33	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		07/14/23 08:26	07/16/23 05:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*257*	*S1+*	*70 - 130*	*07/14/23 08:26*	*07/16/23 05:33*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*07/14/23 08:26*	*07/16/23 05:33*	*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			07/17/23 14:47	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7	mg/Kg			07/25/23 11:30	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4927-1
SDG: 03C1558255

Client Sample ID: SS03

Lab Sample ID: 890-4927-3
Matrix: Solid
Date Collected: 07/07/23 10:00
Date Received: 07/12/23 08:35
Sample Depth: 0.5

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	<49.7	U	49.7		mg/Kg		07/18/23 13:38	07/25/23 03:04	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		07/18/23 13:38	07/25/23 03:04	1
OII Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		07/18/23 13:38	07/25/23 03:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*69*	*S1-*	*70 - 130*	*07/18/23 13:38*	*07/25/23 03:04*	*1*
o-Terphenyl	*77*		*70 - 130*	*07/18/23 13:38*	*07/25/23 03:04*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**13800**		99.4		mg/Kg			07/14/23 22:27	20

Client Sample ID: SS04

Lab Sample ID: 890-4927-4
Matrix: Solid
Date Collected: 07/07/23 10:15
Date Received: 07/12/23 08:35
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *1	0.00200		mg/Kg		07/14/23 08:26	07/16/23 05:58	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/14/23 08:26	07/16/23 05:58	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/14/23 08:26	07/16/23 05:58	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/14/23 08:26	07/16/23 05:58	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/14/23 08:26	07/16/23 05:58	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/14/23 08:26	07/16/23 05:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*344*	*S1+*	*70 - 130*	*07/14/23 08:26*	*07/16/23 05:58*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*07/14/23 08:26*	*07/16/23 05:58*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			07/17/23 14:47	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			07/25/23 11:30	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		07/18/23 13:38	07/25/23 03:24	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/18/23 13:38	07/25/23 03:24	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/18/23 13:38	07/25/23 03:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*69*	*S1-*	*70 - 130*	*07/18/23 13:38*	*07/25/23 03:24*	*1*
o-Terphenyl	*76*		*70 - 130*	*07/18/23 13:38*	*07/25/23 03:24*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4927-1
SDG: 03C1558255

Client Sample ID: SS04

Lab Sample ID: 890-4927-4
Matrix: Solid
Date Collected: 07/07/23 10:15
Date Received: 07/12/23 08:35
Sample Depth: 0.5

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1810		50.0		mg/Kg			07/14/23 22:32	10

Client Sample ID: SS05

Lab Sample ID: 890-4927-5
Matrix: Solid
Date Collected: 07/07/23 10:20
Date Received: 07/12/23 08:35
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 *1	0.00202		mg/Kg		07/14/23 08:26	07/16/23 06:24	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/14/23 08:26	07/16/23 06:24	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/14/23 08:26	07/16/23 06:24	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		07/14/23 08:26	07/16/23 06:24	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/14/23 08:26	07/16/23 06:24	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		07/14/23 08:26	07/16/23 06:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*261*	*S1+*	*70 - 130*	*07/14/23 08:26*	*07/16/23 06:24*	*1*
1,4-Difluorobenzene (Surr)	*71*		*70 - 130*	*07/14/23 08:26*	*07/16/23 06:24*	*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			07/17/23 14:47	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3		mg/Kg			07/25/23 11:30	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	<50.3	U	50.3		mg/Kg		07/18/23 13:38	07/25/23 03:45	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3		mg/Kg		07/18/23 13:38	07/25/23 03:45	1
OII Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		07/18/23 13:38	07/25/23 03:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*69*	*S1-*	*70 - 130*	*07/18/23 13:38*	*07/25/23 03:45*	*1*
o-Terphenyl	*75*		*70 - 130*	*07/18/23 13:38*	*07/25/23 03:45*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	288		24.8		mg/Kg			07/14/23 22:37	5

Client Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4927-1
SDG: 03C1558255

Client Sample ID: SS06

Lab Sample ID: 890-4927-6
Matrix: Solid
Date Collected: 07/07/23 10:25
Date Received: 07/12/23 08:35
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *1	0.00200		mg/Kg		07/14/23 08:26	07/16/23 06:50	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/14/23 08:26	07/16/23 06:50	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/14/23 08:26	07/16/23 06:50	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		07/14/23 08:26	07/16/23 06:50	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/14/23 08:26	07/16/23 06:50	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		07/14/23 08:26	07/16/23 06:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*217*	*S1+*	*70 - 130*	*07/14/23 08:26*	*07/16/23 06:50*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*07/14/23 08:26*	*07/16/23 06:50*	*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			07/17/23 14:47	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			07/25/23 11:30	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	<49.6	U	49.6		mg/Kg		07/18/23 13:38	07/25/23 04:05	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		07/18/23 13:38	07/25/23 04:05	1
OII Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		07/18/23 13:38	07/25/23 04:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*1*	*S1-*	*70 - 130*	*07/18/23 13:38*	*07/25/23 04:05*	*1*
o-Terphenyl	*1*	*S1-*	*70 - 130*	*07/18/23 13:38*	*07/25/23 04:05*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**163**		5.04		mg/Kg			07/14/23 22:42	1

Client Sample ID: SS07

Lab Sample ID: 890-4927-7
Matrix: Solid
Date Collected: 07/07/23 10:30
Date Received: 07/12/23 08:35
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *1	0.00200		mg/Kg		07/14/23 08:26	07/16/23 07:17	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/14/23 08:26	07/16/23 07:17	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/14/23 08:26	07/16/23 07:17	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/14/23 08:26	07/16/23 07:17	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/14/23 08:26	07/16/23 07:17	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/14/23 08:26	07/16/23 07:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*255*	*S1+*	*70 - 130*	*07/14/23 08:26*	*07/16/23 07:17*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4927-1
SDG: 03C1558255

Client Sample ID: SS07

Lab Sample ID: 890-4927-7
Matrix: Solid
Date Collected: 07/07/23 10:30
Date Received: 07/12/23 08:35
Sample Depth: 0.5

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*63*	*S1-*	*70 - 130*	*07/14/23 08:26*	*07/16/23 07:17*	*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			07/17/23 14:47	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			07/25/23 11:30	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		07/18/23 13:39	07/25/23 04:25	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/18/23 13:39	07/25/23 04:25	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/18/23 13:39	07/25/23 04:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*68*	*S1-*	*70 - 130*	*07/18/23 13:39*	*07/25/23 04:25*	*1*
o-Terphenyl	*74*		*70 - 130*	*07/18/23 13:39*	*07/25/23 04:25*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**476**	**F1**	25.0		mg/Kg			07/14/23 22:47	5

Surrogate Summary

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4927-1
SDG: 03C1558255

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-4927-1	SS01	234 S1+	62 S1-
890-4927-2	SS02	244 S1+	75
890-4927-3	SS03	257 S1+	84
890-4927-4	SS04	344 S1+	96
890-4927-5	SS05	261 S1+	71
890-4927-6	SS06	217 S1+	92
890-4927-7	SS07	255 S1+	63 S1-
890-4934-A-41-B MS	Matrix Spike	213 S1+	85
890-4934-A-41-C MSD	Matrix Spike Duplicate	224 S1+	72
LCS 880-57655/1-A	Lab Control Sample	197 S1+	72
LCSD 880-57655/2-A	Lab Control Sample Dup	197 S1+	93
MB 880-57617/5-A	Method Blank	94	78
MB 880-57655/5-A	Method Blank	115	60 S1-

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-30795-A-64-C MS	Matrix Spike	75	72
880-30795-A-64-D MSD	Matrix Spike Duplicate	76	70
890-4927-1	SS01	68 S1-	74
890-4927-2	SS02	70	79
890-4927-3	SS03	69 S1-	77
890-4927-4	SS04	69 S1-	76
890-4927-5	SS05	69 S1-	75
890-4927-6	SS06	1 S1-	1 S1-
890-4927-7	SS07	68 S1-	74
LCS 880-57953/2-A	Lab Control Sample	84	85
LCSD 880-57953/3-A	Lab Control Sample Dup	84	83
MB 880-57953/1-A	Method Blank	82	93

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4927-1
SDG: 03C1558255

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-57617/5-A
Matrix: Solid
Analysis Batch: 57701

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57617

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/13/23 13:36	07/15/23 08:05	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/13/23 13:36	07/15/23 08:05	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/13/23 13:36	07/15/23 08:05	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/13/23 13:36	07/15/23 08:05	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/13/23 13:36	07/15/23 08:05	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/13/23 13:36	07/15/23 08:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*07/13/23 13:36*	*07/15/23 08:05*	*1*
1,4-Difluorobenzene (Surr)	*78*		*70 - 130*	*07/13/23 13:36*	*07/15/23 08:05*	*1*

Lab Sample ID: MB 880-57655/5-A
Matrix: Solid
Analysis Batch: 57701

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57655

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/14/23 08:26	07/15/23 21:24	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/14/23 08:26	07/15/23 21:24	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/14/23 08:26	07/15/23 21:24	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/14/23 08:26	07/15/23 21:24	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/14/23 08:26	07/15/23 21:24	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/14/23 08:26	07/15/23 21:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*07/14/23 08:26*	*07/15/23 21:24*	*1*
1,4-Difluorobenzene (Surr)	*60*	*S1-*	*70 - 130*	*07/14/23 08:26*	*07/15/23 21:24*	*1*

Lab Sample ID: LCS 880-57655/1-A
Matrix: Solid
Analysis Batch: 57701

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57655

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.07178		mg/Kg		72	70 - 130		
Toluene			0.100	0.1171		mg/Kg		117	70 - 130		
Ethylbenzene			0.100	0.1226		mg/Kg		123	70 - 130		
m-Xylene & p-Xylene			0.200	0.2238		mg/Kg		112	70 - 130		
o-Xylene			0.100	0.1089		mg/Kg		109	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*197*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*72*		*70 - 130*

Lab Sample ID: LCSD 880-57655/2-A
Matrix: Solid
Analysis Batch: 57701

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 57655

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1222	*1	mg/Kg		122	70 - 130	52	35

QC Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4927-1
SDG: 03C1558255

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

Lab Sample ID: LCSD 880-57655/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 57701 — **Prep Batch: 57655**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.1164		mg/Kg		116	70 - 130	1	35
Ethylbenzene			0.100	0.1256		mg/Kg		126	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.2298		mg/Kg		115	70 - 130	3	35
o-Xylene			0.100	0.1175		mg/Kg		117	70 - 130	8	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*197*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

Lab Sample ID: 890-4934-A-41-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 57701 — **Prep Batch: 57655**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00198	U *1	0.0994	0.1164		mg/Kg		117	70 - 130
Toluene	<0.00198	U	0.0994	0.1119		mg/Kg		113	70 - 130
Ethylbenzene	<0.00198	U	0.0994	0.1144		mg/Kg		115	70 - 130
m-Xylene & p-Xylene	<0.00396	U	0.199	0.2096		mg/Kg		104	70 - 130
o-Xylene	<0.00198	U	0.0994	0.1113		mg/Kg		111	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*213*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*85*		*70 - 130*

Lab Sample ID: 890-4934-A-41-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 57701 — **Prep Batch: 57655**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00198	U *1	0.100	0.09210		mg/Kg		92	70 - 130	23	35
Toluene	<0.00198	U	0.100	0.09373		mg/Kg		94	70 - 130	18	35
Ethylbenzene	<0.00198	U	0.100	0.09897		mg/Kg		99	70 - 130	14	35
m-Xylene & p-Xylene	<0.00396	U	0.200	0.1839		mg/Kg		91	70 - 130	13	35
o-Xylene	<0.00198	U	0.100	0.09715		mg/Kg		97	70 - 130	14	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*224*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*72*		*70 - 130*

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

Lab Sample ID: MB 880-57953/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58292 — **Prep Batch: 57953**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/18/23 13:34	07/24/23 20:09	1

QC Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4927-1
SDG: 03C1558255

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

Lab Sample ID: MB 880-57953/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58292 — **Prep Batch: 57953**

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		07/18/23 13:34	07/24/23 20:09	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/18/23 13:34	07/24/23 20:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*82*		*70 - 130*	*07/18/23 13:34*	*07/24/23 20:09*	*1*
o-Terphenyl	*93*		*70 - 130*	*07/18/23 13:34*	*07/24/23 20:09*	*1*

Lab Sample ID: LCS 880-57953/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58292 — **Prep Batch: 57953**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	834.0		mg/Kg		83	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	877.2		mg/Kg		88	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*84*		*70 - 130*
o-Terphenyl	*85*		*70 - 130*

Lab Sample ID: LCSD 880-57953/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58292 — **Prep Batch: 57953**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	825.8		mg/Kg		83	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	875.4		mg/Kg		88	70 - 130	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*84*		*70 - 130*
o-Terphenyl	*83*		*70 - 130*

Lab Sample ID: 880-30795-A-64-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58292 — **Prep Batch: 57953**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.6	U F1	1010	680.4	F1	mg/Kg		64	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.6	U	1010	792.9		mg/Kg		77	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*75*		*70 - 130*
o-Terphenyl	*72*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4927-1
SDG: 03C1558255

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

Lab Sample ID: 880-30795-A-64-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58292 — **Prep Batch: 57953**

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	<49.6	U F1	1010	699.4	F1	mg/Kg		66	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<49.6	U	1010	789.2		mg/Kg		77	70 - 130	0	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*76*		*70 - 130*
o-Terphenyl	*70*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-57587/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 57704

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			07/14/23 21:20	1

Lab Sample ID: LCS 880-57587/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 57704

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	252.6		mg/Kg		101	90 - 110		

Lab Sample ID: LCSD 880-57587/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 57704

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	253.5		mg/Kg		101	90 - 110	0	20

Lab Sample ID: 890-4927-7 MS — **Client Sample ID: SS07**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 57704

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	476	F1	1250	1875	F1	mg/Kg		112	90 - 110		

Lab Sample ID: 890-4927-7 MSD — **Client Sample ID: SS07**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 57704

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	476	F1	1250	1872	F1	mg/Kg		112	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4927-1
SDG: 03C1558255

GC VOA

Prep Batch: 57617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-57617/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 57655

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4927-1	SS01	Total/NA	Solid	5035	
890-4927-2	SS02	Total/NA	Solid	5035	
890-4927-3	SS03	Total/NA	Solid	5035	
890-4927-4	SS04	Total/NA	Solid	5035	
890-4927-5	SS05	Total/NA	Solid	5035	
890-4927-6	SS06	Total/NA	Solid	5035	
890-4927-7	SS07	Total/NA	Solid	5035	
MB 880-57655/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-57655/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-57655/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4934-A-41-B MS	Matrix Spike	Total/NA	Solid	5035	
890-4934-A-41-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 57701

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4927-1	SS01	Total/NA	Solid	8021B	57655
890-4927-2	SS02	Total/NA	Solid	8021B	57655
890-4927-3	SS03	Total/NA	Solid	8021B	57655
890-4927-4	SS04	Total/NA	Solid	8021B	57655
890-4927-5	SS05	Total/NA	Solid	8021B	57655
890-4927-6	SS06	Total/NA	Solid	8021B	57655
890-4927-7	SS07	Total/NA	Solid	8021B	57655
MB 880-57617/5-A	Method Blank	Total/NA	Solid	8021B	57617
MB 880-57655/5-A	Method Blank	Total/NA	Solid	8021B	57655
LCS 880-57655/1-A	Lab Control Sample	Total/NA	Solid	8021B	57655
LCSD 880-57655/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	57655
890-4934-A-41-B MS	Matrix Spike	Total/NA	Solid	8021B	57655
890-4934-A-41-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	57655

Analysis Batch: 57866

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4927-1	SS01	Total/NA	Solid	Total BTEX	
890-4927-2	SS02	Total/NA	Solid	Total BTEX	
890-4927-3	SS03	Total/NA	Solid	Total BTEX	
890-4927-4	SS04	Total/NA	Solid	Total BTEX	
890-4927-5	SS05	Total/NA	Solid	Total BTEX	
890-4927-6	SS06	Total/NA	Solid	Total BTEX	
890-4927-7	SS07	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 57953

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4927-1	SS01	Total/NA	Solid	8015NM Prep	
890-4927-2	SS02	Total/NA	Solid	8015NM Prep	
890-4927-3	SS03	Total/NA	Solid	8015NM Prep	
890-4927-4	SS04	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4927-1
SDG: 03C1558255

GC Semi VOA (Continued)

Prep Batch: 57953 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4927-5	SS05	Total/NA	Solid	8015NM Prep	
890-4927-6	SS06	Total/NA	Solid	8015NM Prep	
890-4927-7	SS07	Total/NA	Solid	8015NM Prep	
MB 880-57953/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-57953/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-57953/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-30795-A-64-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-30795-A-64-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 58292

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4927-1	SS01	Total/NA	Solid	8015B NM	57953
890-4927-2	SS02	Total/NA	Solid	8015B NM	57953
890-4927-3	SS03	Total/NA	Solid	8015B NM	57953
890-4927-4	SS04	Total/NA	Solid	8015B NM	57953
890-4927-5	SS05	Total/NA	Solid	8015B NM	57953
890-4927-6	SS06	Total/NA	Solid	8015B NM	57953
890-4927-7	SS07	Total/NA	Solid	8015B NM	57953
MB 880-57953/1-A	Method Blank	Total/NA	Solid	8015B NM	57953
LCS 880-57953/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	57953
LCSD 880-57953/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	57953
880-30795-A-64-C MS	Matrix Spike	Total/NA	Solid	8015B NM	57953
880-30795-A-64-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	57953

Analysis Batch: 58472

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4927-1	SS01	Total/NA	Solid	8015 NM	
890-4927-2	SS02	Total/NA	Solid	8015 NM	
890-4927-3	SS03	Total/NA	Solid	8015 NM	
890-4927-4	SS04	Total/NA	Solid	8015 NM	
890-4927-5	SS05	Total/NA	Solid	8015 NM	
890-4927-6	SS06	Total/NA	Solid	8015 NM	
890-4927-7	SS07	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 57587

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4927-1	SS01	Soluble	Solid	DI Leach	
890-4927-2	SS02	Soluble	Solid	DI Leach	
890-4927-3	SS03	Soluble	Solid	DI Leach	
890-4927-4	SS04	Soluble	Solid	DI Leach	
890-4927-5	SS05	Soluble	Solid	DI Leach	
890-4927-6	SS06	Soluble	Solid	DI Leach	
890-4927-7	SS07	Soluble	Solid	DI Leach	
MB 880-57587/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-57587/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-57587/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4927-7 MS	SS07	Soluble	Solid	DI Leach	
890-4927-7 MSD	SS07	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4927-1
SDG: 03C1558255

HPLC/IC

Analysis Batch: 57704

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4927-1	SS01	Soluble	Solid	300.0	57587
890-4927-2	SS02	Soluble	Solid	300.0	57587
890-4927-3	SS03	Soluble	Solid	300.0	57587
890-4927-4	SS04	Soluble	Solid	300.0	57587
890-4927-5	SS05	Soluble	Solid	300.0	57587
890-4927-6	SS06	Soluble	Solid	300.0	57587
890-4927-7	SS07	Soluble	Solid	300.0	57587
MB 880-57587/1-A	Method Blank	Soluble	Solid	300.0	57587
LCS 880-57587/2-A	Lab Control Sample	Soluble	Solid	300.0	57587
LCSD 880-57587/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	57587
890-4927-7 MS	SS07	Soluble	Solid	300.0	57587
890-4927-7 MSD	SS07	Soluble	Solid	300.0	57587

Lab Chronicle

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4927-1
SDG: 03C1558255

Client Sample ID: SS01

Lab Sample ID: 890-4927-1
Matrix: Solid
Date Collected: 07/07/23 09:50
Date Received: 07/12/23 08:35

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	57655	07/14/23 08:26	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57701	07/16/23 04:41	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			57866	07/17/23 14:47	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58472	07/25/23 11:30	SM	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	57953	07/18/23 13:38	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58292	07/25/23 02:23	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	57587	07/13/23 10:49	KS	EET MID
Soluble	Analysis	300.0		20			57704	07/14/23 22:06	CH	EET MID

Client Sample ID: SS02

Lab Sample ID: 890-4927-2
Matrix: Solid
Date Collected: 07/07/23 09:55
Date Received: 07/12/23 08:35

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	57655	07/14/23 08:26	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57701	07/16/23 05:07	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			57866	07/17/23 14:47	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58472	07/25/23 11:30	SM	EET MID
Total/NA	Prep	8015NM Prep			9.95 g	10 mL	57953	07/18/23 13:38	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58292	07/25/23 02:44	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	57587	07/13/23 10:49	KS	EET MID
Soluble	Analysis	300.0		20			57704	07/14/23 22:22	CH	EET MID

Client Sample ID: SS03

Lab Sample ID: 890-4927-3
Matrix: Solid
Date Collected: 07/07/23 10:00
Date Received: 07/12/23 08:35

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	57655	07/14/23 08:26	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57701	07/16/23 05:33	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			57866	07/17/23 14:47	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58472	07/25/23 11:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.07 g	10 mL	57953	07/18/23 13:38	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58292	07/25/23 03:04	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	57587	07/13/23 10:49	KS	EET MID
Soluble	Analysis	300.0		20			57704	07/14/23 22:27	CH	EET MID

Client Sample ID: SS04

Lab Sample ID: 890-4927-4
Matrix: Solid
Date Collected: 07/07/23 10:15
Date Received: 07/12/23 08:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	57655	07/14/23 08:26	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57701	07/16/23 05:58	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			57866	07/17/23 14:47	AJ	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4927-1
SDG: 03C1558255

Client Sample ID: SS04

Date Collected: 07/07/23 10:15
Date Received: 07/12/23 08:35

Lab Sample ID: 890-4927-4

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			58472	07/25/23 11:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	57953	07/18/23 13:38	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58292	07/25/23 03:24	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	57587	07/13/23 10:49	KS	EET MID
Soluble	Analysis	300.0		10			57704	07/14/23 22:32	CH	EET MID

Client Sample ID: SS05

Date Collected: 07/07/23 10:20
Date Received: 07/12/23 08:35

Lab Sample ID: 890-4927-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	57655	07/14/23 08:26	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57701	07/16/23 06:24	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			57866	07/17/23 14:47	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58472	07/25/23 11:30	SM	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	57953	07/18/23 13:38	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58292	07/25/23 03:45	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	57587	07/13/23 10:49	KS	EET MID
Soluble	Analysis	300.0		5			57704	07/14/23 22:37	CH	EET MID

Client Sample ID: SS06

Date Collected: 07/07/23 10:25
Date Received: 07/12/23 08:35

Lab Sample ID: 890-4927-6

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			4.99 g	5 mL	57655	07/14/23 08:26	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57701	07/16/23 06:50	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			57866	07/17/23 14:47	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58472	07/25/23 11:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	57953	07/18/23 13:38	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58292	07/25/23 04:05	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	57587	07/13/23 10:49	KS	EET MID
Soluble	Analysis	300.0		1			57704	07/14/23 22:42	CH	EET MID

Client Sample ID: SS07

Date Collected: 07/07/23 10:30
Date Received: 07/12/23 08:35

Lab Sample ID: 890-4927-7

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	57655	07/14/23 08:26	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57701	07/16/23 07:17	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			57866	07/17/23 14:47	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58472	07/25/23 11:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	57953	07/18/23 13:39	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58292	07/25/23 04:25	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4927-1
SDG: 03C1558255

Client Sample ID: SS07

Date Collected: 07/07/23 10:30
Date Received: 07/12/23 08:35

Lab Sample ID: 890-4927-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.01 g	50 mL	57587	07/13/23 10:49	KS	EET MID
Soluble	Analysis	300.0		5			57704	07/14/23 22:47	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: Remuda 500 Tank Battery

Job ID: 890-4927-1
SDG: 03C1558255

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	T104704400-23-26	06-30-24

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: Remuda 500 Tank Battery

Job ID: 890-4927-1
SDG: 03C1558255

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: Remuda 500 Tank Battery

Job ID: 890-4927-1
SDG: 03C1558255

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4927-1	SS01	Solid	07/07/23 09:50	07/12/23 08:35	0.5
890-4927-2	SS02	Solid	07/07/23 09:55	07/12/23 08:35	0.5
890-4927-3	SS03	Solid	07/07/23 10:00	07/12/23 08:35	0.5
890-4927-4	SS04	Solid	07/07/23 10:15	07/12/23 08:35	0.5
890-4927-5	SS05	Solid	07/07/23 10:20	07/12/23 08:35	0.5
890-4927-6	SS06	Solid	07/07/23 10:25	07/12/23 08:35	0.5
890-4927-7	SS07	Solid	07/07/23 10:30	07/12/23 08:35	0.5

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Chain of Custody

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

Work Order No: _____

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

Work Order Comments

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

Project Name:	Remuda 500 Tank Battery	Turn Around	☑ Routine ☐ Rush
Project Number:	03C1558255	Due Date:	
Project Location:		TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Connor Whitman		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	TMH007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	2.8
Total Containers:		Corrected Temperature:	2.6

ANALYSIS REQUEST

Pres. Code

Parameters: CHLORIDES (EPA: 3000.0), TPH (8015), BTEX (8021)

890-4927 Chain of Custody

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont
SS01	S	7/7/23	950	.5	G	1
SS02			955			1
SS03			1000			1
SS04			1015			1
SS05			1020			1
SS06			1025			1
SS07			1030			1

GW

Sample Comments

Incident ID:
nAPP2317850727

Cost Center:
1067601001

AFE:

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		7.12.23 835	4		
3			6		
5					

Revised Date: 08/25/2020 Rev: 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4927-1
SDG Number: 03C1558255

Login Number: 4927
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: 890-4927-1
SDG Number: 03C1558255

Login Number: 4927
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 07/13/23 11:48 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 8/2/2023 9:07:01 AM

JOB DESCRIPTION

REMUDA 500 TANK BATTERY
SDG NUMBER 03C1558255

JOB NUMBER

890-4963-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

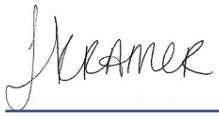
Eurofins Carlsbad

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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8/2/2023 9:07:01 AM

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

Client: Ensolum
Project/Site: REMUDA 500 TANK BATTERY

Laboratory Job ID: 890-4963-1
SDG: 03C1558255

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-4963-1
Project/Site: REMUDA 500 TANK BATTERY SDG: 03C1558255

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, 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: REMUDA 500 TANK BATTERY

Job ID: 890-4963-1
SDG: 03C1558255

Job ID: 890-4963-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4963-1

Receipt
The samples were received on 7/18/2023 4:36 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 3.4°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: PH01 (890-4963-1), PH02 (890-4963-2), PH03 (890-4963-3) and FS01 (890-4963-4).

GC VOA
Method 8021B: Surrogate recovery for the following sample was outside control limits: (CCV 880-58416/33). Evidence of matrix interferences is not obvious.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-58416 recovered above the upper control limit for Ethylbenzene, m-Xylene & p-Xylene and o-Xylene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 880-58416/33).

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: PH03 (890-4963-3), FS01 (890-4963-4), (MB 880-58485/1-A) and (880-30743-A-1-G). Evidence of matrix interferences is not obvious.

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

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

Client Sample Results

Client: Ensolum
Project/Site: REMUDA 500 TANK BATTERY

Job ID: 890-4963-1
SDG: 03C1558255

Client Sample ID: PH01

Lab Sample ID: 890-4963-1
Matrix: Solid
Date Collected: 07/18/23 10:05
Date Received: 07/18/23 16:36
Sample Depth: 2

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		07/25/23 11:03	07/25/23 19:28	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/25/23 11:03	07/25/23 19:28	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/25/23 11:03	07/25/23 19:28	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		07/25/23 11:03	07/25/23 19:28	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/25/23 11:03	07/25/23 19:28	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		07/25/23 11:03	07/25/23 19:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*07/25/23 11:03*	*07/25/23 19:28*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*07/25/23 11:03*	*07/25/23 19:28*	*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			07/26/23 09:30	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			08/02/23 09:46	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		07/25/23 14:17	08/01/23 18:07	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		07/25/23 14:17	08/01/23 18:07	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/25/23 14:17	08/01/23 18:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*126*		*70 - 130*	*07/25/23 14:17*	*08/01/23 18:07*	*1*
o-Terphenyl	*107*		*70 - 130*	*07/25/23 14:17*	*08/01/23 18:07*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**293**		5.05		mg/Kg			07/25/23 10:08	1

Client Sample ID: PH02

Lab Sample ID: 890-4963-2
Matrix: Solid
Date Collected: 07/18/23 10:35
Date Received: 07/18/23 16:36
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		07/25/23 11:03	07/25/23 19:49	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/25/23 11:03	07/25/23 19:49	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/25/23 11:03	07/25/23 19:49	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/25/23 11:03	07/25/23 19:49	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/25/23 11:03	07/25/23 19:49	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/25/23 11:03	07/25/23 19:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*07/25/23 11:03*	*07/25/23 19:49*	*1*

Client Sample Results

Client: Ensolum
Project/Site: REMUDA 500 TANK BATTERY

Job ID: 890-4963-1
SDG: 03C1558255

Client Sample ID: PH02

Date Collected: 07/18/23 10:35
Date Received: 07/18/23 16:36
Sample Depth: 2

Lab Sample ID: 890-4963-2

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*07/25/23 11:03*	*07/25/23 19:49*	*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			07/26/23 09:30	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			08/02/23 09:46	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6		mg/Kg		07/25/23 14:17	08/01/23 18:29	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		07/25/23 14:17	08/01/23 18:29	1
OII Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		07/25/23 14:17	08/01/23 18:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*121*		*70 - 130*	*07/25/23 14:17*	*08/01/23 18:29*	*1*
o-Terphenyl	*103*		*70 - 130*	*07/25/23 14:17*	*08/01/23 18:29*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**407**		4.99		mg/Kg			07/25/23 10:24	1

Client Sample ID: PH03

Date Collected: 07/18/23 10:55
Date Received: 07/18/23 16:36
Sample Depth: 2

Lab Sample ID: 890-4963-3

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		07/25/23 11:03	07/25/23 20:09	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/25/23 11:03	07/25/23 20:09	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/25/23 11:03	07/25/23 20:09	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/25/23 11:03	07/25/23 20:09	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/25/23 11:03	07/25/23 20:09	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/25/23 11:03	07/25/23 20:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*07/25/23 11:03*	*07/25/23 20:09*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*07/25/23 11:03*	*07/25/23 20:09*	*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			07/26/23 09:30	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			08/02/23 09:46	1

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Client Sample Results

Client: Ensolum
Project/Site: REMUDA 500 TANK BATTERY

Job ID: 890-4963-1
SDG: 03C1558255

Client Sample ID: PH03

Lab Sample ID: 890-4963-3
Matrix: Solid
Date Collected: 07/18/23 10:55
Date Received: 07/18/23 16:36
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	<49.6	U	49.6		mg/Kg		07/25/23 14:17	08/01/23 18:50	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		07/25/23 14:17	08/01/23 18:50	1
OII Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		07/25/23 14:17	08/01/23 18:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*132*	*S1+*	*70 - 130*	*07/25/23 14:17*	*08/01/23 18:50*	*1*
o-Terphenyl	*111*		*70 - 130*	*07/25/23 14:17*	*08/01/23 18:50*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**275**		4.97		mg/Kg			07/25/23 10:29	1

Client Sample ID: FS01

Lab Sample ID: 890-4963-4
Matrix: Solid
Date Collected: 07/18/23 15:30
Date Received: 07/18/23 16:36
Sample Depth: 2

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/25/23 11:03	07/25/23 20:30	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/25/23 11:03	07/25/23 20:30	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/25/23 11:03	07/25/23 20:30	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		07/25/23 11:03	07/25/23 20:30	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/25/23 11:03	07/25/23 20:30	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		07/25/23 11:03	07/25/23 20:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*07/25/23 11:03*	*07/25/23 20:30*	*1*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*07/25/23 11:03*	*07/25/23 20:30*	*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			07/26/23 09:30	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3		mg/Kg			08/02/23 09:46	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	50.3		mg/Kg		07/25/23 14:17	08/01/23 19:11	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3		mg/Kg		07/25/23 14:17	08/01/23 19:11	1
OII Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		07/25/23 14:17	08/01/23 19:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*132*	*S1+*	*70 - 130*	*07/25/23 14:17*	*08/01/23 19:11*	*1*
o-Terphenyl	*110*		*70 - 130*	*07/25/23 14:17*	*08/01/23 19:11*	*1*

Client Sample Results

Client: Ensolum
Project/Site: REMUDA 500 TANK BATTERY

Job ID: 890-4963-1
SDG: 03C1558255

Client Sample ID: FS01
Date Collected: 07/18/23 15:30
Date Received: 07/18/23 16:36
Sample Depth: 2

Lab Sample ID: 890-4963-4
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	265		4.97		mg/Kg			07/25/23 10:34	1

Surrogate Summary

Client: Ensolum
Project/Site: REMUDA 500 TANK BATTERY

Job ID: 890-4963-1
SDG: 03C1558255

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-4963-1	PH01	102	110
890-4963-2	PH02	106	106
890-4963-3	PH03	106	112
890-4963-4	FS01	110	111
890-4986-A-1-D MS	Matrix Spike	107	99
890-4986-A-1-E MSD	Matrix Spike Duplicate	101	105
LCS 880-58465/1-A	Lab Control Sample	106	101
LCSD 880-58465/2-A	Lab Control Sample Dup	113	101
MB 880-58465/5-A	Method Blank	93	92

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-30743-A-1-H MS	Matrix Spike	122	94
880-30743-A-1-I MSD	Matrix Spike Duplicate	124	97
890-4963-1	PH01	126	107
890-4963-2	PH02	121	103
890-4963-3	PH03	132 S1+	111
890-4963-4	FS01	132 S1+	110
LCS 880-58485/2-A	Lab Control Sample	114	111
LCSD 880-58485/3-A	Lab Control Sample Dup	113	111
MB 880-58485/1-A	Method Blank	179 S1+	155 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: REMUDA 500 TANK BATTERY

Job ID: 890-4963-1
SDG: 03C1558255

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-58465/5-A
Matrix: Solid
Analysis Batch: 58416

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58465

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/25/23 11:03	07/25/23 13:12	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/25/23 11:03	07/25/23 13:12	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/25/23 11:03	07/25/23 13:12	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/25/23 11:03	07/25/23 13:12	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/25/23 11:03	07/25/23 13:12	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/25/23 11:03	07/25/23 13:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*07/25/23 11:03*	*07/25/23 13:12*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*07/25/23 11:03*	*07/25/23 13:12*	*1*

Lab Sample ID: LCS 880-58465/1-A
Matrix: Solid
Analysis Batch: 58416

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58465

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1076		mg/Kg		108	70 - 130		
Toluene			0.100	0.1087		mg/Kg		109	70 - 130		
Ethylbenzene			0.100	0.09767		mg/Kg		98	70 - 130		
m-Xylene & p-Xylene			0.200	0.1853		mg/Kg		93	70 - 130		
o-Xylene			0.100	0.09272		mg/Kg		93	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 880-58465/2-A
Matrix: Solid
Analysis Batch: 58416

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 58465

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1009		mg/Kg		101	70 - 130	6	35
Toluene			0.100	0.1030		mg/Kg		103	70 - 130	5	35
Ethylbenzene			0.100	0.09183		mg/Kg		92	70 - 130	6	35
m-Xylene & p-Xylene			0.200	0.1736		mg/Kg		87	70 - 130	7	35
o-Xylene			0.100	0.08555		mg/Kg		86	70 - 130	8	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 890-4986-A-1-D MS
Matrix: Solid
Analysis Batch: 58416

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 58465

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U	0.0992	0.08916		mg/Kg		90	70 - 130		
Toluene	<0.00199	U	0.0992	0.09439		mg/Kg		95	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: REMUDA 500 TANK BATTERY

Job ID: 890-4963-1
SDG: 03C1558255

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

Lab Sample ID: 890-4986-A-1-D MS
Matrix: Solid
Analysis Batch: 58416

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 58465

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U	0.0992	0.08636		mg/Kg		87	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.198	0.1660		mg/Kg		84	70 - 130
o-Xylene	<0.00199	U	0.0992	0.08230		mg/Kg		83	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 890-4986-A-1-E MSD
Matrix: Solid
Analysis Batch: 58416

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 58465

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.0990	0.1231		mg/Kg		124	70 - 130	32	35
Toluene	<0.00199	U	0.0990	0.1184		mg/Kg		120	70 - 130	23	35
Ethylbenzene	<0.00199	U	0.0990	0.1037		mg/Kg		105	70 - 130	18	35
m-Xylene & p-Xylene	<0.00398	U	0.198	0.1942		mg/Kg		98	70 - 130	16	35
o-Xylene	<0.00199	U	0.0990	0.09638		mg/Kg		97	70 - 130	16	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

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

Lab Sample ID: MB 880-58485/1-A
Matrix: Solid
Analysis Batch: 58960

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58485

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/25/23 14:17	08/01/23 07:24	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/25/23 14:17	08/01/23 07:24	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/25/23 14:17	08/01/23 07:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*179*	*S1+*	*70 - 130*	*07/25/23 14:17*	*08/01/23 07:24*	*1*
o-Terphenyl	*155*	*S1+*	*70 - 130*	*07/25/23 14:17*	*08/01/23 07:24*	*1*

Lab Sample ID: LCS 880-58485/2-A
Matrix: Solid
Analysis Batch: 58960

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58485

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1062		mg/Kg		106	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1082		mg/Kg		108	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: REMUDA 500 TANK BATTERY

Job ID: 890-4963-1
SDG: 03C1558255

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

Lab Sample ID: LCS 880-58485/2-A
Matrix: Solid
Analysis Batch: 58960

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58485

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	114		70 - 130
o-Terphenyl	111		70 - 130

Lab Sample ID: LCSD 880-58485/3-A
Matrix: Solid
Analysis Batch: 58960

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 58485

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1024		mg/Kg		102	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			1000	1101		mg/Kg		110	70 - 130	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	113		70 - 130
o-Terphenyl	111		70 - 130

Lab Sample ID: 880-30743-A-1-H MS
Matrix: Solid
Analysis Batch: 58960

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 58485

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	993	874.0		mg/Kg		83	70 - 130
Diesel Range Organics (Over C10-C28)	<50.3	U	993	1175		mg/Kg		115	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	122		70 - 130
o-Terphenyl	94		70 - 130

Lab Sample ID: 880-30743-A-1-I MSD
Matrix: Solid
Analysis Batch: 58960

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 58485

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	<50.3	U	993	873.6		mg/Kg		83	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	<50.3	U	993	1199		mg/Kg		117	70 - 130	2	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	124		70 - 130
o-Terphenyl	97		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: REMUDA 500 TANK BATTERY

Job ID: 890-4963-1
SDG: 03C1558255

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-58380/1-A
Matrix: Solid
Analysis Batch: 58435

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			07/25/23 08:25	1

Lab Sample ID: LCS 880-58380/2-A
Matrix: Solid
Analysis Batch: 58435

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	227.0		mg/Kg		91	90 - 110		

Lab Sample ID: LCSD 880-58380/3-A
Matrix: Solid
Analysis Batch: 58435

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	239.4		mg/Kg		96	90 - 110	5	20

Lab Sample ID: 890-4963-1 MS
Matrix: Solid
Analysis Batch: 58435

Client Sample ID: PH01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	293		253	546.2		mg/Kg		100	90 - 110		

Lab Sample ID: 890-4963-1 MSD
Matrix: Solid
Analysis Batch: 58435

Client Sample ID: PH01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	293		253	545.1		mg/Kg		100	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: REMUDA 500 TANK BATTERY

Job ID: 890-4963-1
SDG: 03C1558255

GC VOA

Analysis Batch: 58416

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4963-1	PH01	Total/NA	Solid	8021B	58465
890-4963-2	PH02	Total/NA	Solid	8021B	58465
890-4963-3	PH03	Total/NA	Solid	8021B	58465
890-4963-4	FS01	Total/NA	Solid	8021B	58465
MB 880-58465/5-A	Method Blank	Total/NA	Solid	8021B	58465
LCS 880-58465/1-A	Lab Control Sample	Total/NA	Solid	8021B	58465
LCSD 880-58465/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	58465
890-4986-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	58465
890-4986-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	58465

Prep Batch: 58465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4963-1	PH01	Total/NA	Solid	5035	
890-4963-2	PH02	Total/NA	Solid	5035	
890-4963-3	PH03	Total/NA	Solid	5035	
890-4963-4	FS01	Total/NA	Solid	5035	
MB 880-58465/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-58465/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-58465/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4986-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
890-4986-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 58528

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4963-1	PH01	Total/NA	Solid	Total BTEX	
890-4963-2	PH02	Total/NA	Solid	Total BTEX	
890-4963-3	PH03	Total/NA	Solid	Total BTEX	
890-4963-4	FS01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 58485

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4963-1	PH01	Total/NA	Solid	8015NM Prep	
890-4963-2	PH02	Total/NA	Solid	8015NM Prep	
890-4963-3	PH03	Total/NA	Solid	8015NM Prep	
890-4963-4	FS01	Total/NA	Solid	8015NM Prep	
MB 880-58485/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-58485/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-58485/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-30743-A-1-H MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-30743-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 58960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4963-1	PH01	Total/NA	Solid	8015B NM	58485
890-4963-2	PH02	Total/NA	Solid	8015B NM	58485
890-4963-3	PH03	Total/NA	Solid	8015B NM	58485
890-4963-4	FS01	Total/NA	Solid	8015B NM	58485
MB 880-58485/1-A	Method Blank	Total/NA	Solid	8015B NM	58485
LCS 880-58485/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	58485

QC Association Summary

Client: Ensolum
Project/Site: REMUDA 500 TANK BATTERY

Job ID: 890-4963-1
SDG: 03C1558255

GC Semi VOA (Continued)

Analysis Batch: 58960 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-58485/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	58485
880-30743-A-1-H MS	Matrix Spike	Total/NA	Solid	8015B NM	58485
880-30743-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	58485

Analysis Batch: 59091

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4963-1	PH01	Total/NA	Solid	8015 NM	
890-4963-2	PH02	Total/NA	Solid	8015 NM	
890-4963-3	PH03	Total/NA	Solid	8015 NM	
890-4963-4	FS01	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 58380

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4963-1	PH01	Soluble	Solid	DI Leach	
890-4963-2	PH02	Soluble	Solid	DI Leach	
890-4963-3	PH03	Soluble	Solid	DI Leach	
890-4963-4	FS01	Soluble	Solid	DI Leach	
MB 880-58380/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-58380/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-58380/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4963-1 MS	PH01	Soluble	Solid	DI Leach	
890-4963-1 MSD	PH01	Soluble	Solid	DI Leach	

Analysis Batch: 58435

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4963-1	PH01	Soluble	Solid	300.0	58380
890-4963-2	PH02	Soluble	Solid	300.0	58380
890-4963-3	PH03	Soluble	Solid	300.0	58380
890-4963-4	FS01	Soluble	Solid	300.0	58380
MB 880-58380/1-A	Method Blank	Soluble	Solid	300.0	58380
LCS 880-58380/2-A	Lab Control Sample	Soluble	Solid	300.0	58380
LCSD 880-58380/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	58380
890-4963-1 MS	PH01	Soluble	Solid	300.0	58380
890-4963-1 MSD	PH01	Soluble	Solid	300.0	58380

Lab Chronicle

Client: Ensolum
Project/Site: REMUDA 500 TANK BATTERY

Job ID: 890-4963-1
SDG: 03C1558255

Client Sample ID: PH01

Lab Sample ID: 890-4963-1
Matrix: Solid
Date Collected: 07/18/23 10:05
Date Received: 07/18/23 16:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	58465	07/25/23 11:03	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58416	07/25/23 19:28	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58528	07/26/23 09:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			59091	08/02/23 09:46	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	58485	07/25/23 14:17	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58960	08/01/23 18:07	AJ	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	58380	07/24/23 14:45	KS	EET MID
Soluble	Analysis	300.0		1			58435	07/25/23 10:08	CH	EET MID

Client Sample ID: PH02

Lab Sample ID: 890-4963-2
Matrix: Solid
Date Collected: 07/18/23 10:35
Date Received: 07/18/23 16:36

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	58465	07/25/23 11:03	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58416	07/25/23 19:49	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58528	07/26/23 09:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			59091	08/02/23 09:46	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	58485	07/25/23 14:17	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58960	08/01/23 18:29	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	58380	07/24/23 14:45	KS	EET MID
Soluble	Analysis	300.0		1			58435	07/25/23 10:24	CH	EET MID

Client Sample ID: PH03

Lab Sample ID: 890-4963-3
Matrix: Solid
Date Collected: 07/18/23 10:55
Date Received: 07/18/23 16:36

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	58465	07/25/23 11:03	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58416	07/25/23 20:09	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58528	07/26/23 09:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			59091	08/02/23 09:46	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	58485	07/25/23 14:17	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58960	08/01/23 18:50	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	58380	07/24/23 14:45	KS	EET MID
Soluble	Analysis	300.0		1			58435	07/25/23 10:29	CH	EET MID

Client Sample ID: FS01

Lab Sample ID: 890-4963-4
Matrix: Solid
Date Collected: 07/18/23 15:30
Date Received: 07/18/23 16:36

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	58465	07/25/23 11:03	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58416	07/25/23 20:30	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58528	07/26/23 09:30	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: REMUDA 500 TANK BATTERY

Job ID: 890-4963-1
SDG: 03C1558255

Client Sample ID: FS01

Date Collected: 07/18/23 15:30
Date Received: 07/18/23 16:36

Lab Sample ID: 890-4963-4

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			59091	08/02/23 09:46	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	58485	07/25/23 14:17	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58960	08/01/23 19:11	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	58380	07/24/23 14:45	KS	EET MID
Soluble	Analysis	300.0		1			58435	07/25/23 10:34	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: REMUDA 500 TANK BATTERY

Job ID: 890-4963-1
SDG: 03C1558255

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	T104704400-23-26	06-30-24

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: REMUDA 500 TANK BATTERY

Job ID: 890-4963-1
SDG: 03C1558255

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: REMUDA 500 TANK BATTERY

Job ID: 890-4963-1
SDG: 03C1558255

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4963-1	PH01	Solid	07/18/23 10:05	07/18/23 16:36	2
890-4963-2	PH02	Solid	07/18/23 10:35	07/18/23 16:36	2
890-4963-3	PH03	Solid	07/18/23 10:55	07/18/23 16:36	2
890-4963-4	FS01	Solid	07/18/23 15:30	07/18/23 16:36	2

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Benjamin Belill	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:	989-854-0852 Email:	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:	Remuda 500 Tank Battery	Turn Around	
Project Number:	03C1558255	☒ Routine ☐ Rush	
Project Location:	32.2704, -103.93747	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:	3.6
Total Containers:		Corrected Temperature:	3.4

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: Chlorides	TPH	BTEX
PH01	S	7/18/23	10:05	2'	G	1		X	X	X
PH02	S		10:35	2'	G					
PH03	S		10:55	2'	G					
FS01	S		15:30	2'	C					

ANALYSIS REQUEST

890-4963 Chain of Custody

Preservative Codes

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

Sample Comments

Incident #:
nAPP2317850727

Cost center:
1067601001

Ben Belill:
bbelill@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 M. O'Dell		7.18.23 1634	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4963-1
SDG Number: 03C1558255

Login Number: 4963
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: 890-4963-1
SDG Number: 03C1558255

Login Number: 4963
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 07/20/23 12:42 PM

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 8/2/2023 10:34:01 AM

JOB DESCRIPTION

Remuda 500 Tank Battery
SDG NUMBER 03C1558255

JOB NUMBER

890-4969-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

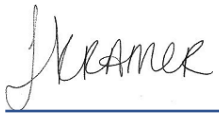
Eurofins Carlsbad

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: Remuda 500 Tank Battery

Laboratory Job ID: 890-4969-1
SDG: 03C1558255

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-4969-1
Project/Site: Remuda 500 Tank Battery SDG: 03C1558255

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, 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: Remuda 500 Tank Battery

Job ID: 890-4969-1
SDG: 03C1558255

Job ID: 890-4969-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4969-1

Receipt
The samples were received on 7/20/2023 9:22 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.8°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: FS04 (890-4969-1), FS05 (890-4969-2), SW01 (890-4969-3) and SW02 (890-4969-4).

GC VOA
Method 8021B: Surrogate recovery for the following sample was outside control limits: (MB 880-58463/5-A). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following sample was outside control limits: FS05 (890-4969-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-58417 recovered above the upper control limit for Benzene. An acceptable CCV was ran within the 12 hour window, therefore the data has been qualified and reported. The associated sample is impacted: (CCV 880-58417/20).

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-58417 recovered above the upper control limit for m-Xylene & p-Xylene. An acceptable CCV was ran within the 12 hour window, therefore the data has been qualified and reported. The associated sample is impacted: (CCV 880-58417/64).

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 laboratory control sample (LCS) associated with preparation batch 880-58634 and analytical batch 880-58963 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: Surrogate recovery for the following samples were outside control limits: SW01 (890-4969-3) and SW02 (890-4969-4). Evidence of matrix interferences is not obvious.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-58217 and analytical batch 880-58468 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: Remuda 500 Tank Battery

Job ID: 890-4969-1
SDG: 03C1558255

Client Sample ID: FS04

Lab Sample ID: 890-4969-1
Matrix: Solid
Date Collected: 07/19/23 10:05
Date Received: 07/20/23 09:22
Sample Depth: 2.5

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		07/25/23 13:41	07/26/23 04:17	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/25/23 13:41	07/26/23 04:17	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/25/23 13:41	07/26/23 04:17	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/25/23 13:41	07/26/23 04:17	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/25/23 13:41	07/26/23 04:17	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/25/23 13:41	07/26/23 04:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*07/25/23 13:41*	*07/26/23 04:17*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*07/25/23 13:41*	*07/26/23 04:17*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			07/26/23 09:46	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			07/27/23 08:32	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		07/25/23 15:32	07/27/23 07:07	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/25/23 15:32	07/27/23 07:07	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/25/23 15:32	07/27/23 07:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*85*		*70 - 130*	*07/25/23 15:32*	*07/27/23 07:07*	*1*
o-Terphenyl	*95*		*70 - 130*	*07/25/23 15:32*	*07/27/23 07:07*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**457**		24.9		mg/Kg			07/25/23 12:12	5

Client Sample ID: FS05

Lab Sample ID: 890-4969-2
Matrix: Solid
Date Collected: 07/19/23 10:00
Date Received: 07/20/23 09:22
Sample Depth: 2.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/25/23 13:41	07/26/23 04:37	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/25/23 13:41	07/26/23 04:37	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/25/23 13:41	07/26/23 04:37	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/25/23 13:41	07/26/23 04:37	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/25/23 13:41	07/26/23 04:37	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/25/23 13:41	07/26/23 04:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*	*07/25/23 13:41*	*07/26/23 04:37*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4969-1
SDG: 03C1558255

Client Sample ID: FS05

Lab Sample ID: 890-4969-2
Matrix: Solid
Date Collected: 07/19/23 10:00
Date Received: 07/20/23 09:22
Sample Depth: 2.5

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*48*	*S1-*	*70 - 130*	*07/25/23 13:41*	*07/26/23 04:37*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg			07/26/23 09:46	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			07/27/23 08:32	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		07/25/23 15:32	07/27/23 07:27	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		07/25/23 15:32	07/27/23 07:27	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		07/25/23 15:32	07/27/23 07:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*84*		*70 - 130*	*07/25/23 15:32*	*07/27/23 07:27*	*1*
o-Terphenyl	*93*		*70 - 130*	*07/25/23 15:32*	*07/27/23 07:27*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**444**		25.1	mg/Kg			07/25/23 12:17	5

Client Sample ID: SW01

Lab Sample ID: 890-4969-3
Matrix: Solid
Date Collected: 07/19/23 13:25
Date Received: 07/20/23 09:22
Sample Depth: 0 - 3.5

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		07/25/23 13:41	07/26/23 04:58	1
Toluene	<0.00201	U	0.00201	mg/Kg		07/25/23 13:41	07/26/23 04:58	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		07/25/23 13:41	07/26/23 04:58	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		07/25/23 13:41	07/26/23 04:58	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		07/25/23 13:41	07/26/23 04:58	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		07/25/23 13:41	07/26/23 04:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*07/25/23 13:41*	*07/26/23 04:58*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*07/25/23 13:41*	*07/26/23 04:58*	*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			07/26/23 09:46	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**64.9**		50.4	mg/Kg			08/02/23 10:27	1

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Client Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4969-1
SDG: 03C1558255

Client Sample ID: SW01

Lab Sample ID: 890-4969-3
Matrix: Solid
Date Collected: 07/19/23 13:25
Date Received: 07/20/23 09:22
Sample Depth: 0 - 3.5

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	<50.4	U	50.4		mg/Kg		07/27/23 08:51	08/01/23 10:46	1
Diesel Range Organics (Over C10-C28)	**64.9**	*-	50.4		mg/Kg		07/27/23 08:51	08/01/23 10:46	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		07/27/23 08:51	08/01/23 10:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*122*		*70 - 130*	*07/27/23 08:51*	*08/01/23 10:46*	*1*
o-Terphenyl	*136*	*S1+*	*70 - 130*	*07/27/23 08:51*	*08/01/23 10:46*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**412**		24.8		mg/Kg			07/25/23 12:22	5

Client Sample ID: SW02

Lab Sample ID: 890-4969-4
Matrix: Solid
Date Collected: 07/19/23 10:15
Date Received: 07/20/23 09:22
Sample Depth: 0 - 2.5

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		07/25/23 13:41	07/26/23 05:19	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/25/23 13:41	07/26/23 05:19	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/25/23 13:41	07/26/23 05:19	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		07/25/23 13:41	07/26/23 05:19	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/25/23 13:41	07/26/23 05:19	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		07/25/23 13:41	07/26/23 05:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*77*		*70 - 130*	*07/25/23 13:41*	*07/26/23 05:19*	*1*
1,4-Difluorobenzene (Surr)	*75*		*70 - 130*	*07/25/23 13:41*	*07/26/23 05:19*	*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			07/26/23 09:46	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.2	U	50.2		mg/Kg			08/02/23 10:27	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	<50.2	U	50.2		mg/Kg		07/27/23 08:51	08/01/23 11:52	1
Diesel Range Organics (Over C10-C28)	<50.2	U *-	50.2		mg/Kg		07/27/23 08:51	08/01/23 11:52	1
OII Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		07/27/23 08:51	08/01/23 11:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*216*	*S1+*	*70 - 130*	*07/27/23 08:51*	*08/01/23 11:52*	*1*
o-Terphenyl	*236*	*S1+*	*70 - 130*	*07/27/23 08:51*	*08/01/23 11:52*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4969-1
SDG: 03C1558255

Client Sample ID: SW02

Lab Sample ID: 890-4969-4

Date Collected: 07/19/23 10:15
Matrix: Solid
Date Received: 07/20/23 09:22
Sample Depth: 0 - 2.5

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	380		25.2		mg/Kg			07/25/23 12:37	5

Surrogate Summary

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4969-1
SDG: 03C1558255

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-4966-A-1-B MS	Matrix Spike	113	106
890-4966-A-1-C MSD	Matrix Spike Duplicate	116	103
890-4969-1	FS04	100	94
890-4969-2	FS05	92	48 S1-
890-4969-3	SW01	101	90
890-4969-4	SW02	77	75
LCS 880-58480/1-A	Lab Control Sample	111	106
LCSD 880-58480/2-A	Lab Control Sample Dup	113	105
MB 880-58463/5-A	Method Blank	67 S1-	96
MB 880-58480/5-A	Method Blank	73	90

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-4969-1	FS04	85	95
890-4969-2	FS05	84	93
890-4969-3	SW01	122	136 S1+
890-4969-3 MS	SW01	101	103
890-4969-3 MSD	SW01	100	100
890-4969-4	SW02	216 S1+	236 S1+
890-4986-A-1-H MS	Matrix Spike	90	84
890-4986-A-1-I MSD	Matrix Spike Duplicate	93	86
LCS 880-58493/2-A	Lab Control Sample	99	95
LCS 880-58634/2-A	Lab Control Sample	73	84
LCSD 880-58493/3-A	Lab Control Sample Dup	91	88
LCSD 880-58634/3-A	Lab Control Sample Dup	75	86
MB 880-58493/1-A	Method Blank	82	85
MB 880-58634/1-A	Method Blank	149 S1+	167 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4969-1
SDG: 03C1558255

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-58463/5-A
Matrix: Solid
Analysis Batch: 58417

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58463

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/25/23 10:46	07/25/23 12:49	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/25/23 10:46	07/25/23 12:49	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/25/23 10:46	07/25/23 12:49	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/25/23 10:46	07/25/23 12:49	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/25/23 10:46	07/25/23 12:49	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/25/23 10:46	07/25/23 12:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*67*	*S1-*	*70 - 130*	*07/25/23 10:46*	*07/25/23 12:49*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*07/25/23 10:46*	*07/25/23 12:49*	*1*

Lab Sample ID: MB 880-58480/5-A
Matrix: Solid
Analysis Batch: 58417

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58480

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/25/23 13:41	07/25/23 23:28	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/25/23 13:41	07/25/23 23:28	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/25/23 13:41	07/25/23 23:28	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/25/23 13:41	07/25/23 23:28	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/25/23 13:41	07/25/23 23:28	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/25/23 13:41	07/25/23 23:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*73*		*70 - 130*	*07/25/23 13:41*	*07/25/23 23:28*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*07/25/23 13:41*	*07/25/23 23:28*	*1*

Lab Sample ID: LCS 880-58480/1-A
Matrix: Solid
Analysis Batch: 58417

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58480

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1137		mg/Kg		114	70 - 130		
Toluene			0.100	0.09545		mg/Kg		95	70 - 130		
Ethylbenzene			0.100	0.1073		mg/Kg		107	70 - 130		
m-Xylene & p-Xylene			0.200	0.2224		mg/Kg		111	70 - 130		
o-Xylene			0.100	0.1105		mg/Kg		110	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: LCSD 880-58480/2-A
Matrix: Solid
Analysis Batch: 58417

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 58480

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1123		mg/Kg		112	70 - 130	1	35

QC Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4969-1
SDG: 03C1558255

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

Lab Sample ID: LCSD 880-58480/2-A
Matrix: Solid
Analysis Batch: 58417

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 58480

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.09721		mg/Kg		97	70 - 130	2	35
Ethylbenzene			0.100	0.1131		mg/Kg		113	70 - 130	5	35
m-Xylene & p-Xylene			0.200	0.2337		mg/Kg		117	70 - 130	5	35
o-Xylene			0.100	0.1160		mg/Kg		116	70 - 130	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: 890-4966-A-1-B MS
Matrix: Solid
Analysis Batch: 58417

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 58480

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U	0.0994	0.09985		mg/Kg		100	70 - 130
Toluene	<0.00200	U	0.0994	0.08411		mg/Kg		84	70 - 130
Ethylbenzene	<0.00200	U	0.0994	0.09473		mg/Kg		95	70 - 130
m-Xylene & p-Xylene	<0.00399	U	0.199	0.1893		mg/Kg		95	70 - 130
o-Xylene	<0.00200	U	0.0994	0.09260		mg/Kg		93	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: 890-4966-A-1-C MSD
Matrix: Solid
Analysis Batch: 58417

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 58480

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0998	0.09323		mg/Kg		93	70 - 130	7	35
Toluene	<0.00200	U	0.0998	0.07891		mg/Kg		79	70 - 130	6	35
Ethylbenzene	<0.00200	U	0.0998	0.09128		mg/Kg		91	70 - 130	4	35
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1818		mg/Kg		91	70 - 130	4	35
o-Xylene	<0.00200	U	0.0998	0.09001		mg/Kg		90	70 - 130	3	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

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

Lab Sample ID: MB 880-58493/1-A
Matrix: Solid
Analysis Batch: 58515

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58493

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/25/23 15:29	07/26/23 09:29	1

QC Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4969-1
SDG: 03C1558255

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

Lab Sample ID: MB 880-58493/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58515 — **Prep Batch: 58493**

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		07/25/23 15:29	07/26/23 09:29	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/25/23 15:29	07/26/23 09:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*82*		*70 - 130*	*07/25/23 15:29*	*07/26/23 09:29*	*1*
o-Terphenyl	*85*		*70 - 130*	*07/25/23 15:29*	*07/26/23 09:29*	*1*

Lab Sample ID: LCS 880-58493/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58515 — **Prep Batch: 58493**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	774.6		mg/Kg		77	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	993.7		mg/Kg		99	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*99*		*70 - 130*
o-Terphenyl	*95*		*70 - 130*

Lab Sample ID: LCSD 880-58493/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58515 — **Prep Batch: 58493**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	758.7		mg/Kg		76	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	929.8		mg/Kg		93	70 - 130	7	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*91*		*70 - 130*
o-Terphenyl	*88*		*70 - 130*

Lab Sample ID: 890-4986-A-1-H MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58515 — **Prep Batch: 58493**

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	1010	788.2		mg/Kg		75	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	1010	901.2		mg/Kg		86	70 - 130		

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

QC Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4969-1
SDG: 03C1558255

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

Lab Sample ID: 890-4986-A-1-I MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58515 — **Prep Batch: 58493**

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	1010	805.6		mg/Kg		77	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<49.9	U	1010	926.7		mg/Kg		89	70 - 130	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*93*		*70 - 130*
o-Terphenyl	*86*		*70 - 130*

Lab Sample ID: MB 880-58634/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58963 — **Prep Batch: 58634**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/27/23 08:51	08/01/23 07:24	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/27/23 08:51	08/01/23 07:24	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/27/23 08:51	08/01/23 07:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*149*	*S1+*	*70 - 130*	*07/27/23 08:51*	*08/01/23 07:24*	*1*
o-Terphenyl	*167*	*S1+*	*70 - 130*	*07/27/23 08:51*	*08/01/23 07:24*	*1*

Lab Sample ID: LCS 880-58634/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58963 — **Prep Batch: 58634**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	928.3		mg/Kg		93	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	668.8	*-	mg/Kg		67	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*73*		*70 - 130*
o-Terphenyl	*84*		*70 - 130*

Lab Sample ID: LCSD 880-58634/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58963 — **Prep Batch: 58634**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	995.4		mg/Kg		100	70 - 130	7	20
Diesel Range Organics (Over C10-C28)			1000	723.1		mg/Kg		72	70 - 130	8	20

QC Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4969-1
SDG: 03C1558255

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

Lab Sample ID: LCSD 880-58634/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58963 — **Prep Batch: 58634**

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	75		70 - 130
o-Terphenyl	86		70 - 130

Lab Sample ID: 890-4969-3 MS — **Client Sample ID: SW01**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58963 — **Prep Batch: 58634**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	996	918.5		mg/Kg		88	70 - 130		
Diesel Range Organics (Over C10-C28)	64.9	*-	996	858.8		mg/Kg		80	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	101		70 - 130
o-Terphenyl	103		70 - 130

Lab Sample ID: 890-4969-3 MSD — **Client Sample ID: SW01**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58963 — **Prep Batch: 58634**

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	<50.4	U	996	813.1		mg/Kg		77	70 - 130	12	20
Diesel Range Organics (Over C10-C28)	64.9	*-	996	840.0		mg/Kg		78	70 - 130	2	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	100		70 - 130
o-Terphenyl	100		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-58217/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 58468

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			07/25/23 11:37	1

Lab Sample ID: LCS 880-58217/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 58468

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	242.2		mg/Kg		97	90 - 110		

QC Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4969-1
SDG: 03C1558255

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 880-58217/3-A
Matrix: Solid
Analysis Batch: 58468

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	242.6		mg/Kg		97	90 - 110	0	20

Lab Sample ID: 890-4968-A-21-B MS
Matrix: Solid
Analysis Batch: 58468

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	44.1	F1	251	328.6	F1	mg/Kg		114	90 - 110		

Lab Sample ID: 890-4968-A-21-C MSD
Matrix: Solid
Analysis Batch: 58468

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	44.1	F1	251	328.9	F1	mg/Kg		114	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4969-1
SDG: 03C1558255

GC VOA

Analysis Batch: 58417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4969-1	FS04	Total/NA	Solid	8021B	58480
890-4969-2	FS05	Total/NA	Solid	8021B	58480
890-4969-3	SW01	Total/NA	Solid	8021B	58480
890-4969-4	SW02	Total/NA	Solid	8021B	58480
MB 880-58463/5-A	Method Blank	Total/NA	Solid	8021B	58463
MB 880-58480/5-A	Method Blank	Total/NA	Solid	8021B	58480
LCS 880-58480/1-A	Lab Control Sample	Total/NA	Solid	8021B	58480
LCSD 880-58480/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	58480
890-4966-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	58480
890-4966-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	58480

Prep Batch: 58463

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-58463/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 58480

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4969-1	FS04	Total/NA	Solid	5035	
890-4969-2	FS05	Total/NA	Solid	5035	
890-4969-3	SW01	Total/NA	Solid	5035	
890-4969-4	SW02	Total/NA	Solid	5035	
MB 880-58480/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-58480/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-58480/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4966-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
890-4966-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 58542

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4969-1	FS04	Total/NA	Solid	Total BTEX	
890-4969-2	FS05	Total/NA	Solid	Total BTEX	
890-4969-3	SW01	Total/NA	Solid	Total BTEX	
890-4969-4	SW02	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 58493

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4969-1	FS04	Total/NA	Solid	8015NM Prep	
890-4969-2	FS05	Total/NA	Solid	8015NM Prep	
MB 880-58493/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-58493/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-58493/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4986-A-1-H MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4986-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 58515

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4969-1	FS04	Total/NA	Solid	8015B NM	58493
890-4969-2	FS05	Total/NA	Solid	8015B NM	58493
MB 880-58493/1-A	Method Blank	Total/NA	Solid	8015B NM	58493

QC Association Summary

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4969-1
SDG: 03C1558255

GC Semi VOA (Continued)

Analysis Batch: 58515 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-58493/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	58493
LCSD 880-58493/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	58493
890-4986-A-1-H MS	Matrix Spike	Total/NA	Solid	8015B NM	58493
890-4986-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	58493

Analysis Batch: 58630

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4969-1	FS04	Total/NA	Solid	8015 NM	
890-4969-2	FS05	Total/NA	Solid	8015 NM	
890-4969-3	SW01	Total/NA	Solid	8015 NM	
890-4969-4	SW02	Total/NA	Solid	8015 NM	

Prep Batch: 58634

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4969-3	SW01	Total/NA	Solid	8015NM Prep	
890-4969-4	SW02	Total/NA	Solid	8015NM Prep	
MB 880-58634/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-58634/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-58634/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4969-3 MS	SW01	Total/NA	Solid	8015NM Prep	
890-4969-3 MSD	SW01	Total/NA	Solid	8015NM Prep	

Analysis Batch: 58963

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4969-3	SW01	Total/NA	Solid	8015B NM	58634
890-4969-4	SW02	Total/NA	Solid	8015B NM	58634
MB 880-58634/1-A	Method Blank	Total/NA	Solid	8015B NM	58634
LCS 880-58634/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	58634
LCSD 880-58634/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	58634
890-4969-3 MS	SW01	Total/NA	Solid	8015B NM	58634
890-4969-3 MSD	SW01	Total/NA	Solid	8015B NM	58634

HPLC/IC

Leach Batch: 58217

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4969-1	FS04	Soluble	Solid	DI Leach	
890-4969-2	FS05	Soluble	Solid	DI Leach	
890-4969-3	SW01	Soluble	Solid	DI Leach	
890-4969-4	SW02	Soluble	Solid	DI Leach	
MB 880-58217/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-58217/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-58217/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4968-A-21-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-4968-A-21-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 58468

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4969-1	FS04	Soluble	Solid	300.0	58217
890-4969-2	FS05	Soluble	Solid	300.0	58217
890-4969-3	SW01	Soluble	Solid	300.0	58217

QC Association Summary

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4969-1
SDG: 03C1558255

HPLC/IC (Continued)

Analysis Batch: 58468 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4969-4	SW02	Soluble	Solid	300.0	58217
MB 880-58217/1-A	Method Blank	Soluble	Solid	300.0	58217
LCS 880-58217/2-A	Lab Control Sample	Soluble	Solid	300.0	58217
LCSD 880-58217/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	58217
890-4968-A-21-B MS	Matrix Spike	Soluble	Solid	300.0	58217
890-4968-A-21-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	58217

Lab Chronicle

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4969-1
SDG: 03C1558255

Client Sample ID: FS04

Lab Sample ID: 890-4969-1
Matrix: Solid
Date Collected: 07/19/23 10:05
Date Received: 07/20/23 09:22

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	58480	07/25/23 13:41	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58417	07/26/23 04:17	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58542	07/26/23 09:46	SM	EET MID
Total/NA	Analysis	8015 NM		1			58630	07/27/23 08:32	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	58493	07/25/23 15:32	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58515	07/27/23 07:07	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	58217	07/21/23 09:38	KS	EET MID
Soluble	Analysis	300.0		5			58468	07/25/23 12:12	CH	EET MID

Client Sample ID: FS05

Lab Sample ID: 890-4969-2
Matrix: Solid
Date Collected: 07/19/23 10:00
Date Received: 07/20/23 09:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	58480	07/25/23 13:41	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58417	07/26/23 04:37	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58542	07/26/23 09:46	SM	EET MID
Total/NA	Analysis	8015 NM		1			58630	07/27/23 08:32	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	58493	07/25/23 15:32	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58515	07/27/23 07:27	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	58217	07/21/23 09:38	KS	EET MID
Soluble	Analysis	300.0		5			58468	07/25/23 12:17	CH	EET MID

Client Sample ID: SW01

Lab Sample ID: 890-4969-3
Matrix: Solid
Date Collected: 07/19/23 13:25
Date Received: 07/20/23 09:22

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	58480	07/25/23 13:41	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58417	07/26/23 04:58	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58542	07/26/23 09:46	SM	EET MID
Total/NA	Analysis	8015 NM		1			58630	08/02/23 10:27	SM	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	58634	07/27/23 08:51	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58963	08/01/23 10:46	AJ	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	58217	07/21/23 09:38	KS	EET MID
Soluble	Analysis	300.0		5			58468	07/25/23 12:22	CH	EET MID

Client Sample ID: SW02

Lab Sample ID: 890-4969-4
Matrix: Solid
Date Collected: 07/19/23 10:15
Date Received: 07/20/23 09:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	58480	07/25/23 13:41	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58417	07/26/23 05:19	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58542	07/26/23 09:46	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4969-1
SDG: 03C1558255

Client Sample ID: SW02

Date Collected: 07/19/23 10:15
Date Received: 07/20/23 09:22

Lab Sample ID: 890-4969-4

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			58630	08/02/23 10:27	SM	EET MID
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	58634	07/27/23 08:51	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58963	08/01/23 11:52	AJ	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	58217	07/21/23 09:38	KS	EET MID
Soluble	Analysis	300.0		5			58468	07/25/23 12:37	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: Remuda 500 Tank Battery

Job ID: 890-4969-1
SDG: 03C1558255

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	T104704400-23-26	06-30-24

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: Remuda 500 Tank Battery

Job ID: 890-4969-1
SDG: 03C1558255

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: Remuda 500 Tank Battery

Job ID: 890-4969-1
SDG: 03C1558255

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4969-1	FS04	Solid	07/19/23 10:05	07/20/23 09:22	2.5
890-4969-2	FS05	Solid	07/19/23 10:00	07/20/23 09:22	2.5
890-4969-3	SW01	Solid	07/19/23 13:25	07/20/23 09:22	0 - 3.5
890-4969-4	SW02	Solid	07/19/23 10:15	07/20/23 09:22	0 - 2.5

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Ben Belill	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	989-854-0852	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:	Remuda 500 Tank Battery	Turn Around	
Project Number:	03C1558255	☒ Routine ☐ Rush	
Project Location:	32.2104, -103.93747	Due Date:	
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:	TM007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	6.0
Total Containers:		Corrected Temperature:	5.8

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: Chlorides	TPH	BTEX
FS04	S	7/19/23	10:05	2.5'	C	1		X	X	X
FS05	S	7/19/23	10:00	2.5'	C	1				
SW01	S	7/19/23	13:25	0-.5'	C	1				
SW02	S	7/19/23	10:15	0-2.5'	C	1		↓	↓	↓

890-4969 Chain of Custody

Preservative Codes

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

Sample Comments

Incident #:
nAPP2317850727

cost center:
1067601001

Ben Belill:
bbelill@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	M. O'Dell	Clue Gulp	7.20.23 920			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4969-1
SDG Number: 03C1558255

Login Number: 4969
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: 890-4969-1
SDG Number: 03C1558255

Login Number: 4969
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 07/21/23 10:58 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: Ben Belill
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

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JOB DESCRIPTION

Remuda 500 Tank Battery
SDG NUMBER 03C1558255

JOB NUMBER

890-4976-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

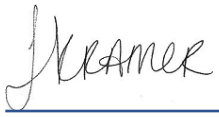
Eurofins Carlsbad

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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Revision 1

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

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Laboratory Job ID: 890-4976-1
SDG: 03C1558255

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4976-1
SDG: 03C1558255

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4976-1
SDG: 03C1558255

Job ID: 890-4976-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4976-1

REVISION

The report being provided is a revision of the original report sent on 8/7/2023. The report (revision 1) is being revised due to Per client email, requesting chloride re run.

Receipt
The samples were received on 7/21/2023 9:13 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: FS03 (890-4976-1), FS06 (890-4976-2), FS07 (890-4976-3), FS08 (890-4976-4), FS02 (890-4976-5), FS11 (890-4976-6), FS12 (890-4976-7), BH01 (890-4976-8), BH01A (890-4976-9), BH02 (890-4976-10), BH02A (890-4976-11), FS10 (890-4976-12), SW03 (890-4976-13), FS09 (890-4976-14), SW04 (890-4976-15) and BH03 (890-4976-16).

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-58735 and analytical batch 880-58782 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-58782 recovered above the upper control limit for Benzene, Toluene, Ethylbenzene, m-Xylene & p-Xylene and o-Xylene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 880-58782/33).

Method 8021B: Surrogate recovery for the following samples were outside control limits: FS03 (890-4976-1), FS06 (890-4976-2), FS07 (890-4976-3), FS08 (890-4976-4), FS02 (890-4976-5), FS11 (890-4976-6), FS12 (890-4976-7), BH01 (890-4976-8), BH01A (890-4976-9), BH02 (890-4976-10), BH02A (890-4976-11), FS10 (890-4976-12), SW03 (890-4976-13), FS09 (890-4976-14), SW04 (890-4976-15), BH03 (890-4976-16), (LCSD 880-58735/2-A), (890-4976-A-1-B MS) and (890-4976-A-1-C MSD). Evidence of matrix interferences is not obvious.

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

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

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

Client Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4976-1
SDG: 03C1558255

Client Sample ID: FS03

Date Collected: 07/20/23 11:25
Date Received: 07/21/23 09:13
Sample Depth: 2.5

Lab Sample ID: 890-4976-1
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		07/28/23 13:24	07/29/23 19:17	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/28/23 13:24	07/29/23 19:17	1
Ethylbenzene	<0.00202	U F1	0.00202		mg/Kg		07/28/23 13:24	07/29/23 19:17	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		07/28/23 13:24	07/29/23 19:17	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/28/23 13:24	07/29/23 19:17	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		07/28/23 13:24	07/29/23 19:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*135*	*S1+*	*70 - 130*	*07/28/23 13:24*	*07/29/23 19:17*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*07/28/23 13:24*	*07/29/23 19:17*	*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			07/31/23 14:05	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			08/07/23 09:40	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	<50.5	U	50.5		mg/Kg		08/03/23 09:25	08/05/23 00:53	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		08/03/23 09:25	08/05/23 00:53	1
Oil Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		08/03/23 09:25	08/05/23 00:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*08/03/23 09:25*	*08/05/23 00:53*	*1*
o-Terphenyl	*100*		*70 - 130*	*08/03/23 09:25*	*08/05/23 00:53*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**426**		25.0		mg/Kg			07/25/23 15:15	5

Client Sample ID: FS06

Date Collected: 07/20/23 11:30
Date Received: 07/21/23 09:13
Sample Depth: 2.5

Lab Sample ID: 890-4976-2
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		07/28/23 13:24	07/29/23 19:42	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/28/23 13:24	07/29/23 19:42	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/28/23 13:24	07/29/23 19:42	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		07/28/23 13:24	07/29/23 19:42	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/28/23 13:24	07/29/23 19:42	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		07/28/23 13:24	07/29/23 19:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*147*	*S1+*	*70 - 130*	*07/28/23 13:24*	*07/29/23 19:42*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4976-1
SDG: 03C1558255

Client Sample ID: FS06

Date Collected: 07/20/23 11:30
Date Received: 07/21/23 09:13
Sample Depth: 2.5

Lab Sample ID: 890-4976-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*74*		*70 - 130*	*07/28/23 13:24*	*07/29/23 19:42*	*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			07/31/23 14:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6	mg/Kg			08/07/23 09:40	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	<49.6	U	49.6	mg/Kg		08/03/23 09:25	08/05/23 01:57	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6	mg/Kg		08/03/23 09:25	08/05/23 01:57	1
Oil Range Organics (Over C28-C36)	<49.6	U	49.6	mg/Kg		08/03/23 09:25	08/05/23 01:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*08/03/23 09:25*	*08/05/23 01:57*	*1*
o-Terphenyl	*110*		*70 - 130*	*08/03/23 09:25*	*08/05/23 01:57*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**448**		24.8	mg/Kg			07/25/23 15:30	5

Client Sample ID: FS07

Date Collected: 07/20/23 11:35
Date Received: 07/21/23 09:13
Sample Depth: 2.5

Lab Sample ID: 890-4976-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/28/23 13:24	07/29/23 20:07	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/28/23 13:24	07/29/23 20:07	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/28/23 13:24	07/29/23 20:07	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		07/28/23 13:24	07/29/23 20:07	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/28/23 13:24	07/29/23 20:07	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		07/28/23 13:24	07/29/23 20:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*167*	*S1+*	*70 - 130*	*07/28/23 13:24*	*07/29/23 20:07*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*07/28/23 13:24*	*07/29/23 20:07*	*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			07/31/23 14:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7	mg/Kg			08/07/23 09:40	1

Client Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4976-1
SDG: 03C1558255

Client Sample ID: FS07

Lab Sample ID: 890-4976-3
Matrix: Solid
Date Collected: 07/20/23 11:35
Date Received: 07/21/23 09:13
Sample Depth: 2.5

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	<49.7	U	49.7		mg/Kg		08/03/23 09:25	08/05/23 02:18	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		08/03/23 09:25	08/05/23 02:18	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		08/03/23 09:25	08/05/23 02:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*08/03/23 09:25*	*08/05/23 02:18*	*1*
o-Terphenyl	*107*		*70 - 130*	*08/03/23 09:25*	*08/05/23 02:18*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**561**		24.9		mg/Kg			07/25/23 15:35	5

Client Sample ID: FS08

Lab Sample ID: 890-4976-4
Matrix: Solid
Date Collected: 07/20/23 11:40
Date Received: 07/21/23 09:13
Sample Depth: 2.5

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		07/28/23 13:24	07/29/23 20:33	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/28/23 13:24	07/29/23 20:33	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		07/28/23 13:24	07/29/23 20:33	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		07/28/23 13:24	07/29/23 20:33	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		07/28/23 13:24	07/29/23 20:33	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		07/28/23 13:24	07/29/23 20:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*160*	*S1+*	*70 - 130*	*07/28/23 13:24*	*07/29/23 20:33*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*07/28/23 13:24*	*07/29/23 20:33*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			07/31/23 14:05	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			08/07/23 09:40	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	<49.6	U	49.6		mg/Kg		08/03/23 09:25	08/05/23 02:39	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		08/03/23 09:25	08/05/23 02:39	1
Oil Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		08/03/23 09:25	08/05/23 02:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*87*		*70 - 130*	*08/03/23 09:25*	*08/05/23 02:39*	*1*
o-Terphenyl	*96*		*70 - 130*	*08/03/23 09:25*	*08/05/23 02:39*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4976-1
SDG: 03C1558255

Client Sample ID: FS08
Date Collected: 07/20/23 11:40
Date Received: 07/21/23 09:13
Sample Depth: 2.5

Lab Sample ID: 890-4976-4
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	562		25.0		mg/Kg			07/25/23 15:40	5

Client Sample ID: FS02
Date Collected: 07/20/23 12:05
Date Received: 07/21/23 09:13
Sample Depth: 3.5

Lab Sample ID: 890-4976-5
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		07/28/23 13:24	07/29/23 20:58	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/28/23 13:24	07/29/23 20:58	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/28/23 13:24	07/29/23 20:58	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/28/23 13:24	07/29/23 20:58	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/28/23 13:24	07/29/23 20:58	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/28/23 13:24	07/29/23 20:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*167*	*S1+*	*70 - 130*	*07/28/23 13:24*	*07/29/23 20:58*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*07/28/23 13:24*	*07/29/23 20:58*	*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			07/31/23 14:05	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			08/07/23 09:40	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	<50.5	U	50.5		mg/Kg		08/03/23 09:25	08/05/23 03:01	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		08/03/23 09:25	08/05/23 03:01	1
Oil Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		08/03/23 09:25	08/05/23 03:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*08/03/23 09:25*	*08/05/23 03:01*	*1*
o-Terphenyl	*106*		*70 - 130*	*08/03/23 09:25*	*08/05/23 03:01*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	504		24.8		mg/Kg			07/25/23 15:45	5

Client Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4976-1
SDG: 03C1558255

Client Sample ID: FS11

Date Collected: 07/20/23 12:20
Date Received: 07/21/23 09:13
Sample Depth: 2.5

Lab Sample ID: 890-4976-6

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		07/28/23 13:24	07/29/23 21:23	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/28/23 13:24	07/29/23 21:23	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/28/23 13:24	07/29/23 21:23	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/28/23 13:24	07/29/23 21:23	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/28/23 13:24	07/29/23 21:23	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/28/23 13:24	07/29/23 21:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*136*	*S1+*	*70 - 130*	*07/28/23 13:24*	*07/29/23 21:23*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*07/28/23 13:24*	*07/29/23 21:23*	*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			07/31/23 14:05	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.2	U	50.2		mg/Kg			08/07/23 09:40	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	<50.2	U	50.2		mg/Kg		08/03/23 09:25	08/05/23 03:22	1
Diesel Range Organics (Over C10-C28)	<50.2	U	50.2		mg/Kg		08/03/23 09:25	08/05/23 03:22	1
Oil Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		08/03/23 09:25	08/05/23 03:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*08/03/23 09:25*	*08/05/23 03:22*	*1*
o-Terphenyl	*99*		*70 - 130*	*08/03/23 09:25*	*08/05/23 03:22*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**465**		25.2		mg/Kg			07/25/23 15:50	5

Client Sample ID: FS12

Date Collected: 07/20/23 12:25
Date Received: 07/21/23 09:13
Sample Depth: 2.5

Lab Sample ID: 890-4976-7

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		07/28/23 13:24	07/29/23 21:48	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/28/23 13:24	07/29/23 21:48	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/28/23 13:24	07/29/23 21:48	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/28/23 13:24	07/29/23 21:48	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/28/23 13:24	07/29/23 21:48	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/28/23 13:24	07/29/23 21:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*181*	*S1+*	*70 - 130*	*07/28/23 13:24*	*07/29/23 21:48*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4976-1
SDG: 03C1558255

Client Sample ID: FS12

Date Collected: 07/20/23 12:25
Date Received: 07/21/23 09:13
Sample Depth: 2.5

Lab Sample ID: 890-4976-7
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*	*07/28/23 13:24*	*07/29/23 21:48*	*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			07/31/23 14:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3	mg/Kg			08/07/23 09:40	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	<50.3	U	50.3	mg/Kg		08/03/23 09:25	08/05/23 03:43	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3	mg/Kg		08/03/23 09:25	08/05/23 03:43	1
Oil Range Organics (Over C28-C36)	<50.3	U	50.3	mg/Kg		08/03/23 09:25	08/05/23 03:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*08/03/23 09:25*	*08/05/23 03:43*	*1*
o-Terphenyl	*111*		*70 - 130*	*08/03/23 09:25*	*08/05/23 03:43*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**436**		25.0	mg/Kg			07/25/23 15:55	5

Client Sample ID: BH01

Date Collected: 07/20/23 12:30
Date Received: 07/21/23 09:13
Sample Depth: 0.5

Lab Sample ID: 890-4976-8
Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		07/28/23 13:24	07/29/23 22:14	1
Toluene	<0.00198	U	0.00198	mg/Kg		07/28/23 13:24	07/29/23 22:14	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		07/28/23 13:24	07/29/23 22:14	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		07/28/23 13:24	07/29/23 22:14	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		07/28/23 13:24	07/29/23 22:14	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		07/28/23 13:24	07/29/23 22:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*151*	*S1+*	*70 - 130*	*07/28/23 13:24*	*07/29/23 22:14*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*07/28/23 13:24*	*07/29/23 22:14*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396	mg/Kg			07/31/23 14:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1	mg/Kg			08/07/23 09:40	1

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Client Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4976-1
SDG: 03C1558255

Client Sample ID: BH01

Date Collected: 07/20/23 12:30
Date Received: 07/21/23 09:13
Sample Depth: 0.5

Lab Sample ID: 890-4976-8
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1		mg/Kg		08/03/23 09:25	08/05/23 04:04	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		08/03/23 09:25	08/05/23 04:04	1
Oil Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		08/03/23 09:25	08/05/23 04:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*08/03/23 09:25*	*08/05/23 04:04*	*1*
o-Terphenyl	*100*		*70 - 130*	*08/03/23 09:25*	*08/05/23 04:04*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8000**		49.5		mg/Kg			07/25/23 16:10	10

Client Sample ID: BH01A

Date Collected: 07/20/23 12:45
Date Received: 07/21/23 09:13
Sample Depth: 3

Lab Sample ID: 890-4976-9
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		07/28/23 13:24	07/29/23 22:39	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/28/23 13:24	07/29/23 22:39	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/28/23 13:24	07/29/23 22:39	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/28/23 13:24	07/29/23 22:39	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/28/23 13:24	07/29/23 22:39	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/28/23 13:24	07/29/23 22:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*1493*	*S1+*	*70 - 130*	*07/28/23 13:24*	*07/29/23 22:39*	*1*
1,4-Difluorobenzene (Surr)	*945*	*S1+*	*70 - 130*	*07/28/23 13:24*	*07/29/23 22:39*	*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			07/31/23 14:05	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7		mg/Kg			08/07/23 09:40	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	<49.7	U	49.7		mg/Kg		08/03/23 09:25	08/05/23 04:25	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		08/03/23 09:25	08/05/23 04:25	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		08/03/23 09:25	08/05/23 04:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*86*		*70 - 130*	*08/03/23 09:25*	*08/05/23 04:25*	*1*
o-Terphenyl	*96*		*70 - 130*	*08/03/23 09:25*	*08/05/23 04:25*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4976-1
SDG: 03C1558255

Client Sample ID: BH01A
Date Collected: 07/20/23 12:45
Date Received: 07/21/23 09:13
Sample Depth: 3

Lab Sample ID: 890-4976-9
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	379		5.04		mg/Kg			08/08/23 10:43	1

Client Sample ID: BH02
Date Collected: 07/20/23 12:55
Date Received: 07/21/23 09:13
Sample Depth: 0.5

Lab Sample ID: 890-4976-10
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		07/28/23 13:24	07/29/23 23:04	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/28/23 13:24	07/29/23 23:04	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/28/23 13:24	07/29/23 23:04	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		07/28/23 13:24	07/29/23 23:04	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/28/23 13:24	07/29/23 23:04	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		07/28/23 13:24	07/29/23 23:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*160*	*S1+*	*70 - 130*	*07/28/23 13:24*	*07/29/23 23:04*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*07/28/23 13:24*	*07/29/23 23:04*	*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			07/31/23 14:05	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			08/07/23 09:40	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		08/03/23 09:25	08/05/23 04:46	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		08/03/23 09:25	08/05/23 04:46	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		08/03/23 09:25	08/05/23 04:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*90*		*70 - 130*	*08/03/23 09:25*	*08/05/23 04:46*	*1*
o-Terphenyl	*100*		*70 - 130*	*08/03/23 09:25*	*08/05/23 04:46*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	101		4.97		mg/Kg			07/25/23 16:30	1

Client Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4976-1
SDG: 03C1558255

Client Sample ID: BH02A

Date Collected: 07/20/23 13:10
Date Received: 07/21/23 09:13
Sample Depth: 3

Lab Sample ID: 890-4976-11
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		07/28/23 13:24	07/30/23 00:46	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/28/23 13:24	07/30/23 00:46	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/28/23 13:24	07/30/23 00:46	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		07/28/23 13:24	07/30/23 00:46	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/28/23 13:24	07/30/23 00:46	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		07/28/23 13:24	07/30/23 00:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*147*	*S1+*	*70 - 130*	*07/28/23 13:24*	*07/30/23 00:46*	*1*
1,4-Difluorobenzene (Surr)	*74*		*70 - 130*	*07/28/23 13:24*	*07/30/23 00:46*	*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			07/31/23 14:05	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			08/07/23 09:40	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		08/03/23 09:25	08/05/23 05:28	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		08/03/23 09:25	08/05/23 05:28	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		08/03/23 09:25	08/05/23 05:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*87*		*70 - 130*	*08/03/23 09:25*	*08/05/23 05:28*	*1*
o-Terphenyl	*98*		*70 - 130*	*08/03/23 09:25*	*08/05/23 05:28*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**212**		4.95		mg/Kg			07/25/23 16:35	1

Client Sample ID: FS10

Date Collected: 07/20/23 13:20
Date Received: 07/21/23 09:13
Sample Depth: 3.5

Lab Sample ID: 890-4976-12
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		07/28/23 13:24	07/30/23 01:12	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/28/23 13:24	07/30/23 01:12	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/28/23 13:24	07/30/23 01:12	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/28/23 13:24	07/30/23 01:12	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/28/23 13:24	07/30/23 01:12	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/28/23 13:24	07/30/23 01:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*143*	*S1+*	*70 - 130*	*07/28/23 13:24*	*07/30/23 01:12*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4976-1
SDG: 03C1558255

Client Sample ID: FS10
Date Collected: 07/20/23 13:20
Date Received: 07/21/23 09:13
Sample Depth: 3.5

Lab Sample ID: 890-4976-12
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*07/28/23 13:24*	*07/30/23 01:12*	*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			07/31/23 14:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.2	U	50.2	mg/Kg			08/07/23 09:40	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	<50.2	U	50.2	mg/Kg		08/03/23 09:25	08/05/23 05:49	1
Diesel Range Organics (Over C10-C28)	<50.2	U	50.2	mg/Kg		08/03/23 09:25	08/05/23 05:49	1
Oil Range Organics (Over C28-C36)	<50.2	U	50.2	mg/Kg		08/03/23 09:25	08/05/23 05:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*87*		*70 - 130*	*08/03/23 09:25*	*08/05/23 05:49*	*1*
o-Terphenyl	*98*		*70 - 130*	*08/03/23 09:25*	*08/05/23 05:49*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**442**		25.3	mg/Kg			08/08/23 10:58	5

Client Sample ID: SW03
Date Collected: 07/20/23 13:30
Date Received: 07/21/23 09:13
Sample Depth: 0 - 3

Lab Sample ID: 890-4976-13
Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		07/28/23 13:24	07/30/23 01:37	1
Toluene	<0.00198	U	0.00198	mg/Kg		07/28/23 13:24	07/30/23 01:37	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		07/28/23 13:24	07/30/23 01:37	1
m-Xylene & p-Xylene	<0.00397	U	0.00397	mg/Kg		07/28/23 13:24	07/30/23 01:37	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		07/28/23 13:24	07/30/23 01:37	1
Xylenes, Total	<0.00397	U	0.00397	mg/Kg		07/28/23 13:24	07/30/23 01:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*162*	*S1+*	*70 - 130*	*07/28/23 13:24*	*07/30/23 01:37*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*07/28/23 13:24*	*07/30/23 01:37*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397	mg/Kg			07/31/23 14:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4	mg/Kg			08/07/23 09:40	1

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Client Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4976-1
SDG: 03C1558255

Client Sample ID: SW03

Lab Sample ID: 890-4976-13
Matrix: Solid
Date Collected: 07/20/23 13:30
Date Received: 07/21/23 09:13
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	<50.4	U	50.4		mg/Kg		08/03/23 09:25	08/05/23 06:10	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4		mg/Kg		08/03/23 09:25	08/05/23 06:10	1
Oil Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		08/03/23 09:25	08/05/23 06:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*08/03/23 09:25*	*08/05/23 06:10*	*1*
o-Terphenyl	*96*		*70 - 130*	*08/03/23 09:25*	*08/05/23 06:10*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**301**		5.01		mg/Kg			07/25/23 16:45	1

Client Sample ID: FS09

Lab Sample ID: 890-4976-14
Matrix: Solid
Date Collected: 07/20/23 13:55
Date Received: 07/21/23 09:13
Sample Depth: 4

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		07/28/23 13:24	07/30/23 02:03	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/28/23 13:24	07/30/23 02:03	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/28/23 13:24	07/30/23 02:03	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/28/23 13:24	07/30/23 02:03	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/28/23 13:24	07/30/23 02:03	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/28/23 13:24	07/30/23 02:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*151*	*S1+*	*70 - 130*	*07/28/23 13:24*	*07/30/23 02:03*	*1*
1,4-Difluorobenzene (Surr)	*78*		*70 - 130*	*07/28/23 13:24*	*07/30/23 02:03*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			07/31/23 14:05	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.2	U	50.2		mg/Kg			08/07/23 09:40	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	<50.2	U	50.2		mg/Kg		08/03/23 09:25	08/05/23 06:30	1
Diesel Range Organics (Over C10-C28)	<50.2	U	50.2		mg/Kg		08/03/23 09:25	08/05/23 06:30	1
Oil Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		08/03/23 09:25	08/05/23 06:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*08/03/23 09:25*	*08/05/23 06:30*	*1*
o-Terphenyl	*105*		*70 - 130*	*08/03/23 09:25*	*08/05/23 06:30*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4976-1
SDG: 03C1558255

Client Sample ID: FS09
Date Collected: 07/20/23 13:55
Date Received: 07/21/23 09:13
Sample Depth: 4

Lab Sample ID: 890-4976-14
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	572		25.3		mg/Kg			07/25/23 16:50	5

Client Sample ID: SW04
Date Collected: 07/20/23 14:10
Date Received: 07/21/23 09:13
Sample Depth: 0 - 3

Lab Sample ID: 890-4976-15
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		07/28/23 13:24	07/30/23 02:28	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/28/23 13:24	07/30/23 02:28	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/28/23 13:24	07/30/23 02:28	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/28/23 13:24	07/30/23 02:28	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/28/23 13:24	07/30/23 02:28	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/28/23 13:24	07/30/23 02:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*186*	*S1+*	*70 - 130*	*07/28/23 13:24*	*07/30/23 02:28*	*1*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*	*07/28/23 13:24*	*07/30/23 02:28*	*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			07/31/23 14:05	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4		mg/Kg			08/07/23 09:40	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	<50.4	U	50.4		mg/Kg		08/03/23 09:25	08/05/23 06:55	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4		mg/Kg		08/03/23 09:25	08/05/23 06:55	1
Oil Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		08/03/23 09:25	08/05/23 06:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*08/03/23 09:25*	*08/05/23 06:55*	*1*
o-Terphenyl	*94*		*70 - 130*	*08/03/23 09:25*	*08/05/23 06:55*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1080		24.9		mg/Kg			07/25/23 16:55	5

Client Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4976-1
SDG: 03C1558255

Client Sample ID: BH03

Date Collected: 07/20/23 14:25
Date Received: 07/21/23 09:13
Sample Depth: 3

Lab Sample ID: 890-4976-16

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		07/28/23 13:24	07/30/23 02:54	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/28/23 13:24	07/30/23 02:54	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/28/23 13:24	07/30/23 02:54	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		07/28/23 13:24	07/30/23 02:54	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/28/23 13:24	07/30/23 02:54	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		07/28/23 13:24	07/30/23 02:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*165*	*S1+*	*70 - 130*	*07/28/23 13:24*	*07/30/23 02:54*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*07/28/23 13:24*	*07/30/23 02:54*	*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			07/31/23 14:05	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			08/07/23 09:40	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	<50.5	U	50.5		mg/Kg		08/03/23 09:25	08/05/23 07:18	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		08/03/23 09:25	08/05/23 07:18	1
Oil Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		08/03/23 09:25	08/05/23 07:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*08/03/23 09:25*	*08/05/23 07:18*	*1*
o-Terphenyl	*103*		*70 - 130*	*08/03/23 09:25*	*08/05/23 07:18*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**459**		24.8		mg/Kg			07/25/23 17:00	5

Surrogate Summary

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4976-1
SDG: 03C1558255

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)
890-4976-1	FS03	135 S1+	87
890-4976-1 MS	FS03	155 S1+	98
890-4976-1 MSD	FS03	158 S1+	103
890-4976-2	FS06	147 S1+	74
890-4976-3	FS07	167 S1+	101
890-4976-4	FS08	160 S1+	103
890-4976-5	FS02	167 S1+	98
890-4976-6	FS11	136 S1+	87
890-4976-7	FS12	181 S1+	115
890-4976-8	BH01	151 S1+	86
890-4976-9	BH01A	1493 S1+	945 S1+
890-4976-10	BH02	160 S1+	96
890-4976-11	BH02A	147 S1+	74
890-4976-12	FS10	143 S1+	87
890-4976-13	SW03	162 S1+	91
890-4976-14	FS09	151 S1+	78
890-4976-15	SW04	186 S1+	108
890-4976-16	BH03	165 S1+	97
LCS 880-58735/1-A	Lab Control Sample	117	88
LCSD 880-58735/2-A	Lab Control Sample Dup	144 S1+	96
MB 880-58735/5-A	Method Blank	79	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)
890-4976-1	FS03	92	100
890-4976-1 MS	FS03	99	96
890-4976-1 MSD	FS03	99	95
890-4976-2	FS06	96	110
890-4976-3	FS07	95	107
890-4976-4	FS08	87	96
890-4976-5	FS02	95	106
890-4976-6	FS11	89	99
890-4976-7	FS12	100	111
890-4976-8	BH01	89	100
890-4976-9	BH01A	86	96
890-4976-10	BH02	90	100
890-4976-11	BH02A	87	98
890-4976-12	FS10	87	98
890-4976-13	SW03	88	96
890-4976-14	FS09	93	105
890-4976-15	SW04	88	94
890-4976-16	BH03	93	103

Surrogate Summary

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4976-1
SDG: 03C1558255

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

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

		Percent Surrogate Recovery (Acceptance Limits)									
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)								
LCS 880-59186/2-A	Lab Control Sample	97	100								
LCSD 880-59186/3-A	Lab Control Sample Dup	88	89								
MB 880-59186/1-A	Method Blank	85	97								

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4976-1
SDG: 03C1558255

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-58735/5-A
Matrix: Solid
Analysis Batch: 58782

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58735

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/28/23 13:24	07/29/23 18:51	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/28/23 13:24	07/29/23 18:51	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/28/23 13:24	07/29/23 18:51	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/28/23 13:24	07/29/23 18:51	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/28/23 13:24	07/29/23 18:51	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/28/23 13:24	07/29/23 18:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*79*		*70 - 130*	*07/28/23 13:24*	*07/29/23 18:51*	*1*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*	*07/28/23 13:24*	*07/29/23 18:51*	*1*

Lab Sample ID: LCS 880-58735/1-A
Matrix: Solid
Analysis Batch: 58782

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58735

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09556		mg/Kg		96	70 - 130		
Toluene			0.100	0.09532		mg/Kg		95	70 - 130		
Ethylbenzene			0.100	0.1016		mg/Kg		102	70 - 130		
m-Xylene & p-Xylene			0.200	0.1885		mg/Kg		94	70 - 130		
o-Xylene			0.100	0.09037		mg/Kg		90	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*

Lab Sample ID: LCSD 880-58735/2-A
Matrix: Solid
Analysis Batch: 58782

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 58735

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	20	35
Toluene			0.100	0.1169		mg/Kg		117	70 - 130	20	35
Ethylbenzene			0.100	0.1255		mg/Kg		126	70 - 130	21	35
m-Xylene & p-Xylene			0.200	0.2264		mg/Kg		113	70 - 130	18	35
o-Xylene			0.100	0.1156		mg/Kg		116	70 - 130	24	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*144*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: 890-4976-1 MS
Matrix: Solid
Analysis Batch: 58782

Client Sample ID: FS03
Prep Type: Total/NA
Prep Batch: 58735

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U	0.0996	0.1169		mg/Kg		117	70 - 130		
Toluene	<0.00202	U	0.0996	0.1192		mg/Kg		120	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4976-1
SDG: 03C1558255

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

Lab Sample ID: 890-4976-1 MS
Matrix: Solid
Analysis Batch: 58782

Client Sample ID: FS03
Prep Type: Total/NA
Prep Batch: 58735

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U F1	0.0996	0.1254		mg/Kg		126	70 - 130
m-Xylene & p-Xylene	<0.00404	U	0.199	0.2223		mg/Kg		112	70 - 130
o-Xylene	<0.00202	U	0.0996	0.1178		mg/Kg		118	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*155*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: 890-4976-1 MSD
Matrix: Solid
Analysis Batch: 58782

Client Sample ID: FS03
Prep Type: Total/NA
Prep Batch: 58735

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.0994	0.1214		mg/Kg		122	70 - 130	4	35
Toluene	<0.00202	U	0.0994	0.1228		mg/Kg		124	70 - 130	3	35
Ethylbenzene	<0.00202	U F1	0.0994	0.1325	F1	mg/Kg		133	70 - 130	5	35
m-Xylene & p-Xylene	<0.00404	U	0.199	0.2321		mg/Kg		117	70 - 130	4	35
o-Xylene	<0.00202	U	0.0994	0.1208		mg/Kg		122	70 - 130	3	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*158*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

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

Lab Sample ID: MB 880-59186/1-A
Matrix: Solid
Analysis Batch: 59287

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 59186

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/03/23 09:24	08/04/23 23:48	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/03/23 09:24	08/04/23 23:48	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/03/23 09:24	08/04/23 23:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*85*		*70 - 130*	*08/03/23 09:24*	*08/04/23 23:48*	*1*
o-Terphenyl	*97*		*70 - 130*	*08/03/23 09:24*	*08/04/23 23:48*	*1*

Lab Sample ID: LCS 880-59186/2-A
Matrix: Solid
Analysis Batch: 59287

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 59186

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	701.2		mg/Kg		70	70 - 130
Diesel Range Organics (Over C10-C28)	1000	939.6		mg/Kg		94	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4976-1
SDG: 03C1558255

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

Lab Sample ID: LCS 880-59186/2-A
Matrix: Solid
Analysis Batch: 59287

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 59186

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	97		70 - 130
o-Terphenyl	100		70 - 130

Lab Sample ID: LCSD 880-59186/3-A
Matrix: Solid
Analysis Batch: 59287

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 59186

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	741.9		mg/Kg		74	70 - 130	6	20
Diesel Range Organics (Over C10-C28)			1000	972.4		mg/Kg		97	70 - 130	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	88		70 - 130
o-Terphenyl	89		70 - 130

Lab Sample ID: 890-4976-1 MS
Matrix: Solid
Analysis Batch: 59287

Client Sample ID: FS03
Prep Type: Total/NA
Prep Batch: 59186

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	998	763.0		mg/Kg		73	70 - 130
Diesel Range Organics (Over C10-C28)	<50.5	U	998	975.4		mg/Kg		96	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	99		70 - 130
o-Terphenyl	96		70 - 130

Lab Sample ID: 890-4976-1 MSD
Matrix: Solid
Analysis Batch: 59287

Client Sample ID: FS03
Prep Type: Total/NA
Prep Batch: 59186

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	<50.5	U	998	792.0		mg/Kg		76	70 - 130	4	20
Diesel Range Organics (Over C10-C28)	<50.5	U	998	969.3		mg/Kg		95	70 - 130	1	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	99		70 - 130
o-Terphenyl	95		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4976-1
SDG: 03C1558255

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-58383/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 58469

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			07/25/23 14:31	1

Lab Sample ID: LCS 880-58383/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 58469

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	241.5		mg/Kg		97	90 - 110		

Lab Sample ID: LCSD 880-58383/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 58469

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	242.7		mg/Kg		97	90 - 110	1	20

Lab Sample ID: 890-4976-7 MS — **Client Sample ID: FS12**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 58469

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	436		1250	1696		mg/Kg		101	90 - 110		

Lab Sample ID: 890-4976-7 MSD — **Client Sample ID: FS12**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 58469

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	436		1250	1699		mg/Kg		101	90 - 110	0	20

Lab Sample ID: MB 880-59549/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 59619

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			08/08/23 10:28	1

Lab Sample ID: LCS 880-59549/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 59619

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	235.7		mg/Kg		94	90 - 110		

Lab Sample ID: LCSD 880-59549/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 59619

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	258.0		mg/Kg		103	90 - 110	9	20

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QC Sample Results

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4976-1
SDG: 03C1558255

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 890-4976-9 MS
Matrix: Solid
Analysis Batch: 59619

Client Sample ID: BH01A
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	379		252	633.8		mg/Kg		101	90 - 110		

Lab Sample ID: 890-4976-9 MSD
Matrix: Solid
Analysis Batch: 59619

Client Sample ID: BH01A
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	379		252	631.4		mg/Kg		100	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4976-1
SDG: 03C1558255

GC VOA

Prep Batch: 58735

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4976-1	FS03	Total/NA	Solid	5035	
890-4976-2	FS06	Total/NA	Solid	5035	
890-4976-3	FS07	Total/NA	Solid	5035	
890-4976-4	FS08	Total/NA	Solid	5035	
890-4976-5	FS02	Total/NA	Solid	5035	
890-4976-6	FS11	Total/NA	Solid	5035	
890-4976-7	FS12	Total/NA	Solid	5035	
890-4976-8	BH01	Total/NA	Solid	5035	
890-4976-9	BH01A	Total/NA	Solid	5035	
890-4976-10	BH02	Total/NA	Solid	5035	
890-4976-11	BH02A	Total/NA	Solid	5035	
890-4976-12	FS10	Total/NA	Solid	5035	
890-4976-13	SW03	Total/NA	Solid	5035	
890-4976-14	FS09	Total/NA	Solid	5035	
890-4976-15	SW04	Total/NA	Solid	5035	
890-4976-16	BH03	Total/NA	Solid	5035	
MB 880-58735/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-58735/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-58735/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4976-1 MS	FS03	Total/NA	Solid	5035	
890-4976-1 MSD	FS03	Total/NA	Solid	5035	

Analysis Batch: 58782

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4976-1	FS03	Total/NA	Solid	8021B	58735
890-4976-2	FS06	Total/NA	Solid	8021B	58735
890-4976-3	FS07	Total/NA	Solid	8021B	58735
890-4976-4	FS08	Total/NA	Solid	8021B	58735
890-4976-5	FS02	Total/NA	Solid	8021B	58735
890-4976-6	FS11	Total/NA	Solid	8021B	58735
890-4976-7	FS12	Total/NA	Solid	8021B	58735
890-4976-8	BH01	Total/NA	Solid	8021B	58735
890-4976-9	BH01A	Total/NA	Solid	8021B	58735
890-4976-10	BH02	Total/NA	Solid	8021B	58735
890-4976-11	BH02A	Total/NA	Solid	8021B	58735
890-4976-12	FS10	Total/NA	Solid	8021B	58735
890-4976-13	SW03	Total/NA	Solid	8021B	58735
890-4976-14	FS09	Total/NA	Solid	8021B	58735
890-4976-15	SW04	Total/NA	Solid	8021B	58735
890-4976-16	BH03	Total/NA	Solid	8021B	58735
MB 880-58735/5-A	Method Blank	Total/NA	Solid	8021B	58735
LCS 880-58735/1-A	Lab Control Sample	Total/NA	Solid	8021B	58735
LCSD 880-58735/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	58735
890-4976-1 MS	FS03	Total/NA	Solid	8021B	58735
890-4976-1 MSD	FS03	Total/NA	Solid	8021B	58735

Analysis Batch: 58870

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4976-1	FS03	Total/NA	Solid	Total BTEX	
890-4976-2	FS06	Total/NA	Solid	Total BTEX	
890-4976-3	FS07	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4976-1
SDG: 03C1558255

GC VOA (Continued)

Analysis Batch: 58870 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4976-4	FS08	Total/NA	Solid	Total BTEX	
890-4976-5	FS02	Total/NA	Solid	Total BTEX	
890-4976-6	FS11	Total/NA	Solid	Total BTEX	
890-4976-7	FS12	Total/NA	Solid	Total BTEX	
890-4976-8	BH01	Total/NA	Solid	Total BTEX	
890-4976-9	BH01A	Total/NA	Solid	Total BTEX	
890-4976-10	BH02	Total/NA	Solid	Total BTEX	
890-4976-11	BH02A	Total/NA	Solid	Total BTEX	
890-4976-12	FS10	Total/NA	Solid	Total BTEX	
890-4976-13	SW03	Total/NA	Solid	Total BTEX	
890-4976-14	FS09	Total/NA	Solid	Total BTEX	
890-4976-15	SW04	Total/NA	Solid	Total BTEX	
890-4976-16	BH03	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 59186

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4976-1	FS03	Total/NA	Solid	8015NM Prep	
890-4976-2	FS06	Total/NA	Solid	8015NM Prep	
890-4976-3	FS07	Total/NA	Solid	8015NM Prep	
890-4976-4	FS08	Total/NA	Solid	8015NM Prep	
890-4976-5	FS02	Total/NA	Solid	8015NM Prep	
890-4976-6	FS11	Total/NA	Solid	8015NM Prep	
890-4976-7	FS12	Total/NA	Solid	8015NM Prep	
890-4976-8	BH01	Total/NA	Solid	8015NM Prep	
890-4976-9	BH01A	Total/NA	Solid	8015NM Prep	
890-4976-10	BH02	Total/NA	Solid	8015NM Prep	
890-4976-11	BH02A	Total/NA	Solid	8015NM Prep	
890-4976-12	FS10	Total/NA	Solid	8015NM Prep	
890-4976-13	SW03	Total/NA	Solid	8015NM Prep	
890-4976-14	FS09	Total/NA	Solid	8015NM Prep	
890-4976-15	SW04	Total/NA	Solid	8015NM Prep	
890-4976-16	BH03	Total/NA	Solid	8015NM Prep	
MB 880-59186/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-59186/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-59186/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4976-1 MS	FS03	Total/NA	Solid	8015NM Prep	
890-4976-1 MSD	FS03	Total/NA	Solid	8015NM Prep	

Analysis Batch: 59287

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4976-1	FS03	Total/NA	Solid	8015B NM	59186
890-4976-2	FS06	Total/NA	Solid	8015B NM	59186
890-4976-3	FS07	Total/NA	Solid	8015B NM	59186
890-4976-4	FS08	Total/NA	Solid	8015B NM	59186
890-4976-5	FS02	Total/NA	Solid	8015B NM	59186
890-4976-6	FS11	Total/NA	Solid	8015B NM	59186
890-4976-7	FS12	Total/NA	Solid	8015B NM	59186
890-4976-8	BH01	Total/NA	Solid	8015B NM	59186
890-4976-9	BH01A	Total/NA	Solid	8015B NM	59186

QC Association Summary

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4976-1
SDG: 03C1558255

GC Semi VOA (Continued)

Analysis Batch: 59287 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4976-10	BH02	Total/NA	Solid	8015B NM	59186
890-4976-11	BH02A	Total/NA	Solid	8015B NM	59186
890-4976-12	FS10	Total/NA	Solid	8015B NM	59186
890-4976-13	SW03	Total/NA	Solid	8015B NM	59186
890-4976-14	FS09	Total/NA	Solid	8015B NM	59186
890-4976-15	SW04	Total/NA	Solid	8015B NM	59186
890-4976-16	BH03	Total/NA	Solid	8015B NM	59186
MB 880-59186/1-A	Method Blank	Total/NA	Solid	8015B NM	59186
LCS 880-59186/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	59186
LCSD 880-59186/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	59186
890-4976-1 MS	FS03	Total/NA	Solid	8015B NM	59186
890-4976-1 MSD	FS03	Total/NA	Solid	8015B NM	59186

Analysis Batch: 59455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4976-1	FS03	Total/NA	Solid	8015 NM	
890-4976-2	FS06	Total/NA	Solid	8015 NM	
890-4976-3	FS07	Total/NA	Solid	8015 NM	
890-4976-4	FS08	Total/NA	Solid	8015 NM	
890-4976-5	FS02	Total/NA	Solid	8015 NM	
890-4976-6	FS11	Total/NA	Solid	8015 NM	
890-4976-7	FS12	Total/NA	Solid	8015 NM	
890-4976-8	BH01	Total/NA	Solid	8015 NM	
890-4976-9	BH01A	Total/NA	Solid	8015 NM	
890-4976-10	BH02	Total/NA	Solid	8015 NM	
890-4976-11	BH02A	Total/NA	Solid	8015 NM	
890-4976-12	FS10	Total/NA	Solid	8015 NM	
890-4976-13	SW03	Total/NA	Solid	8015 NM	
890-4976-14	FS09	Total/NA	Solid	8015 NM	
890-4976-15	SW04	Total/NA	Solid	8015 NM	
890-4976-16	BH03	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 58383

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4976-1	FS03	Soluble	Solid	DI Leach	
890-4976-2	FS06	Soluble	Solid	DI Leach	
890-4976-3	FS07	Soluble	Solid	DI Leach	
890-4976-4	FS08	Soluble	Solid	DI Leach	
890-4976-5	FS02	Soluble	Solid	DI Leach	
890-4976-6	FS11	Soluble	Solid	DI Leach	
890-4976-7	FS12	Soluble	Solid	DI Leach	
890-4976-8	BH01	Soluble	Solid	DI Leach	
890-4976-10	BH02	Soluble	Solid	DI Leach	
890-4976-11	BH02A	Soluble	Solid	DI Leach	
890-4976-13	SW03	Soluble	Solid	DI Leach	
890-4976-14	FS09	Soluble	Solid	DI Leach	
890-4976-15	SW04	Soluble	Solid	DI Leach	
890-4976-16	BH03	Soluble	Solid	DI Leach	
MB 880-58383/1-A	Method Blank	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4976-1
SDG: 03C1558255

HPLC/IC (Continued)

Leach Batch: 58383 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-58383/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-58383/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4976-7 MS	FS12	Soluble	Solid	DI Leach	
890-4976-7 MSD	FS12	Soluble	Solid	DI Leach	

Analysis Batch: 58469

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4976-1	FS03	Soluble	Solid	300.0	58383
890-4976-2	FS06	Soluble	Solid	300.0	58383
890-4976-3	FS07	Soluble	Solid	300.0	58383
890-4976-4	FS08	Soluble	Solid	300.0	58383
890-4976-5	FS02	Soluble	Solid	300.0	58383
890-4976-6	FS11	Soluble	Solid	300.0	58383
890-4976-7	FS12	Soluble	Solid	300.0	58383
890-4976-8	BH01	Soluble	Solid	300.0	58383
890-4976-10	BH02	Soluble	Solid	300.0	58383
890-4976-11	BH02A	Soluble	Solid	300.0	58383
890-4976-13	SW03	Soluble	Solid	300.0	58383
890-4976-14	FS09	Soluble	Solid	300.0	58383
890-4976-15	SW04	Soluble	Solid	300.0	58383
890-4976-16	BH03	Soluble	Solid	300.0	58383
MB 880-58383/1-A	Method Blank	Soluble	Solid	300.0	58383
LCS 880-58383/2-A	Lab Control Sample	Soluble	Solid	300.0	58383
LCSD 880-58383/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	58383
890-4976-7 MS	FS12	Soluble	Solid	300.0	58383
890-4976-7 MSD	FS12	Soluble	Solid	300.0	58383

Leach Batch: 59549

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4976-9	BH01A	Soluble	Solid	DI Leach	
890-4976-12	FS10	Soluble	Solid	DI Leach	
MB 880-59549/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-59549/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-59549/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4976-9 MS	BH01A	Soluble	Solid	DI Leach	
890-4976-9 MSD	BH01A	Soluble	Solid	DI Leach	

Analysis Batch: 59619

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4976-9	BH01A	Soluble	Solid	300.0	59549
890-4976-12	FS10	Soluble	Solid	300.0	59549
MB 880-59549/1-A	Method Blank	Soluble	Solid	300.0	59549
LCS 880-59549/2-A	Lab Control Sample	Soluble	Solid	300.0	59549
LCSD 880-59549/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	59549
890-4976-9 MS	BH01A	Soluble	Solid	300.0	59549
890-4976-9 MSD	BH01A	Soluble	Solid	300.0	59549

Lab Chronicle

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4976-1
SDG: 03C1558255

Client Sample ID: FS03
Date Collected: 07/20/23 11:25
Date Received: 07/21/23 09:13

Lab Sample ID: 890-4976-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	58735	07/28/23 13:24	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58782	07/29/23 19:17	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58870	07/31/23 14:05	AJ	EET MID
Total/NA	Analysis	8015 NM		1			59455	08/07/23 09:40	SM	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	59186	08/03/23 09:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59287	08/05/23 00:53	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	58383	07/24/23 14:48	KS	EET MID
Soluble	Analysis	300.0		5			58469	07/25/23 15:15	CH	EET MID

Client Sample ID: FS06
Date Collected: 07/20/23 11:30
Date Received: 07/21/23 09:13

Lab Sample ID: 890-4976-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	58735	07/28/23 13:24	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58782	07/29/23 19:42	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58870	07/31/23 14:05	AJ	EET MID
Total/NA	Analysis	8015 NM		1			59455	08/07/23 09:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	59186	08/03/23 09:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59287	08/05/23 01:57	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	58383	07/24/23 14:48	KS	EET MID
Soluble	Analysis	300.0		5			58469	07/25/23 15:30	CH	EET MID

Client Sample ID: FS07
Date Collected: 07/20/23 11:35
Date Received: 07/21/23 09:13

Lab Sample ID: 890-4976-3
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	58735	07/28/23 13:24	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58782	07/29/23 20:07	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58870	07/31/23 14:05	AJ	EET MID
Total/NA	Analysis	8015 NM		1			59455	08/07/23 09:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.07 g	10 mL	59186	08/03/23 09:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59287	08/05/23 02:18	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	58383	07/24/23 14:48	KS	EET MID
Soluble	Analysis	300.0		5			58469	07/25/23 15:35	CH	EET MID

Client Sample ID: FS08
Date Collected: 07/20/23 11:40
Date Received: 07/21/23 09:13

Lab Sample ID: 890-4976-4
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			5.05 g	5 mL	58735	07/28/23 13:24	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58782	07/29/23 20:33	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58870	07/31/23 14:05	AJ	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4976-1
SDG: 03C1558255

Client Sample ID: FS08
Date Collected: 07/20/23 11:40
Date Received: 07/21/23 09:13

Lab Sample ID: 890-4976-4
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			59455	08/07/23 09:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	59186	08/03/23 09:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59287	08/05/23 02:39	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	58383	07/24/23 14:48	KS	EET MID
Soluble	Analysis	300.0		5			58469	07/25/23 15:40	CH	EET MID

Client Sample ID: FS02
Date Collected: 07/20/23 12:05
Date Received: 07/21/23 09:13

Lab Sample ID: 890-4976-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	58735	07/28/23 13:24	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58782	07/29/23 20:58	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58870	07/31/23 14:05	AJ	EET MID
Total/NA	Analysis	8015 NM		1			59455	08/07/23 09:40	SM	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	59186	08/03/23 09:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59287	08/05/23 03:01	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	58383	07/24/23 14:48	KS	EET MID
Soluble	Analysis	300.0		5			58469	07/25/23 15:45	CH	EET MID

Client Sample ID: FS11
Date Collected: 07/20/23 12:20
Date Received: 07/21/23 09:13

Lab Sample ID: 890-4976-6
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			4.98 g	5 mL	58735	07/28/23 13:24	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58782	07/29/23 21:23	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58870	07/31/23 14:05	AJ	EET MID
Total/NA	Analysis	8015 NM		1			59455	08/07/23 09:40	SM	EET MID
Total/NA	Prep	8015NM Prep			9.96 g	10 mL	59186	08/03/23 09:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59287	08/05/23 03:22	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	58383	07/24/23 14:48	KS	EET MID
Soluble	Analysis	300.0		5			58469	07/25/23 15:50	CH	EET MID

Client Sample ID: FS12
Date Collected: 07/20/23 12:25
Date Received: 07/21/23 09:13

Lab Sample ID: 890-4976-7
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			5.02 g	5 mL	58735	07/28/23 13:24	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58782	07/29/23 21:48	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58870	07/31/23 14:05	AJ	EET MID
Total/NA	Analysis	8015 NM		1			59455	08/07/23 09:40	SM	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	59186	08/03/23 09:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59287	08/05/23 03:43	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4976-1
SDG: 03C1558255

Client Sample ID: FS12
Date Collected: 07/20/23 12:25
Date Received: 07/21/23 09:13

Lab Sample ID: 890-4976-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.01 g	50 mL	58383	07/24/23 14:48	KS	EET MID
Soluble	Analysis	300.0		5			58469	07/25/23 15:55	CH	EET MID

Client Sample ID: BH01
Date Collected: 07/20/23 12:30
Date Received: 07/21/23 09:13

Lab Sample ID: 890-4976-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	58735	07/28/23 13:24	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58782	07/29/23 22:14	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58870	07/31/23 14:05	AJ	EET MID
Total/NA	Analysis	8015 NM		1			59455	08/07/23 09:40	SM	EET MID
Total/NA	Prep	8015NM Prep			9.99 g	10 mL	59186	08/03/23 09:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59287	08/05/23 04:04	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	58383	07/24/23 14:48	KS	EET MID
Soluble	Analysis	300.0		10			58469	07/25/23 16:10	CH	EET MID

Client Sample ID: BH01A
Date Collected: 07/20/23 12:45
Date Received: 07/21/23 09:13

Lab Sample ID: 890-4976-9
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			5.01 g	5 mL	58735	07/28/23 13:24	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58782	07/29/23 22:39	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58870	07/31/23 14:05	AJ	EET MID
Total/NA	Analysis	8015 NM		1			59455	08/07/23 09:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.07 g	10 mL	59186	08/03/23 09:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59287	08/05/23 04:25	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	59549	08/07/23 15:55	KS	EET MID
Soluble	Analysis	300.0		1			59619	08/08/23 10:43	CH	EET MID

Client Sample ID: BH02
Date Collected: 07/20/23 12:55
Date Received: 07/21/23 09:13

Lab Sample ID: 890-4976-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	58735	07/28/23 13:24	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58782	07/29/23 23:04	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58870	07/31/23 14:05	AJ	EET MID
Total/NA	Analysis	8015 NM		1			59455	08/07/23 09:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	59186	08/03/23 09:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59287	08/05/23 04:46	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	58383	07/24/23 14:48	KS	EET MID
Soluble	Analysis	300.0		1			58469	07/25/23 16:30	CH	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4976-1
SDG: 03C1558255

Client Sample ID: BH02A
Date Collected: 07/20/23 13:10
Date Received: 07/21/23 09:13

Lab Sample ID: 890-4976-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	58735	07/28/23 13:24	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58782	07/30/23 00:46	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58870	07/31/23 14:05	AJ	EET MID
Total/NA	Analysis	8015 NM		1			59455	08/07/23 09:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	59186	08/03/23 09:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59287	08/05/23 05:28	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	58383	07/24/23 14:48	KS	EET MID
Soluble	Analysis	300.0		1			58469	07/25/23 16:35	CH	EET MID

Client Sample ID: FS10
Date Collected: 07/20/23 13:20
Date Received: 07/21/23 09:13

Lab Sample ID: 890-4976-12
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	58735	07/28/23 13:24	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58782	07/30/23 01:12	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58870	07/31/23 14:05	AJ	EET MID
Total/NA	Analysis	8015 NM		1			59455	08/07/23 09:40	SM	EET MID
Total/NA	Prep	8015NM Prep			9.96 g	10 mL	59186	08/03/23 09:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59287	08/05/23 05:49	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	59549	08/07/23 15:55	KS	EET MID
Soluble	Analysis	300.0		5			59619	08/08/23 10:58	CH	EET MID

Client Sample ID: SW03
Date Collected: 07/20/23 13:30
Date Received: 07/21/23 09:13

Lab Sample ID: 890-4976-13
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			5.04 g	5 mL	58735	07/28/23 13:24	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58782	07/30/23 01:37	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58870	07/31/23 14:05	AJ	EET MID
Total/NA	Analysis	8015 NM		1			59455	08/07/23 09:40	SM	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	59186	08/03/23 09:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59287	08/05/23 06:10	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	58383	07/24/23 14:48	KS	EET MID
Soluble	Analysis	300.0		1			58469	07/25/23 16:45	CH	EET MID

Client Sample ID: FS09
Date Collected: 07/20/23 13:55
Date Received: 07/21/23 09:13

Lab Sample ID: 890-4976-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	58735	07/28/23 13:24	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58782	07/30/23 02:03	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58870	07/31/23 14:05	AJ	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Remuda 500 Tank Battery

Job ID: 890-4976-1
SDG: 03C1558255

Client Sample ID: FS09
Date Collected: 07/20/23 13:55
Date Received: 07/21/23 09:13

Lab Sample ID: 890-4976-14
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			59455	08/07/23 09:40	SM	EET MID
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	59186	08/03/23 09:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59287	08/05/23 06:30	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	58383	07/24/23 14:48	KS	EET MID
Soluble	Analysis	300.0		5			58469	07/25/23 16:50	CH	EET MID

Client Sample ID: SW04
Date Collected: 07/20/23 14:10
Date Received: 07/21/23 09:13

Lab Sample ID: 890-4976-15
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	58735	07/28/23 13:24	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58782	07/30/23 02:28	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58870	07/31/23 14:05	AJ	EET MID
Total/NA	Analysis	8015 NM		1			59455	08/07/23 09:40	SM	EET MID
Total/NA	Prep	8015NM Prep			9.93 g	10 mL	59186	08/03/23 09:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59287	08/05/23 06:55	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	58383	07/24/23 14:48	KS	EET MID
Soluble	Analysis	300.0		5			58469	07/25/23 16:55	CH	EET MID

Client Sample ID: BH03
Date Collected: 07/20/23 14:25
Date Received: 07/21/23 09:13

Lab Sample ID: 890-4976-16
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	58735	07/28/23 13:24	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58782	07/30/23 02:54	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58870	07/31/23 14:05	AJ	EET MID
Total/NA	Analysis	8015 NM		1			59455	08/07/23 09:40	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	59186	08/03/23 09:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59287	08/05/23 07:18	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	58383	07/24/23 14:48	KS	EET MID
Soluble	Analysis	300.0		5			58469	07/25/23 17:00	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: Remuda 500 Tank Battery

Job ID: 890-4976-1
SDG: 03C1558255

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	T104704400-23-26	06-30-24

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: Remuda 500 Tank Battery

Job ID: 890-4976-1
SDG: 03C1558255

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: Remuda 500 Tank Battery

Job ID: 890-4976-1
SDG: 03C1558255

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4976-1	FS03	Solid	07/20/23 11:25	07/21/23 09:13	2.5
890-4976-2	FS06	Solid	07/20/23 11:30	07/21/23 09:13	2.5
890-4976-3	FS07	Solid	07/20/23 11:35	07/21/23 09:13	2.5
890-4976-4	FS08	Solid	07/20/23 11:40	07/21/23 09:13	2.5
890-4976-5	FS02	Solid	07/20/23 12:05	07/21/23 09:13	3.5
890-4976-6	FS11	Solid	07/20/23 12:20	07/21/23 09:13	2.5
890-4976-7	FS12	Solid	07/20/23 12:25	07/21/23 09:13	2.5
890-4976-8	BH01	Solid	07/20/23 12:30	07/21/23 09:13	0.5
890-4976-9	BH01A	Solid	07/20/23 12:45	07/21/23 09:13	3
890-4976-10	BH02	Solid	07/20/23 12:55	07/21/23 09:13	0.5
890-4976-11	BH02A	Solid	07/20/23 13:10	07/21/23 09:13	3
890-4976-12	FS10	Solid	07/20/23 13:20	07/21/23 09:13	3.5
890-4976-13	SW03	Solid	07/20/23 13:30	07/21/23 09:13	0 - 3
890-4976-14	FS09	Solid	07/20/23 13:55	07/21/23 09:13	4
890-4976-15	SW04	Solid	07/20/23 14:10	07/21/23 09:13	0 - 3
890-4976-16	BH03	Solid	07/20/23 14:25	07/21/23 09:13	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 2

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

Work Order Comments

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

Project Name:	Remuda 500 Tank Battery	Turn Around	☑ Routine ☐ Rush
Project Number:	03C1558255	Due Date:	
Project Location:		TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Connor Whitman		
PO #:			

SAMPLE RECEIPT					
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No		
Samples Received Intact:	(Yes) No	Thermometer ID:	TWN007		
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		

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 3000.0)	TPH (8015)	BTEX (8021)	Parameters
FS03	S	7/20/23	1125	2.5	C	1					
FS06			1130	2.5	C	1					
FS07			1135	2.5	C	1					
FS08			1140	2.5	C	1					
FS02			1205	3.5	C	1					
FS11			1220	2.5	C	1					
FS12			1225	2.5	C	1					
BH01			1230	.5	G	1					
BH01A			1245	3	G	1					
BH02			1255	.5	G	1					

890-4976 Chain of Custody

Sample Comments

Incident ID: nAPP2317850727
Cost Center: 1067601001
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			7.21.23 913	2		
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 2 of 2

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

Work Order Comments

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

Project Name:	Remuda 500 Tank Battery	Turn Around	☑ Routine ☐ Rush
Project Number:	03C1558255	Due Date:	
Project Location:		TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Connor Whitman		
PO #:			

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

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 3000.0)	TPH (8015)	BTEX (8021)
BH02A	S	7/20/23	1310	3	G	1				
FS10			1320	3.5	C	1				
SW03			1330	0-3	C	1				
FS09			1355	4	C	1				
SW04			1410	0-3	C	1				
BH03			1425	3	G	1				

Parameters

Preservative Codes

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

Sample Comments

Incident ID:
nAPP2317850727

Cost Center:
1067601001

AFE:

CW

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		7.21.23 913	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4976-1
SDG Number: 03C1558255

Login Number: 4976
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: 890-4976-1
SDG Number: 03C1558255

Login Number: 4976
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 07/24/23 08:33 AM

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

ENSOLUM

APPENDIX E

NMOCD Notifications

From: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Sent: Friday, July 14, 2023 9:44 AM
To: Collins, Melanie <melanie.collins@exxonmobil.com>
Cc: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>
Subject: RE: [EXTERNAL] Updated XTO - Sampling Notification (Week of 7/17/23 - 7/21/23)

External Email – Think Before You Click

Melanie,

Notification requirements are **two business days**, per rule. You may proceed on your schedule. The OCD has received your notification. When reporting sampling at multiple locations it is required to provide and date and time for each location. Include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented 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: Collins, Melanie <melanie.collins@exxonmobil.com>
Sent: Thursday, July 13, 2023 2:56 PM
To: Enviro, OCD, EMNRD 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: spills@slo.state.nm.us; Green, Garrett J <garrett.green@exxonmobil.com>
Subject: [EXTERNAL] Updated XTO - Sampling Notification (Week of 7/17/23 - 7/21/23)

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

All,

XTO plans to complete final sampling activities at the sites listed below for the week of July 17, 2023.

Tuesday 7/18/23
- PLU 183Q / nAPP2315133557
- Remuda 500 Tank Battery / nAPP2317850727 (SLO)

Wednesday 7/19/23
- PLU 224 / nAPP2310050120
- Remuda 500 Tank Battery / nAPP2317850727 (SLO)

Thursday 7/20/23
- PLU 224 / nAPP2310050120
- James Ranch Unit 19 Battery / nAPP2317142256 (SLO)

Friday 7/21/23
- James Ranch Unit 19 Battery / nAPP2317142256 (SLO)

Thank you,

Melanie Collins

XTO ENERGY

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

CONDITIONS

Action 265789

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 265789
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	XTO's deferral requests final remediation for Incident Number NAPP2317850727 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 area requested for deferral is in the immediate vicinity of production equipment and flowlines on the caliche well pad, where remediation would require a major facility deconstruction (Figure 4). The area has 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.	2/8/2024