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	NAPP2233950022
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 32.25947 Longitude -103.92244

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Remuda N 31 124H	Site Type Production Well
Date Release Discovered 11/22/2022	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
K	31	23S	30E	Eddy

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 4.25	Volume Recovered (bbls) 0.39
☒ Produced Water	Volume Released (bbls) 17.48	Volume Recovered (bbls) 1.61
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☒ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: The flowline for the Remuda N 31 124H well failed, releasing fluids to soil. Vacuum truck was dispatched and recovered free fluids. A third-party contractor has been retained for remediation purposes.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2233950022
District RP	
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Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release? N/A
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? N/A	

Initial Response

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

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

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

NA

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

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

Printed Name: Garrett Green
Title: SSHE Coordinator

Signature: 
Date: 12/5/2022

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

OCD Only

Received by: Jocelyn Harimon
Date: 12/05/2022

Location:	Remuda N 31 124H	
Spill Date:	11/22/2022	

Area 1		
Approximate Area =	2427.00	sq. ft.
Average Saturation (or depth) of spill =	2.50	inches
Average Porosity Factor =	0.15	
VOLUME OF LEAK		
Total Crude Oil =	2.64	bbls
Total Produced Water =	10.87	bbls

Area 2		
Approximate Area =	1554.00	sq. ft.
Average Saturation (or depth) of spill =	1.00	inches
Average Porosity Factor =	0.03	
VOLUME OF LEAK		
Total Crude Oil =	0.53	bbls
Total Produced Water =	2.17	bbls

Area 3		
Approximate Area =	1550.00	sq. ft.
Average Saturation (or depth) of spill =	3.00	inches
Average Porosity Factor =	0.08	
VOLUME OF LEAK		
Total Crude Oil =	1.08	bbls
Total Produced Water =	4.44	bbls

TOTAL VOLUME OF LEAK		
Total Crude Oil =	**4.25**	**bbls**
Total Produced Water =	**17.48**	**bbls**
TOTAL VOLUME RECOVERED		
Total Crude Oil =	**0.39**	**bbls**
Total Produced Water =	**1.61**	**bbls**

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

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

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 163928
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	None	12/6/2022

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2233950022
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2233950022
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:** 6/22/2023

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

OCD Only

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

State of New Mexico
Oil Conservation Division

Incident ID	napp2233950022
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: [signature]
Date: 6/22/2023
email: garrett.green@exxonmobil.com
Telephone: 575-200-0729

OCD Only

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

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

Signature:
Date:

State of New Mexico
Oil Conservation Division

Incident ID	napp2233950022
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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Printed Name: Garrett Green
Title: SSHE Coordinator
Signature: [signature]
Date: 6/22/2023
email: garrett.green@exxonmobil.com
Telephone: 575-200-0729

OCD Only

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

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

Signature: Robert Hamlet
Date: 11/29/2023

ENSOLUM

June 22, 2023

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

Re: Remediation Work Plan
Remuda N 31 124H
Incident Number nAPP2233950022
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared the following *Remediation Work Plan* (*Work Plan*) to document site assessment and excavation activities completed to date and propose additional remedial actions to address the remaining impacted soil identified at the Remuda N 31 124H (Site). The purpose of the remediation activities completed to date was to delineate the lateral and vertical extent of impacted soil resulting from a release of crude oil and produced water at the Site and excavate the impacted soil in the on-pad release area. The following *Work Plan* proposes advancing a depth to water boring to confirm the Site Closure Criteria and excavation of impacted soil in the top 4 feet of the off-pad release area in the adjacent right-of-way (ROW).

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit K, Section 31, Township 23 South, Range 30 East, in Eddy County, New Mexico (32.25947°N, -103.92244°W) and is associated with oil and gas exploration and production operations on New Mexico State Land.

On November 22, 2022, failure of a flow line resulted in the release of 4.25 barrels (bbls) of crude oil and 17.48 bbls produced water onto the well pad and into the adjacent ROW. A vacuum truck was dispatched to the Site and recovered 2 bbls of released fluids. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) and the New Mexico State Land Office (NMSLO) on a Release Notification Form C-141 (Form C-141) on December 5, 2022. The release was assigned Incident Number nAPP2233950022.

A Right of Entry Request for Remediation form will be submitted to the NMSLO, requesting approval to remediate the release area in the off-pad ROW. The request will include a copy of the Form C-141, a topographic location map, and a satellite image of the location. Since the release occurred on pad and within a newly constructed ROW, 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 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. Potential site receptors are identified on Figure 1.

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is New Mexico Office of the State Engineer (NMOSE) Point of Diversion (POD) well C-04526, located approximately 1.06 miles southeast of the Site. The well was drilled during May 2021 to a depth of 105 feet bgs, and no groundwater was encountered. The Well Record and Log is included in Appendix A. All wells used for depth to groundwater determination are depicted on Figure 1.

The closest continuously flowing or significant watercourse to the Site is an intermittent stream, located approximately 464 feet northwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (medium potential karst designation area).

Based on the results of the Site Characterization, 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)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 20,000 mg/kg

A reclamation requirement of 600 mg/kg chloride and 100 mg/kg TPH applies to the top 4 feet of the off pad area that was impacted by the release, per 19.15.29.13.D (1) NMAC for the top 4 feet of areas that will be reclaimed following remediation.

DELINEATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On April 26, 2022, Ensolum personnel were at the Site to conduct Site assessment activities and evaluate the release extent based on information provided on the Form C-141 and visual observations. Assessment soil samples SS01 through SS09 were collected within and around the release extent at a depth of 0.5 feet bgs to assess the lateral extent of the release.

On May 3, 2022, Ensolum personnel returned to the Site to oversee delineation activities. Potholes PH01 through PH05 were advanced via trackhoe within the release extent, at the locations of assessment samples SS01 through SS05. The potholes were advanced to depths ranging from 4 feet to 16 feet bgs. Discrete soil samples were collected from each pothole at depths ranging from 1-foot bgs to 16 feet bgs. Soil from the delineation samples was field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. Field screening results and observations were logged on lithologic/soil sampling logs, which are included in Appendix B. The release extent and soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was completed during the Site visits and a photographic log is included in Appendix C.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of the following contaminants of concern (COCs) BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Laboratory analytical results for delineation soil samples SS01, SS02, SS04, and SS05, collected at a depth of 0.5 feet bgs within the release extent, indicated that TPH-GRO/DRO and TPH concentrations exceeded the Site Closure Criteria. Laboratory analytical results for assessment soil samples SS06 through SS09, collected at a depth of 0.5 feet bgs around the release extent, indicated that all COC concentrations were compliant with the most stringent Table I Closure Criteria and successfully defined the lateral extent of the release.

Laboratory analytical results for the delineation sample collected at 1-foot bgs from pothole PH05 indicated that TPH-GRO/DRO and TPH concentrations exceeded the Site Closure Criteria, subsequent samples collected at depths ranging from 4 feet to 16 feet bgs from pothole PH05 were compliant with the Site Closure Criteria. Laboratory analytical results for the delineation samples collected from potholes PH01 through PH04 indicated that all COC concentrations were compliant with the Site Closure Criteria and successfully defined the vertical extent of the release. The laboratory analytical results are presented in Table 1 and the complete laboratory reports are included in Appendix D.

EXCAVATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

Between May 5 and May 12, 2022, Ensolum personnel were at the Site to oversee excavation activities in the on-pad release extent. Impacted soil was excavated as indicated by visible staining and laboratory analytical results for the delineation soil samples. Excavation activities were performed using track-mounted backhoe and transport vehicle. To direct excavation activities, soil was screened for VOCs and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. The excavation was completed to depths ranging from 1-foot to 3.5 feet bgs. Photographic documentation of the excavation activities is included in Appendix C.

Following removal of the impacted soil, 5-point composite soil samples were collected at least every 200 square feet from the floor of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples FS01 through FS32 were collected from the floor of the excavation from depths ranging from 1-foot to 3.5 feet bgs. Composite soil samples SW01 through SW10 were collected from the sidewalls of the excavation at depths ranging from the ground surface to 3.5 feet bgs. The soil samples were collected, handled, and analyzed following the same procedures as described above. The excavation extent and excavation soil sample locations are presented on Figure 3.

The excavation area measured approximately 6,365 square feet. A total of approximately 710 cubic yards of impacted soil were removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 disposal facility in Carlsbad, New Mexico.

Laboratory analytical results for excavation floor samples FS01 through FS32 and excavation sidewall samples SW01 through SW10 indicated all COC concentrations were compliant with the Site Closure Criteria. The laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included in Appendix D.

Excavation of the impacted off-pad area in the adjacent ROW is still required; however, remediation efforts are on hold pending submittal and approval of a Right of Entry (ROE) permit from the NMSLO.

PROPOSED REMEDIATION WORK PLAN

In order to confirm depth to groundwater is greater than 100 feet bgs at the Site, XTO proposes to advance a soil boring to a depth of 105 feet bgs. The soil boring will be located within 0.5 miles of the Site and a field geologist will log and describe soils continuously. The soil boring will be left open for over 72 hours to allow for equilibration of groundwater levels within the temporary boring casing. After the 72-hour waiting period, depth to groundwater will be assessed and the soil boring will be backfilled following NMOSE approved procedures. A well record or soil boring log will be included in a subsequent *Closure Request*.

Following confirmation of depth to groundwater and receipt of a fully executed ROE permit from the NMSLO, XTO will proceed with excavation of impacted soil in the ROW to below the reclamation requirement in the top 4 feet and below the Site Closure Criteria at depths greater than 4 feet bgs. The delineation soil sample results indicate soil containing elevated TPH concentrations exists across an approximate 950 square foot area and extends to a maximum depth of 4 feet bgs. Based on the delineation soil sample analytical results and area of the release extent, an estimated 140 cubic yards of impacted soil will be excavated from the adjacent ROW.

XTO will complete the excavation and soil sampling activities within 90 days of the date of approval of this *Work Plan* by the NMOCD or issuance of the ROE permit from the NMSLO, whichever is received first. A soil boring will be completed pending NMOSE permits and driller schedules. A *Closure Request* will be submitted within 30 days of receipt of final laboratory analytical results or completion of the depth to water boring, whichever occurs last. NMOCD sampling notifications are provided in Appendix E. The NMSLO Reclamation Plan is included in Appendix F.

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

Sincerely,
Ensolum, LLC

Connor Whitman
Field Geologist

Ashley Ager, MS, PG
Principal, Geologist

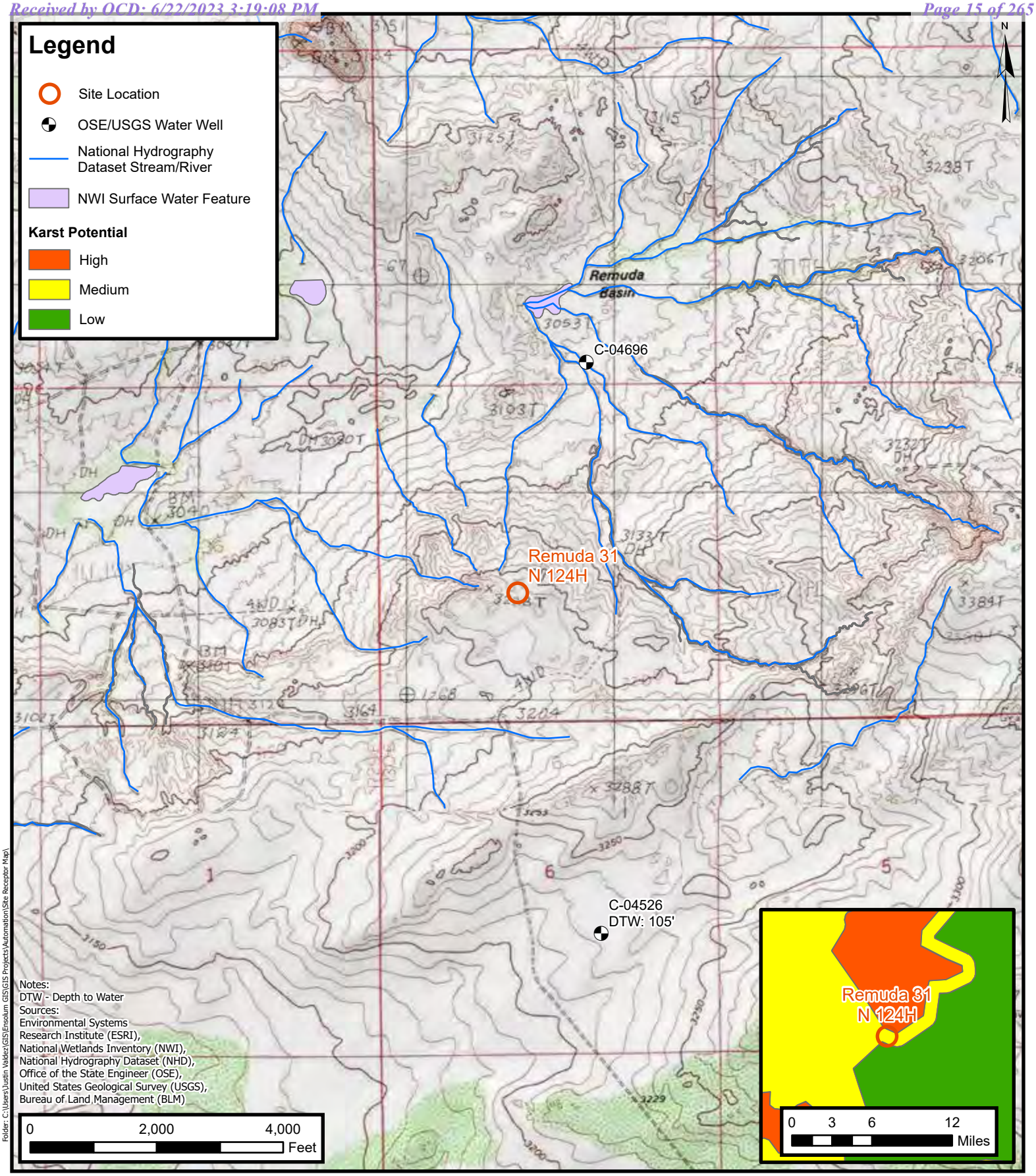
cc: Garrett Green, XTO
Shelby Pennington, XTO
New Mexico State Land Office

Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Figure 3	Excavation Soil Sample Locations

ENSOLUM

FIGURES

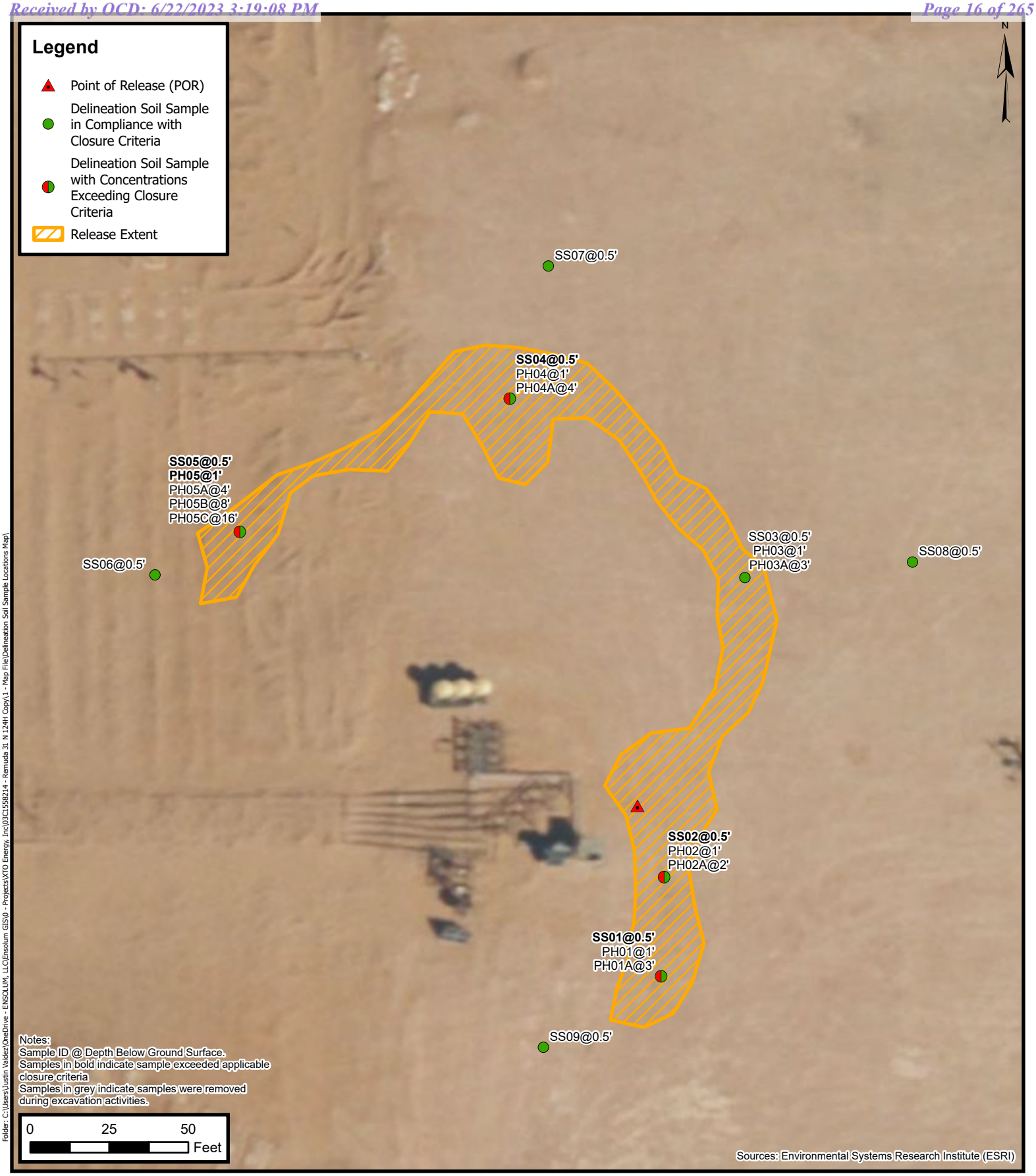


ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

XTO Energy Inc
Remuda 31 N 124H
Incident Number: nAPP2233950022
Unit K, Sec 31, T23S, R30E
Eddy County, New Mexico

FIGURE 1



Folder: C:\Users\Justin Valdez\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\XTO Energy, Inc\03C1558214 - Remuda 31 N 124H Copy\1 - Map File\Delineation Soil Sample Locations Map\

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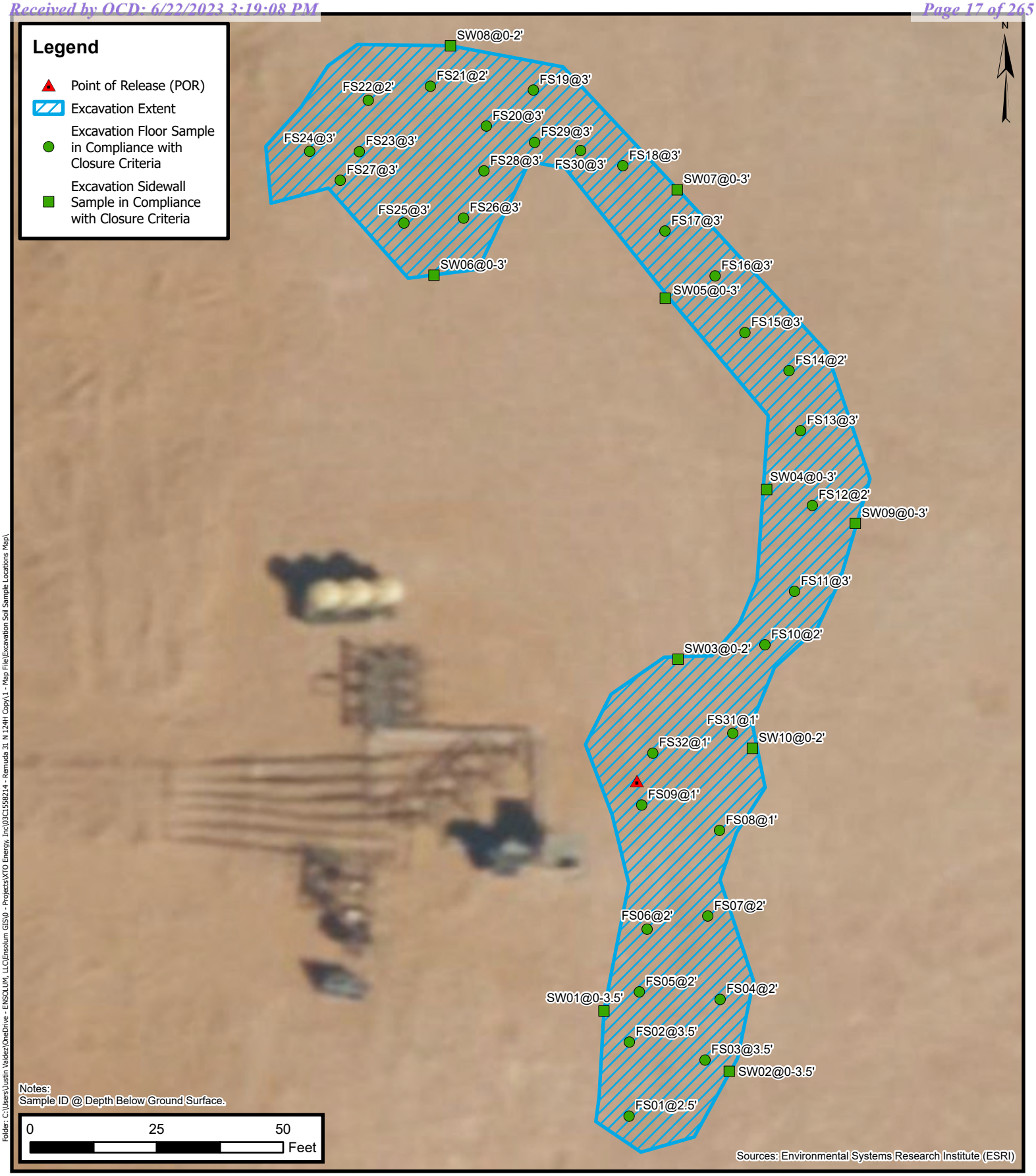
Environmental, Engineering and Hydrogeologic Consultants

Delineation Soil Sample Locations

XTO Energy Inc
Remuda 31 N 124H
Incident Number: nAPP2233950022
Unit K, Sec 31, T23S, R30E
Eddy County, New Mexico

FIGURE 2



Folder: C:\Users\Justin Valdez\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\XTO Energy, Inc\03C1558214 - Remuda 31 N 124H Copy\1 - Map File\Excavation Soil Sample Locations Map\

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Environmental, Engineering and Hydrogeologic Consultants

Excavation Soil Sample Locations

XTO Energy Inc
Remuda 31 N 124H
Incident Number: nAPP2233950022
Unit K, Sec 31, T23S, R30E
Eddy County, New Mexico

FIGURE 3

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Remuda N 31 124H
XTO Energy, Inc.
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Delineation Soil Samples										
~~SS01~~	~~04/26/2023~~	~~0.5~~	~~<0.00199~~	~~<0.00398~~	~~60.1~~	~~5,010~~	~~<50.0~~	~~**5,070**~~	~~**5,070**~~	~~426~~
~~PH01~~	~~05/03/2023~~	~~1~~	~~<0.00199~~	~~0.0111~~	~~<49.8~~	~~551~~	~~<49.8~~	~~551~~	~~551~~	~~2,260~~
PH01A	05/03/2023	3	<0.00200	0.0129	<50.0	<50.0	<50.0	<50.0	<50.0	240
~~SS02~~	~~04/26/2023~~	~~0.5~~	~~<0.00199~~	~~0.0134~~	~~<49.8~~	~~2,600~~	~~<49.8~~	~~**2,600**~~	~~**2,600**~~	~~1,200~~
~~PH02~~	~~05/03/2023~~	~~1~~	~~<0.00201~~	~~<0.00402~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~87.3~~
PH02A	05/03/2023	2	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	183
~~SS03~~	~~04/26/2023~~	~~0.5~~	~~<0.00198~~	~~0.00436~~	~~<50.0~~	~~898~~	~~<50.0~~	~~898~~	~~898~~	~~3,090~~
~~PH03~~	~~05/03/2023~~	~~1~~	~~<0.00199~~	~~<0.00398~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~2,600~~
PH03A	05/03/2023	3	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	72.0
~~SS04~~	~~04/26/2023~~	~~0.5~~	~~0.0685~~	~~1.90~~	~~319~~	~~6,330~~	~~<50.0~~	~~**6,650**~~	~~**6,650**~~	~~783~~
~~PH04~~	~~05/03/2023~~	~~1~~	~~<0.00200~~	~~<0.00399~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~68.8~~
PH04A	05/03/2023	4	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	184
SS05*	04/26/2023	0.5	0.265	3.94	872	3,210	<49.9	**4,080**	**4,080**	68.0
PH05*	05/03/2023	1	0.00606	3.09	898	5,280	660	**6,180**	**6,840**	574
PH05A	05/03/2023	4	<0.00200	0.00629	<49.9	92.4	59.9	152	152	711
PH05B	05/03/2023	8	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	3,040
PH05C	05/03/2023	16	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	1,230
SS06	04/26/2023	0.5	<0.00200	<0.00399	<50.0	97.9	<50.0	97.9	97.9	65.0
SS07	04/26/2023	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	441
SS08	04/26/2023	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	123
SS09	04/26/2023	0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	106

ENSOLUM

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Remuda N 31 124H
XTO Energy, Inc.
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Excavation Soil Samples										
FS01	05/05/2023	2.5	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	358
FS02	05/05/2023	3.5	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	220
FS03	05/05/2023	3.5	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	183
FS04	05/04/2023	2	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	115
FS05	05/04/2023	2	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	179
FS06	05/04/2023	2	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	139
FS07	05/04/2023	2	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	167
FS08	05/04/2023	1	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	121
FS09	05/04/2023	1	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	182
FS10	05/10/2023	2	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	266
FS11	05/11/2023	3	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	268
FS12	05/10/2023	2	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	445
FS13	05/11/2023	3	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	943
FS14	05/10/2023	2	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	669
FS15	05/11/2023	3	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	975
FS16	05/11/2023	3	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	1,170
FS17	05/11/2023	3	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	398
FS18	05/11/2023	3	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	471
FS19	05/11/2023	3	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	432
FS20	05/11/2023	3	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	365
FS21	05/11/2023	2	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	104

ENSOLUM

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Remuda N 31 124H
XTO Energy, Inc.
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
FS22	05/11/2023	2	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	789
FS23	05/11/2023	3	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	<50.0	1,650
FS24	05/11/2023	3	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	307
FS25	05/12/2023	3	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	270
FS26	05/12/2023	3	<0.00202	<0.00403	<49.8	<49.8	<49.8	<49.8	<49.8	739
FS27	05/12/2023	3	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	2,490
FS28	05/12/2023	3	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	161
FS29	05/12/2023	3	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	82.4
FS30	05/12/2023	3	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	465
FS31	05/12/2023	1	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	69.5
FS32	05/12/2023	1	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	<50.0	234
SW01	05/05/2023	0-3.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	147
SW02	05/05/2023	0-3.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	140
SW03	05/12/2023	0-2	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	363
SW04	05/12/2023	0-3	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	628
SW05	05/12/2023	0-3	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	662
SW06	05/12/2023	0-3	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	921
SW07	05/12/2023	0-3	<0.00200	<0.00401	<49.8	<49.8	<49.8	<49.8	<49.8	735
SW08	05/12/2023	0-2	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	738
SW09	05/12/2023	0-3	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	621
SW10	05/12/2023	0-2	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	1,870

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 or reclamation requirement where applicable.

* Indicates sample collected in area to be reclaimed after remediation is complete; reclaimation requirement for chloride in the top 4 feet is 600 mg/kg and total TPH is 100 mg/kg.

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

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
POD1 (MW-1)	n/a	C-4526

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

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

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32°	14'	42.15"	N
	LONGITUDE	103°	55'	6.20"	W

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

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE
NW NE Sec. 06 T24S R30E

2. DRILLING & CASING INFORMATION

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

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
05/14/2021	05/14/2021	temporary well material	105	n/a

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

DRILLING FLUID: ☑ AIR ☐ MUD ADDITIVES – SPECIFY:

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

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	105	±6.5	Boring- HSA	--	--	--	--

3. ANNULAR MATERIAL

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

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

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

4. HYDROGEOLOGIC LOG OF WELL

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

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

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

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

5. TEST; RIG SUPERVISION

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

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

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

Shane Eldridge, Carmelo Trevino, Cameron Pruitt

6. SIGNATURE

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

Jack Atkins — Jackie D. Atkins — 06/09/2021

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

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

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

OSE DIT JUN 10 2021 PM2:47

Click to hideNews Bulletins

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

Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 321717103561001

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

USGS 321717103561001 23S.29E.24.41321

Eddy County, New Mexico
Latitude 32°17'17", Longitude 103°56'10" NAD27
Land-surface elevation 3,034 feet above NAVD88
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

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

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source measur
1983-02-02		D	62610		2980.24	NGVD29	1	Z		
1983-02-02		D	62611		2981.83	NAVD88	1	Z		
1983-02-02		D	72019	52.17			1	Z		
1987-10-14		D	62610		2981.87	NGVD29	1	Z		
1987-10-14		D	62611		2983.46	NAVD88	1	Z		
1987-10-14		D	72019	50.54			1	Z		
1992-11-16		D	62610		2978.27	NGVD29	1	S		
1992-11-16		D	62611		2979.86	NAVD88	1	S		
1992-11-16		D	72019	54.14			1	S		
2003-01-29		D	62610		2982.15	NGVD29	1	S	USGS	
2003-01-29		D	62611		2983.74	NAVD88	1	S	USGS	
2003-01-29		D	72019	50.26			1	S	USGS	

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day

Section	Code	Description
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Method of measurement	S	Steel-tape measurement.
Method of measurement	Z	Other.
Measuring agency		Not determined
Measuring agency	USGS	U.S. Geological Survey
Source of measurement		Not determined
Source of measurement	S	Measured by personnel of reporting agency.
Water-level approval status	A	Approved for publication -- Processing and review completed.

Questions about sites/data?
Feedback on this web site
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Data Tips
Explanation of terms
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U.S. Department of the Interior | U.S. Geological Survey
Title: Groundwater for USA: Water Levels
URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2023-04-25 12:22:17 EDT
0.31 0.28 nadww02

ENSOLUM

APPENDIX B

Lithologic Soil Sampling Logs

ENSOLUM

	Sample Name: PH01	Date: 05/03/2023
	Site Name: Remuda N 31 124H	
	Incident Number: NAPP2233950022	
	Job Number: 03C1558214	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: MR	Method: Trackhoe
Coordinates: 32.259327, -103.922426	Hole Diameter: NA	Total Depth: 6'

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. A 40% error factor is included in all chloride screenings.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	CCHE	0-1' CALICHE, med. Brown, poorly sorted, sub-rounded grains, staining in 1st half foot, odor, moist.
M	700	122.7	Y	SS01	0.5			
M	3,125	212.9	N	PH01	1	1	SP-SM	1-2' SAND with trace silt, red, poorly sorted, sub-rounded grians, odor, no staining, moist.
M	1691	37.1	N			2		2-3' SAND with trace silt, red/ medium brown, sub-rounded grains, poorly sorted, no odor, no staining, moist.
M	420	2.8	N	PH01A	3	3		3-6' SAND with trace silt, light to medium brown, poorly sorted, sub-rounded grains, no odor, no staining, moist.
M	772	1.0	N	PH01B (hold)	4	4		
						5		
M	<151.2	0.5	N	PH01C (hold)	6	6		
						TD		Total Depth @ 6' bgs.

ENSOLUM

	Sample Name: PH02	Date: 05/03/2023
	Site Name: Remuda N 31 124H	
	Incident Number: NAPP2233950022	
	Job Number: 03C1558214	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: MR	Method: Trackhoe
Coordinates: 32.259413, -103.922422	Hole Diameter: NA	Total Depth: 4'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A 40% error factor is included in all chloride screenings.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	CCHE	0-1' CALICHE, med. Brown, poorly sorted, sub-rounded grains, staining in 1st half foot, odor, moist.
M	1467	54.2	Y	SS02	0.5			
M	638	10.3	N	PH02	1	1	SP-SM	1-2' SAND with trace silt, red, poorly sorted, sub-rounded grains, no odor, no staining, moist.
M	218.4	5.4	N	PH02A	2	2		2-3' SAND with trace silt, red/ medium brown, sub-rounded grains, poorly sorted, no odor, no staining, moist.
M	<151.2	0.5	N			3		3-4' SAND with trace silt, medium brown, poorly sorted, sub-rounded grains, no odor, no staining, moist.
M	<151.2	0.2	N	PH02B (hold)	4	4		
						TD		Total Depth @ 4' bgs.

ENSOLUM

	Sample Name: PH03	Date: 05/03/2023
	Site Name: Remuda N 31 124H	
	Incident Number: NAPP2233950022	
	Job Number: 03C1558214	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: MR	Method: Trackhoe
Coordinates: 32.259672, -103.922336	Hole Diameter: NA	Total Depth: 6'

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. A 40% error factor is included in all chloride screenings.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	CCHE	0-1' CALICHE, med. Brown, poorly sorted, sub-rounded grains, staining in 1st half foot, odor, moist.
M	3612	5.1	Y	SS03	0.5			
M	6,300	48.1	N	PH03	1	1	SP-SM	1-6' SAND with trace silt, red/ medium brown, poorly sorted, sub-rounded grains, no odor, no staining, moist.
M	2223	20.3	N			2		
M	330	0.3	N	PH03A	3	3		
M	1081	0.3	N			4		
						5		
M	<151.2	0.1		PH03B (hold)	6	6		
						TD		Total Depth @ 6' bgs.

ENSOLUM

	Sample Name: PH04	Date: 05/03/2023
	Site Name: Remuda N 31 124H	
	Incident Number: NAPP2233950022	
	Job Number: 03C1558214	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: MR	Method: Trackhoe
Coordinates: 32.259830, -103.922575	Hole Diameter: NA	Total Depth: 6'

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. A 40% error factor is included in all chloride screenings.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	CCHE	0-1' CALICHE, med. Brown, poorly sorted, sub-rounded grains, staining in 1st half foot, odor, moist.
M	1080	257.8	Y	SS04	0.5			
M	2,722	67.1	N	PH04	1	1	SP-SM	1-6' SAND with trace silt, red/ medium brown, poorly sorted, sub-rounded grains, no odor past 2' bgs, no staining, moist.
M	2073	48.8	N			2		
M	330	17.5	N			3		
M	291.2	15.2	N	PH04A	4	4		
						5		
M	291	0.4		PH04B (hold)	6	6		
						TD		Total Depth @ 6' bgs.

ENSOLUM

	Sample Name: PH05	Date: 05/03/2023
	Site Name: Remuda N 31 124H	
	Incident Number: NAPP2233950022	
	Job Number: 03C1558214	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: MR	Method: Hand auger
Coordinates: 32.259717, -103.922852	Hole Diameter: NA	Total Depth: 16'

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. A 40% error factor is included in all chloride screenings.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	SP	0-6' SAND with trace silt, red/brown, poorly sorted, sub-rounded grains, staining in 1st half foot, strong odor, moist.
M	151.2	650.2	Y	SS05	0.5			
M	<151.2	2383	N	PH05	1	1		
M	2078	2325	N			2		
M	5,365	722.3	N			3		
M	7392	76.3	N	PH05A	4	4		
M	8,014	165						
M	8,686	203				6		6-10' SAND with trace silt, red/ brown, poorly sorted, sub-rounded grains, slight odor, no staining, moist.
M	4,945	171		PH05B	8	8		
M	3,354	1.6				10		10-16' SAND with trace silt, medium brown, poorly sorted, sub-rounded grains, no odor/staining moist.
M	2,374	1				12		
M	2,078	0.9				14		
M	1,360.8	0.7		PH05C	16	16		
						TD		Total Depth @ 16 bgs.

ENSOLUM

APPENDIX C

Photographic Logs

ENSOLUM

Photographic Log
XTO Energy, Inc
Remuda N 31 124H
nAPP2233950022

Photograph 1 Date: 05/03/2023
Description: Release extent across pad
View: South

Photograph 2 Date: 05/03/2023
Description: Impacted soil in pipeline Right-Of-Way
View: East

Photograph 3 Date: 05/10/2023
Description: Excavation in area of PH04
View: West

Photograph 4 Date: 05/12/2023
Description: Completed excavation extent on pad
View: South

ENSOLUM

APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 5/2/2023 3:18:36 PM

JOB DESCRIPTION

Remuda N 31 124H
SDG NUMBER 03C1558214

JOB NUMBER

890-4585-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

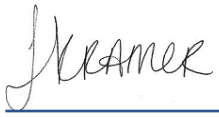
Eurofins Carlsbad

Job Notes

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

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

Authorization



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

Client: Ensolum
Project/Site: Remuda N 31 124H

Laboratory Job ID: 890-4585-1
SDG: 03C1558214

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-4585-1
Project/Site: Remuda N 31 124H SDG: 03C1558214

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4585-1
SDG: 03C1558214

Job ID: 890-4585-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4585-1

Receipt
The samples were received on 4/27/2023 8:12 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 3.4°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SS01 (890-4585-1), SS02 (890-4585-2), SS03 (890-4585-3), SS04 (890-4585-4), SS05 (890-4585-5), SS06 (890-4585-6), SS07 (890-4585-7), SS08 (890-4585-8) and SS09 (890-4585-9).

GC VOA
Method 8021B: The laboratory control sample duplicate (LCSD) for preparation batch 880-52197 and analytical batch 880-52230 recovered outside control limits for the following analytes: Benzene. Since only an acceptable LCS is required per the method, the data has been qualified and reported.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-52197 and analytical batch 880-52230 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: Surrogate recovery for the following samples were outside control limits: SS04 (890-4585-4) and SS05 (890-4585-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-52197 and analytical batch 880-52230 was outside the upper control limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (880-27783-A-1-C). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-52338 and analytical batch 880-52363 was outside the control limits.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-52174/2-A) and (LCSD 880-52174/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (890-4584-A-3-B), (890-4584-A-3-C MS) and (890-4584-A-3-D MSD). 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 (890-4585-1), SS02 (890-4585-2), SS04 (890-4585-4) and SS05 (890-4585-5). 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: SS07 (890-4585-7) and SS08 (890-4585-8). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: SS09 (890-4585-9). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Case Narrative

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4585-1
SDG: 03C1558214

Job ID: 890-4585-1 (Continued)

Laboratory: Eurofins Carlsbad (Continued)

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-52174 and analytical batch 880-52247 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

HPLC/IC

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

Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4585-1
SDG: 03C1558214

Client Sample ID: SS01

Lab Sample ID: 890-4585-1
Matrix: Solid
Date Collected: 04/26/23 09:50
Date Received: 04/27/23 08:12
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 *+ F1	0.00199		mg/Kg		04/28/23 10:16	04/28/23 19:41	1
Toluene	<0.00199	U F1	0.00199		mg/Kg		04/28/23 10:16	04/28/23 19:41	1
Ethylbenzene	<0.00199	U F2 F1	0.00199		mg/Kg		04/28/23 10:16	04/28/23 19:41	1
m-Xylene & p-Xylene	<0.00398	U F2 F1	0.00398		mg/Kg		04/28/23 10:16	04/28/23 19:41	1
o-Xylene	<0.00199	U F2 F1	0.00199		mg/Kg		04/28/23 10:16	04/28/23 19:41	1
Xylenes, Total	<0.00398	U F2 F1	0.00398		mg/Kg		04/28/23 10:16	04/28/23 19:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*	*04/28/23 10:16*	*04/28/23 19:41*	*1*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*	*04/28/23 10:16*	*04/28/23 19:41*	*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			05/01/23 09:57	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**5070**		50.0		mg/Kg			05/02/23 09:55	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**60.1**		50.0		mg/Kg		04/28/23 09:16	05/01/23 13:16	1
Diesel Range Organics (Over C10-C28)	**5010**		50.0		mg/Kg		04/28/23 09:16	05/01/23 13:16	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/28/23 09:16	05/01/23 13:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*76*		*70 - 130*	*04/28/23 09:16*	*05/01/23 13:16*	*1*
o-Terphenyl	*46*	*S1-*	*70 - 130*	*04/28/23 09:16*	*05/01/23 13:16*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**426**		5.05		mg/Kg			05/01/23 15:38	1

Client Sample ID: SS02

Lab Sample ID: 890-4585-2
Matrix: Solid
Date Collected: 04/26/23 09:55
Date Received: 04/27/23 08:12
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *+	0.00199		mg/Kg		04/28/23 10:16	04/28/23 20:01	1
Toluene	**0.0134**		0.00199		mg/Kg		04/28/23 10:16	04/28/23 20:01	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		04/28/23 10:16	04/28/23 20:01	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		04/28/23 10:16	04/28/23 20:01	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		04/28/23 10:16	04/28/23 20:01	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		04/28/23 10:16	04/28/23 20:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*04/28/23 10:16*	*04/28/23 20:01*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4585-1
SDG: 03C1558214

Client Sample ID: SS02

Lab Sample ID: 890-4585-2
Matrix: Solid
Date Collected: 04/26/23 09:55
Date Received: 04/27/23 08:12
Sample Depth: 0.5'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*04/28/23 10:16*	*04/28/23 20:01*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0134**		0.00398	mg/Kg			05/01/23 09:57	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**2600**		49.8	mg/Kg			05/02/23 09:55	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		04/28/23 09:16	05/01/23 13:38	1
Diesel Range Organics (Over C10-C28)	**2600**		49.8	mg/Kg		04/28/23 09:16	05/01/23 13:38	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		04/28/23 09:16	05/01/23 13:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*83*		*70 - 130*	*04/28/23 09:16*	*05/01/23 13:38*	*1*
o-Terphenyl	*57*	*S1-*	*70 - 130*	*04/28/23 09:16*	*05/01/23 13:38*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1200**		49.7	mg/Kg			05/01/23 15:54	10

Client Sample ID: SS03

Lab Sample ID: 890-4585-3
Matrix: Solid
Date Collected: 04/26/23 10:00
Date Received: 04/27/23 08:12
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 *+	0.00198	mg/Kg		04/28/23 10:16	04/28/23 20:22	1
Toluene	<0.00198	U	0.00198	mg/Kg		04/28/23 10:16	04/28/23 20:22	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		04/28/23 10:16	04/28/23 20:22	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		04/28/23 10:16	04/28/23 20:22	1
o-Xylene	**0.00436**		0.00198	mg/Kg		04/28/23 10:16	04/28/23 20:22	1
Xylenes, Total	**0.00436**		0.00396	mg/Kg		04/28/23 10:16	04/28/23 20:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*04/28/23 10:16*	*04/28/23 20:22*	*1*
1,4-Difluorobenzene (Surr)	*78*		*70 - 130*	*04/28/23 10:16*	*04/28/23 20:22*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.00436**		0.00396	mg/Kg			05/01/23 09:57	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**898**		50.0	mg/Kg			05/02/23 09:55	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4585-1
SDG: 03C1558214

Client Sample ID: SS03

Lab Sample ID: 890-4585-3
Matrix: Solid
Date Collected: 04/26/23 10:00
Date Received: 04/27/23 08:12
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	<50.0	U	50.0		mg/Kg		04/28/23 09:16	05/01/23 14:00	1
Diesel Range Organics (Over C10-C28)	**898**		50.0		mg/Kg		04/28/23 09:16	05/01/23 14:00	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/28/23 09:16	05/01/23 14:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*04/28/23 09:16*	*05/01/23 14:00*	*1*
o-Terphenyl	*75*		*70 - 130*	*04/28/23 09:16*	*05/01/23 14:00*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3090**		49.8		mg/Kg			05/01/23 16:00	10

Client Sample ID: SS04

Lab Sample ID: 890-4585-4
Matrix: Solid
Date Collected: 04/26/23 10:05
Date Received: 04/27/23 08:12
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.0685**		0.00996		mg/Kg		05/01/23 15:35	05/02/23 14:23	5
Toluene	**0.119**		0.0503		mg/Kg		04/28/23 10:16	04/28/23 22:25	25
Ethylbenzene	**0.466**		0.0503		mg/Kg		04/28/23 10:16	04/28/23 22:25	25
m-Xylene & p-Xylene	**0.653**		0.101		mg/Kg		04/28/23 10:16	04/28/23 22:25	25
o-Xylene	**0.589**		0.0503		mg/Kg		04/28/23 10:16	04/28/23 22:25	25
Xylenes, Total	**1.24**		0.101		mg/Kg		04/28/23 10:16	04/28/23 22:25	25

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*238*	*S1+*	*70 - 130*	*04/28/23 10:16*	*04/28/23 22:25*	*25*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*04/28/23 10:16*	*04/28/23 22:25*	*25*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**1.90**		0.101		mg/Kg			05/01/23 09:57	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**6650**		50.0		mg/Kg			05/02/23 09:55	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**319**		50.0		mg/Kg		04/28/23 09:16	05/01/23 14:21	1
Diesel Range Organics (Over C10-C28)	**6330**		50.0		mg/Kg		04/28/23 09:16	05/01/23 14:21	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/28/23 09:16	05/01/23 14:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*84*		*70 - 130*	*04/28/23 09:16*	*05/01/23 14:21*	*1*
o-Terphenyl	*58*	*S1-*	*70 - 130*	*04/28/23 09:16*	*05/01/23 14:21*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4585-1
SDG: 03C1558214

Client Sample ID: SS04

Lab Sample ID: 890-4585-4
Matrix: Solid
Date Collected: 04/26/23 10:05
Date Received: 04/27/23 08:12
Sample Depth: 0.5'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	783		24.9		mg/Kg			05/01/23 16:05	5

Client Sample ID: SS05

Lab Sample ID: 890-4585-5
Matrix: Solid
Date Collected: 04/26/23 10:10
Date Received: 04/27/23 08:12
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.265	*+	0.0501		mg/Kg		04/28/23 10:16	04/28/23 22:45	25
Toluene	0.424		0.0501		mg/Kg		04/28/23 10:16	04/28/23 22:45	25
Ethylbenzene	0.900		0.0501		mg/Kg		04/28/23 10:16	04/28/23 22:45	25
m-Xylene & p-Xylene	2.07		0.100		mg/Kg		04/28/23 10:16	04/28/23 22:45	25
o-Xylene	0.279		0.0501		mg/Kg		04/28/23 10:16	04/28/23 22:45	25
Xylenes, Total	2.35		0.100		mg/Kg		04/28/23 10:16	04/28/23 22:45	25

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*381*	*S1+*	*70 - 130*	*04/28/23 10:16*	*04/28/23 22:45*	*25*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*04/28/23 10:16*	*04/28/23 22:45*	*25*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	3.94		0.100		mg/Kg			05/01/23 09:57	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	4080		49.9		mg/Kg			05/02/23 09:55	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	872		49.9		mg/Kg		04/28/23 09:16	05/01/23 14:44	1
Diesel Range Organics (Over C10-C28)	3210		49.9		mg/Kg		04/28/23 09:16	05/01/23 14:44	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		04/28/23 09:16	05/01/23 14:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*103*		*70 - 130*	*04/28/23 09:16*	*05/01/23 14:44*	*1*
o-Terphenyl	*57*	*S1-*	*70 - 130*	*04/28/23 09:16*	*05/01/23 14:44*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	68.0		5.02		mg/Kg			05/01/23 16:10	1

Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4585-1
SDG: 03C1558214

Client Sample ID: SS06

Lab Sample ID: 890-4585-6
Matrix: Solid
Date Collected: 04/26/23 10:35
Date Received: 04/27/23 08:12
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 *+	0.00200		mg/Kg		04/28/23 10:16	04/28/23 20:42	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/28/23 10:16	04/28/23 20:42	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/28/23 10:16	04/28/23 20:42	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		04/28/23 10:16	04/28/23 20:42	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/28/23 10:16	04/28/23 20:42	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		04/28/23 10:16	04/28/23 20:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*04/28/23 10:16*	*04/28/23 20:42*	*1*
1,4-Difluorobenzene (Surr)	*73*		*70 - 130*	*04/28/23 10:16*	*04/28/23 20:42*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			05/01/23 09:57	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**97.9**		50.0		mg/Kg			05/02/23 09:55	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		04/28/23 09:16	05/01/23 15:05	1
Diesel Range Organics (Over C10-C28)	**97.9**		50.0		mg/Kg		04/28/23 09:16	05/01/23 15:05	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/28/23 09:16	05/01/23 15:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*04/28/23 09:16*	*05/01/23 15:05*	*1*
o-Terphenyl	*71*		*70 - 130*	*04/28/23 09:16*	*05/01/23 15:05*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**65.0**		5.03		mg/Kg			05/01/23 16:27	1

Client Sample ID: SS07

Lab Sample ID: 890-4585-7
Matrix: Solid
Date Collected: 04/26/23 10:40
Date Received: 04/27/23 08:12
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *+	0.00199		mg/Kg		04/28/23 10:16	04/28/23 21:03	1
Toluene	<0.00199	U	0.00199		mg/Kg		04/28/23 10:16	04/28/23 21:03	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		04/28/23 10:16	04/28/23 21:03	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		04/28/23 10:16	04/28/23 21:03	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		04/28/23 10:16	04/28/23 21:03	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		04/28/23 10:16	04/28/23 21:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*04/28/23 10:16*	*04/28/23 21:03*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4585-1
SDG: 03C1558214

Client Sample ID: SS07

Lab Sample ID: 890-4585-7
Matrix: Solid
Date Collected: 04/26/23 10:40
Date Received: 04/27/23 08:12
Sample Depth: 0.5'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*79*		*70 - 130*	*04/28/23 10:16*	*04/28/23 21:03*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			05/01/23 09:57	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			05/02/23 09:55	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		04/28/23 09:16	05/01/23 15:27	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		04/28/23 09:16	05/01/23 15:27	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/28/23 09:16	05/01/23 15:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*77*		*70 - 130*	*04/28/23 09:16*	*05/01/23 15:27*	*1*
o-Terphenyl	*57*	*S1-*	*70 - 130*	*04/28/23 09:16*	*05/01/23 15:27*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**441**		25.2	mg/Kg			05/01/23 16:32	5

Client Sample ID: SS08

Lab Sample ID: 890-4585-8
Matrix: Solid
Date Collected: 04/26/23 10:55
Date Received: 04/27/23 08:12
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *+	0.00199	mg/Kg		04/28/23 10:16	04/28/23 21:23	1
Toluene	<0.00199	U	0.00199	mg/Kg		04/28/23 10:16	04/28/23 21:23	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/28/23 10:16	04/28/23 21:23	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/28/23 10:16	04/28/23 21:23	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		04/28/23 10:16	04/28/23 21:23	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/28/23 10:16	04/28/23 21:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*04/28/23 10:16*	*04/28/23 21:23*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*04/28/23 10:16*	*04/28/23 21:23*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			05/01/23 09:57	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			05/02/23 09:55	1

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Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4585-1
SDG: 03C1558214

Client Sample ID: SS08

Lab Sample ID: 890-4585-8
Matrix: Solid
Date Collected: 04/26/23 10:55
Date Received: 04/27/23 08:12
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	<49.9	U	49.9		mg/Kg		04/28/23 09:16	05/01/23 15:49	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		04/28/23 09:16	05/01/23 15:49	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		04/28/23 09:16	05/01/23 15:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*74*		*70 - 130*	*04/28/23 09:16*	*05/01/23 15:49*	*1*
o-Terphenyl	*54*	*S1-*	*70 - 130*	*04/28/23 09:16*	*05/01/23 15:49*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**123**		4.99		mg/Kg			05/01/23 16:37	1

Client Sample ID: SS09

Lab Sample ID: 890-4585-9
Matrix: Solid
Date Collected: 04/26/23 10:50
Date Received: 04/27/23 08:12
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 *+	0.00200		mg/Kg		04/28/23 10:16	04/28/23 21:44	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/28/23 10:16	04/28/23 21:44	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/28/23 10:16	04/28/23 21:44	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		04/28/23 10:16	04/28/23 21:44	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/28/23 10:16	04/28/23 21:44	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		04/28/23 10:16	04/28/23 21:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*04/28/23 10:16*	*04/28/23 21:44*	*1*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*	*04/28/23 10:16*	*04/28/23 21:44*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			05/01/23 09:57	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			05/02/23 09:55	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		04/28/23 09:16	05/01/23 16:39	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		04/28/23 09:16	05/01/23 16:39	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		04/28/23 09:16	05/01/23 16:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*80*		*70 - 130*	*04/28/23 09:16*	*05/01/23 16:39*	*1*
o-Terphenyl	*60*	*S1-*	*70 - 130*	*04/28/23 09:16*	*05/01/23 16:39*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4585-1
SDG: 03C1558214

Client Sample ID: SS09

Date Collected: 04/26/23 10:50
Date Received: 04/27/23 08:12
Sample Depth: 0.5'

Lab Sample ID: 890-4585-9

Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	106		4.96		mg/Kg			05/01/23 16:43	1

Surrogate Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4585-1
SDG: 03C1558214

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-27783-A-1-A MS	Matrix Spike	114	95
880-27783-A-1-B MSD	Matrix Spike Duplicate	115	86
890-4585-1	SS01	85	109
890-4585-1 MS	SS01	125	106
890-4585-1 MSD	SS01	123	101
890-4585-2	SS02	104	93
890-4585-3	SS03	101	78
890-4585-4	SS04	238 S1+	88
890-4585-5	SS05	381 S1+	103
890-4585-6	SS06	105	73
890-4585-7	SS07	101	79
890-4585-8	SS08	101	88
890-4585-9	SS09	105	81
LCS 880-52197/1-A	Lab Control Sample	104	106
LCS 880-52338/1-A	Lab Control Sample	123	84
LCSD 880-52197/2-A	Lab Control Sample Dup	103	105
LCSD 880-52338/2-A	Lab Control Sample Dup	116	98
MB 880-52197/5-A	Method Blank	68 S1-	90
MB 880-52338/5-A	Method Blank	64 S1-	76

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)
890-4584-A-3-C MS	Matrix Spike	84	61 S1-
890-4584-A-3-D MSD	Matrix Spike Duplicate	88	63 S1-
890-4585-1	SS01	76	46 S1-
890-4585-2	SS02	83	57 S1-
890-4585-3	SS03	100	75
890-4585-4	SS04	84	58 S1-
890-4585-5	SS05	103	57 S1-
890-4585-6	SS06	96	71
890-4585-7	SS07	77	57 S1-
890-4585-8	SS08	74	54 S1-
890-4585-9	SS09	80	60 S1-
LCS 880-52174/2-A	Lab Control Sample	82	61 S1-
LCSD 880-52174/3-A	Lab Control Sample Dup	84	62 S1-
MB 880-52174/1-A	Method Blank	100	83

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4585-1
SDG: 03C1558214

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-52197/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 52230 — **Prep Batch: 52197**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/28/23 10:16	04/28/23 19:19	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/28/23 10:16	04/28/23 19:19	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/28/23 10:16	04/28/23 19:19	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/28/23 10:16	04/28/23 19:19	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/28/23 10:16	04/28/23 19:19	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/28/23 10:16	04/28/23 19:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*68*	*S1-*	*70 - 130*	*04/28/23 10:16*	*04/28/23 19:19*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*04/28/23 10:16*	*04/28/23 19:19*	*1*

Lab Sample ID: LCS 880-52197/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 52230 — **Prep Batch: 52197**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1222		mg/Kg		122	70 - 130		
Toluene			0.100	0.1157		mg/Kg		116	70 - 130		
Ethylbenzene			0.100	0.1096		mg/Kg		110	70 - 130		
m-Xylene & p-Xylene			0.200	0.2224		mg/Kg		111	70 - 130		
o-Xylene			0.100	0.1091		mg/Kg		109	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: LCSD 880-52197/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 52230 — **Prep Batch: 52197**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1328	*+	mg/Kg		133	70 - 130	8	35
Toluene			0.100	0.1250		mg/Kg		125	70 - 130	8	35
Ethylbenzene			0.100	0.1216		mg/Kg		122	70 - 130	10	35
m-Xylene & p-Xylene			0.200	0.2482		mg/Kg		124	70 - 130	11	35
o-Xylene			0.100	0.1216		mg/Kg		122	70 - 130	11	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: 890-4585-1 MS — **Client Sample ID: SS01**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 52230 — **Prep Batch: 52197**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U *+ F1	0.0998	0.04593	F1	mg/Kg		46	70 - 130		
Toluene	<0.00199	U F1	0.0998	0.02559	F1	mg/Kg		25	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4585-1
SDG: 03C1558214

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

Lab Sample ID: 890-4585-1 MS — **Client Sample ID: SS01**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 52230 — **Prep Batch: 52197**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U F2 F1	0.0998	0.01843	F1	mg/Kg		18	70 - 130
m-Xylene & p-Xylene	<0.00398	U F2 F1	0.200	0.03697	F1	mg/Kg		18	70 - 130
o-Xylene	<0.00199	U F2 F1	0.0998	0.01924	F1	mg/Kg		18	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: 890-4585-1 MSD — **Client Sample ID: SS01**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 52230 — **Prep Batch: 52197**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U *+ F1	0.100	0.03847	F1	mg/Kg		38	70 - 130	18	35
Toluene	<0.00199	U F1	0.100	0.02095	F1	mg/Kg		20	70 - 130	20	35
Ethylbenzene	<0.00199	U F2 F1	0.100	0.01137	F2 F1	mg/Kg		11	70 - 130	47	35
m-Xylene & p-Xylene	<0.00398	U F2 F1	0.201	0.02460	F2 F1	mg/Kg		12	70 - 130	40	35
o-Xylene	<0.00199	U F2 F1	0.100	0.01331	F2 F1	mg/Kg		12	70 - 130	36	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: MB 880-52338/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 52363 — **Prep Batch: 52338**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/01/23 15:35	05/02/23 10:57	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/01/23 15:35	05/02/23 10:57	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/01/23 15:35	05/02/23 10:57	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/01/23 15:35	05/02/23 10:57	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/01/23 15:35	05/02/23 10:57	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/01/23 15:35	05/02/23 10:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*64*	*S1-*	*70 - 130*	*05/01/23 15:35*	*05/02/23 10:57*	*1*
1,4-Difluorobenzene (Surr)	*76*		*70 - 130*	*05/01/23 15:35*	*05/02/23 10:57*	*1*

Lab Sample ID: LCS 880-52338/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 52363 — **Prep Batch: 52338**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1018		mg/Kg		102	70 - 130
Toluene	0.100	0.1035		mg/Kg		103	70 - 130
Ethylbenzene	0.100	0.1201		mg/Kg		120	70 - 130
m-Xylene & p-Xylene	0.200	0.2480		mg/Kg		124	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4585-1
SDG: 03C1558214

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

Lab Sample ID: LCS 880-52338/1-A
Matrix: Solid
Analysis Batch: 52363

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 52338

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
o-Xylene			0.100	0.1223		mg/Kg		122	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*

Lab Sample ID: LCSD 880-52338/2-A
Matrix: Solid
Analysis Batch: 52363

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 52338

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1042		mg/Kg		104	70 - 130	2	35
Toluene			0.100	0.09893		mg/Kg		99	70 - 130	4	35
Ethylbenzene			0.100	0.1115		mg/Kg		112	70 - 130	7	35
m-Xylene & p-Xylene			0.200	0.2249		mg/Kg		112	70 - 130	10	35
o-Xylene			0.100	0.1106		mg/Kg		111	70 - 130	10	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: 880-27783-A-1-A MS
Matrix: Solid
Analysis Batch: 52363

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 52338

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U	0.0998	0.09584		mg/Kg		96	70 - 130		
Toluene	<0.00200	U	0.0998	0.08235		mg/Kg		83	70 - 130		
Ethylbenzene	<0.00200	U	0.0998	0.08088		mg/Kg		81	70 - 130		
m-Xylene & p-Xylene	<0.00401	U	0.200	0.1406		mg/Kg		70	70 - 130		
o-Xylene	<0.00200	U	0.0998	0.07862		mg/Kg		79	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: 880-27783-A-1-B MSD
Matrix: Solid
Analysis Batch: 52363

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 52338

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0990	0.08907		mg/Kg		90	70 - 130	7	35
Toluene	<0.00200	U	0.0990	0.08186		mg/Kg		83	70 - 130	1	35
Ethylbenzene	<0.00200	U	0.0990	0.08396		mg/Kg		85	70 - 130	4	35
m-Xylene & p-Xylene	<0.00401	U	0.198	0.1505		mg/Kg		76	70 - 130	7	35
o-Xylene	<0.00200	U	0.0990	0.07940		mg/Kg		80	70 - 130	1	35

QC Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4585-1
SDG: 03C1558214

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

Lab Sample ID: 880-27783-A-1-B MSD
Matrix: Solid
Analysis Batch: 52363

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 52338

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	115		70 - 130
1,4-Difluorobenzene (Surr)	86		70 - 130

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

Lab Sample ID: MB 880-52174/1-A
Matrix: Solid
Analysis Batch: 52247

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 52174

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		04/28/23 09:16	05/01/23 08:56	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/28/23 09:16	05/01/23 08:56	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/28/23 09:16	05/01/23 08:56	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130	04/28/23 09:16	05/01/23 08:56	1
o-Terphenyl	83		70 - 130	04/28/23 09:16	05/01/23 08:56	1

Lab Sample ID: LCS 880-52174/2-A
Matrix: Solid
Analysis Batch: 52247

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 52174

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	981.7		mg/Kg		98	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	986.5		mg/Kg		99	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	82		70 - 130
o-Terphenyl	61	S1-	70 - 130

Lab Sample ID: LCSD 880-52174/3-A
Matrix: Solid
Analysis Batch: 52247

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 52174

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1051		mg/Kg		105	70 - 130	7	20
Diesel Range Organics (Over C10-C28)			1000	1041		mg/Kg		104	70 - 130	5	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	84		70 - 130
o-Terphenyl	62	S1-	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4585-1
SDG: 03C1558214

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

Lab Sample ID: 890-4584-A-3-C MS
Matrix: Solid
Analysis Batch: 52247

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 52174

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	997	719.5		mg/Kg		70	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U F1	997	594.8	F1	mg/Kg		58	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*84*		*70 - 130*
o-Terphenyl	*61*	*S1-*	*70 - 130*

Lab Sample ID: 890-4584-A-3-D MSD
Matrix: Solid
Analysis Batch: 52247

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 52174

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	765.4		mg/Kg		74	70 - 130	6	20
Diesel Range Organics (Over C10-C28)	<49.9	U F1	999	618.1	F1	mg/Kg		60	70 - 130	4	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*88*		*70 - 130*
o-Terphenyl	*63*	*S1-*	*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-52208/1-A
Matrix: Solid
Analysis Batch: 52332

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/01/23 15:22	1

Lab Sample ID: LCS 880-52208/2-A
Matrix: Solid
Analysis Batch: 52332

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride			250	232.7		mg/Kg		93	90 - 110

Lab Sample ID: LCSD 880-52208/3-A
Matrix: Solid
Analysis Batch: 52332

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	234.3		mg/Kg		94	90 - 110	1	20

QC Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4585-1
SDG: 03C1558214

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-4585-1 MS
Matrix: Solid
Analysis Batch: 52332

Client Sample ID: SS01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	426		253	667.8		mg/Kg		96	90 - 110

Lab Sample ID: 890-4585-1 MSD
Matrix: Solid
Analysis Batch: 52332

Client Sample ID: SS01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	426		253	667.4		mg/Kg		96	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4585-1
SDG: 03C1558214

GC VOA

Prep Batch: 52197

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4585-1	SS01	Total/NA	Solid	5035	
890-4585-2	SS02	Total/NA	Solid	5035	
890-4585-3	SS03	Total/NA	Solid	5035	
890-4585-4	SS04	Total/NA	Solid	5035	
890-4585-5	SS05	Total/NA	Solid	5035	
890-4585-6	SS06	Total/NA	Solid	5035	
890-4585-7	SS07	Total/NA	Solid	5035	
890-4585-8	SS08	Total/NA	Solid	5035	
890-4585-9	SS09	Total/NA	Solid	5035	
MB 880-52197/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-52197/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-52197/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4585-1 MS	SS01	Total/NA	Solid	5035	
890-4585-1 MSD	SS01	Total/NA	Solid	5035	

Analysis Batch: 52230

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4585-1	SS01	Total/NA	Solid	8021B	52197
890-4585-2	SS02	Total/NA	Solid	8021B	52197
890-4585-3	SS03	Total/NA	Solid	8021B	52197
890-4585-4	SS04	Total/NA	Solid	8021B	52197
890-4585-5	SS05	Total/NA	Solid	8021B	52197
890-4585-6	SS06	Total/NA	Solid	8021B	52197
890-4585-7	SS07	Total/NA	Solid	8021B	52197
890-4585-8	SS08	Total/NA	Solid	8021B	52197
890-4585-9	SS09	Total/NA	Solid	8021B	52197
MB 880-52197/5-A	Method Blank	Total/NA	Solid	8021B	52197
LCS 880-52197/1-A	Lab Control Sample	Total/NA	Solid	8021B	52197
LCSD 880-52197/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	52197
890-4585-1 MS	SS01	Total/NA	Solid	8021B	52197
890-4585-1 MSD	SS01	Total/NA	Solid	8021B	52197

Analysis Batch: 52266

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4585-1	SS01	Total/NA	Solid	Total BTEX	
890-4585-2	SS02	Total/NA	Solid	Total BTEX	
890-4585-3	SS03	Total/NA	Solid	Total BTEX	
890-4585-4	SS04	Total/NA	Solid	Total BTEX	
890-4585-5	SS05	Total/NA	Solid	Total BTEX	
890-4585-6	SS06	Total/NA	Solid	Total BTEX	
890-4585-7	SS07	Total/NA	Solid	Total BTEX	
890-4585-8	SS08	Total/NA	Solid	Total BTEX	
890-4585-9	SS09	Total/NA	Solid	Total BTEX	

Prep Batch: 52338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4585-4	SS04	Total/NA	Solid	5035	
MB 880-52338/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-52338/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-52338/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-27783-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	

QC Association Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4585-1
SDG: 03C1558214

GC VOA (Continued)

Prep Batch: 52338 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-27783-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 52363

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4585-4	SS04	Total/NA	Solid	8021B	52338
MB 880-52338/5-A	Method Blank	Total/NA	Solid	8021B	52338
LCS 880-52338/1-A	Lab Control Sample	Total/NA	Solid	8021B	52338
LCSD 880-52338/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	52338
880-27783-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	52338
880-27783-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	52338

GC Semi VOA

Prep Batch: 52174

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4585-1	SS01	Total/NA	Solid	8015NM Prep	
890-4585-2	SS02	Total/NA	Solid	8015NM Prep	
890-4585-3	SS03	Total/NA	Solid	8015NM Prep	
890-4585-4	SS04	Total/NA	Solid	8015NM Prep	
890-4585-5	SS05	Total/NA	Solid	8015NM Prep	
890-4585-6	SS06	Total/NA	Solid	8015NM Prep	
890-4585-7	SS07	Total/NA	Solid	8015NM Prep	
890-4585-8	SS08	Total/NA	Solid	8015NM Prep	
890-4585-9	SS09	Total/NA	Solid	8015NM Prep	
MB 880-52174/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-52174/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-52174/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4584-A-3-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4584-A-3-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 52247

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4585-1	SS01	Total/NA	Solid	8015B NM	52174
890-4585-2	SS02	Total/NA	Solid	8015B NM	52174
890-4585-3	SS03	Total/NA	Solid	8015B NM	52174
890-4585-4	SS04	Total/NA	Solid	8015B NM	52174
890-4585-5	SS05	Total/NA	Solid	8015B NM	52174
890-4585-6	SS06	Total/NA	Solid	8015B NM	52174
890-4585-7	SS07	Total/NA	Solid	8015B NM	52174
890-4585-8	SS08	Total/NA	Solid	8015B NM	52174
890-4585-9	SS09	Total/NA	Solid	8015B NM	52174
MB 880-52174/1-A	Method Blank	Total/NA	Solid	8015B NM	52174
LCS 880-52174/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	52174
LCSD 880-52174/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	52174
890-4584-A-3-C MS	Matrix Spike	Total/NA	Solid	8015B NM	52174
890-4584-A-3-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	52174

Analysis Batch: 52373

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4585-1	SS01	Total/NA	Solid	8015 NM	
890-4585-2	SS02	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4585-1
SDG: 03C1558214

GC Semi VOA (Continued)

Analysis Batch: 52373 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4585-3	SS03	Total/NA	Solid	8015 NM	
890-4585-4	SS04	Total/NA	Solid	8015 NM	
890-4585-5	SS05	Total/NA	Solid	8015 NM	
890-4585-6	SS06	Total/NA	Solid	8015 NM	
890-4585-7	SS07	Total/NA	Solid	8015 NM	
890-4585-8	SS08	Total/NA	Solid	8015 NM	
890-4585-9	SS09	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 52208

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4585-1	SS01	Soluble	Solid	DI Leach	
890-4585-2	SS02	Soluble	Solid	DI Leach	
890-4585-3	SS03	Soluble	Solid	DI Leach	
890-4585-4	SS04	Soluble	Solid	DI Leach	
890-4585-5	SS05	Soluble	Solid	DI Leach	
890-4585-6	SS06	Soluble	Solid	DI Leach	
890-4585-7	SS07	Soluble	Solid	DI Leach	
890-4585-8	SS08	Soluble	Solid	DI Leach	
890-4585-9	SS09	Soluble	Solid	DI Leach	
MB 880-52208/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-52208/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-52208/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4585-1 MS	SS01	Soluble	Solid	DI Leach	
890-4585-1 MSD	SS01	Soluble	Solid	DI Leach	

Analysis Batch: 52332

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4585-1	SS01	Soluble	Solid	300.0	52208
890-4585-2	SS02	Soluble	Solid	300.0	52208
890-4585-3	SS03	Soluble	Solid	300.0	52208
890-4585-4	SS04	Soluble	Solid	300.0	52208
890-4585-5	SS05	Soluble	Solid	300.0	52208
890-4585-6	SS06	Soluble	Solid	300.0	52208
890-4585-7	SS07	Soluble	Solid	300.0	52208
890-4585-8	SS08	Soluble	Solid	300.0	52208
890-4585-9	SS09	Soluble	Solid	300.0	52208
MB 880-52208/1-A	Method Blank	Soluble	Solid	300.0	52208
LCS 880-52208/2-A	Lab Control Sample	Soluble	Solid	300.0	52208
LCSD 880-52208/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	52208
890-4585-1 MS	SS01	Soluble	Solid	300.0	52208
890-4585-1 MSD	SS01	Soluble	Solid	300.0	52208

Lab Chronicle

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4585-1
SDG: 03C1558214

Client Sample ID: SS01
Date Collected: 04/26/23 09:50
Date Received: 04/27/23 08:12

Lab Sample ID: 890-4585-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	52197	04/28/23 10:16	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52230	04/28/23 19:41	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52266	05/01/23 09:57	SM	EET MID
Total/NA	Analysis	8015 NM		1			52373	05/02/23 09:55	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	52174	04/28/23 09:16	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52247	05/01/23 13:16	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	52208	04/28/23 11:24	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52332	05/01/23 15:38	SMC	EET MID

Client Sample ID: SS02
Date Collected: 04/26/23 09:55
Date Received: 04/27/23 08:12

Lab Sample ID: 890-4585-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	52197	04/28/23 10:16	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52230	04/28/23 20:01	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52266	05/01/23 09:57	SM	EET MID
Total/NA	Analysis	8015 NM		1			52373	05/02/23 09:55	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	52174	04/28/23 09:16	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52247	05/01/23 13:38	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	52208	04/28/23 11:24	KS	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	52332	05/01/23 15:54	SMC	EET MID

Client Sample ID: SS03
Date Collected: 04/26/23 10:00
Date Received: 04/27/23 08:12

Lab Sample ID: 890-4585-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	52197	04/28/23 10:16	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52230	04/28/23 20:22	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52266	05/01/23 09:57	SM	EET MID
Total/NA	Analysis	8015 NM		1			52373	05/02/23 09:55	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	52174	04/28/23 09:16	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52247	05/01/23 14:00	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	52208	04/28/23 11:24	KS	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	52332	05/01/23 16:00	SMC	EET MID

Client Sample ID: SS04
Date Collected: 04/26/23 10:05
Date Received: 04/27/23 08:12

Lab Sample ID: 890-4585-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	52197	04/28/23 10:16	MNR	EET MID
Total/NA	Analysis	8021B		25	5 mL	5 mL	52230	04/28/23 22:25	MNR	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4585-1
SDG: 03C1558214

Client Sample ID: SS04

Date Collected: 04/26/23 10:05
Date Received: 04/27/23 08:12

Lab Sample ID: 890-4585-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	52338	05/01/23 15:35	MNR	EET MID
Total/NA	Analysis	8021B		5	5 mL	5 mL	52363	05/02/23 14:23	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52266	05/01/23 09:57	SM	EET MID
Total/NA	Analysis	8015 NM		1			52373	05/02/23 09:55	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	52174	04/28/23 09:16	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52247	05/01/23 14:21	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	52208	04/28/23 11:24	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	52332	05/01/23 16:05	SMC	EET MID

Client Sample ID: SS05

Date Collected: 04/26/23 10:10
Date Received: 04/27/23 08:12

Lab Sample ID: 890-4585-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	52197	04/28/23 10:16	MNR	EET MID
Total/NA	Analysis	8021B		25	5 mL	5 mL	52230	04/28/23 22:45	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52266	05/01/23 09:57	SM	EET MID
Total/NA	Analysis	8015 NM		1			52373	05/02/23 09:55	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	52174	04/28/23 09:16	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52247	05/01/23 14:44	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	52208	04/28/23 11:24	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52332	05/01/23 16:10	SMC	EET MID

Client Sample ID: SS06

Date Collected: 04/26/23 10:35
Date Received: 04/27/23 08:12

Lab Sample ID: 890-4585-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	52197	04/28/23 10:16	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52230	04/28/23 20:42	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52266	05/01/23 09:57	SM	EET MID
Total/NA	Analysis	8015 NM		1			52373	05/02/23 09:55	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	52174	04/28/23 09:16	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52247	05/01/23 15:05	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	52208	04/28/23 11:24	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52332	05/01/23 16:27	SMC	EET MID

Client Sample ID: SS07

Date Collected: 04/26/23 10:40
Date Received: 04/27/23 08:12

Lab Sample ID: 890-4585-7
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	52197	04/28/23 10:16	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52230	04/28/23 21:03	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52266	05/01/23 09:57	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4585-1
SDG: 03C1558214

Client Sample ID: SS07

Date Collected: 04/26/23 10:40
Date Received: 04/27/23 08:12

Lab Sample ID: 890-4585-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			52373	05/02/23 09:55	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	52174	04/28/23 09:16	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52247	05/01/23 15:27	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	52208	04/28/23 11:24	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	52332	05/01/23 16:32	SMC	EET MID

Client Sample ID: SS08

Date Collected: 04/26/23 10:55
Date Received: 04/27/23 08:12

Lab Sample ID: 890-4585-8
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			5.03 g	5 mL	52197	04/28/23 10:16	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52230	04/28/23 21:23	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52266	05/01/23 09:57	SM	EET MID
Total/NA	Analysis	8015 NM		1			52373	05/02/23 09:55	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	52174	04/28/23 09:16	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52247	05/01/23 15:49	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	52208	04/28/23 11:24	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52332	05/01/23 16:37	SMC	EET MID

Client Sample ID: SS09

Date Collected: 04/26/23 10:50
Date Received: 04/27/23 08:12

Lab Sample ID: 890-4585-9
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	52197	04/28/23 10:16	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52230	04/28/23 21:44	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52266	05/01/23 09:57	SM	EET MID
Total/NA	Analysis	8015 NM		1			52373	05/02/23 09:55	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	52174	04/28/23 09:16	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52247	05/01/23 16:39	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	52208	04/28/23 11:24	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52332	05/01/23 16:43	SMC	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4585-1
SDG: 03C1558214

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-25	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4585-1
SDG: 03C1558214

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 N 31 124H

Job ID: 890-4585-1
SDG: 03C1558214

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4585-1	SS01	Solid	04/26/23 09:50	04/27/23 08:12	0.5'
890-4585-2	SS02	Solid	04/26/23 09:55	04/27/23 08:12	0.5'
890-4585-3	SS03	Solid	04/26/23 10:00	04/27/23 08:12	0.5'
890-4585-4	SS04	Solid	04/26/23 10:05	04/27/23 08:12	0.5'
890-4585-5	SS05	Solid	04/26/23 10:10	04/27/23 08:12	0.5'
890-4585-6	SS06	Solid	04/26/23 10:35	04/27/23 08:12	0.5'
890-4585-7	SS07	Solid	04/26/23 10:40	04/27/23 08:12	0.5'
890-4585-8	SS08	Solid	04/26/23 10:55	04/27/23 08:12	0.5'
890-4585-9	SS09	Solid	04/26/23 10:50	04/27/23 08:12	0.5'

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum LLC	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:	337-257-8307	Email:	tmorrissey@ensolum.com

Work Order Comments

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

Project Name:	Remuda N 31 124H	Turn Around	
Project Number:	03C1558214	☐ Routine ☑ Rush	
Project Location:	32.25947, -103.92244	Due Date:	3 Day
Sampler's Name:	Ronni Hayes	TAT starts the day received by the lab, if received by 4:30pm	
Cost Center #:	1674811001		

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	IR4 #07
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

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	CHLORIDES (EPA: 300.0)	BTEX	TPH	Sample Comments
SS01	S	4/26/2023	950	0.5'	Grab	1	X	X	X	
SS02	S	4/26/2023	955	0.5'	Grab	1	X	X	X	
SS03	S	4/26/2023	1000	0.5'	Grab	1	X	X	X	API 30-015-44415
SS04	S	4/26/2023	1005	0.5'	Grab	1	X	X	X	
SS05	S	4/26/2023	1010	0.5'	Grab	1	X	X	X	Incident Number:
SS06	S	4/26/2023	1035	0.5'	Grab	1	X	X	X	nAPP2233950022
SS07	S	4/26/2023	1040	0.5'	Grab	1	X	X	X	
~~SS08~~	~~S~~	~~4/26/2023~~	~~1055~~	~~0.5'~~	~~Grab~~	~~1~~	~~X~~	~~X~~	~~X~~	
SS09	S	4/26/2023	1050	0.5'	Grab	1	X	X	X	

890-4585 Chain of Custody

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Amanda Estrada	4/27/23 0815	3		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4585-1
SDG Number: 03C1558214

Login Number: 4585
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4585-1
SDG Number: 03C1558214

Login Number: 4585
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 04/28/23 10:06 AM

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

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 5/11/2023 8:33:05 AM

JOB DESCRIPTION

Remuda N 31 124H
SDG NUMBER 03C1558214

JOB NUMBER

890-4620-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

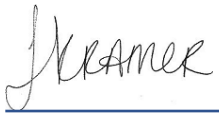
Eurofins Carlsbad

Job Notes

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

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

Authorization



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5/11/2023 8:33:05 AM

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

Client: Ensolum
Project/Site: Remuda N 31 124H

Laboratory Job ID: 890-4620-1
SDG: 03C1558214

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-4620-1
Project/Site: Remuda N 31 124H SDG: 03C1558214

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*1	LCS/LCSD RPD exceeds control limits.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

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

Definitions/Glossary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4620-1
SDG: 03C1558214

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4620-1
SDG: 03C1558214

Job ID: 890-4620-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4620-1

Receipt
The samples were received on 5/3/2023 4:40 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 3.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: PH05 (890-4620-1), PH05A (890-4620-2), PH05B (890-4620-3) and PH05C (890-4620-4).

GC VOA
Method 8021B: The continuing calibration verification (CCV) associated with batch 880-52798 recovered above the upper control limit for Benzene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8021B: The laboratory control sample duplicate (LCSD) for preparation batch 880-52691 and analytical batch 880-52798 recovered outside control limits for the following analytes: Benzene. These analytes were biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported.

Method 8021B: Surrogate recovery for the following sample was outside control limits: PH05B (890-4620-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following samples were outside control limits: (890-4620-A-1-A MS) and (890-4620-A-1-B MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: PH05 (890-4620-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-52942 and analytical batch 880-52909 was outside the control limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: PH05 (890-4620-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-53014 and analytical batch 880-52999 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-53014/2-A) and (LCSD 880-53014/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate compounds were inadvertently omitted during the extraction process for the following samples: (880-28227-A-1-D) and (880-28227-A-1-E MS).

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (880-28227-A-1-F MSD). 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: PH05 (890-4620-1), PH05A (890-4620-2), PH05B (890-4620-3) and PH05C (890-4620-4). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Case Narrative

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4620-1
SDG: 03C1558214

Job ID: 890-4620-1 (Continued)

Laboratory: Eurofins Carlsbad (Continued)

Method 8015MOD_NM: An incorrect volume of spiking solution was inadvertently added to the laboratory control sample (LCS), laboratory control sample (LCSD) associated with preparation batch 880-53014 and analytical batch 880-52999. Percent recoveries are based on the amount spiked.

Method 8015MOD_NM: Spike compounds were inadvertently omitted during the extraction process for the matrix spike (MS); therefore, matrix spike recoveries are unavailable for preparation batch 880-53014 and analytical batch 880-52999. The associated laboratory control sample (LCS) met acceptance criteria.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-53014 and analytical batch 880-52999 was outside control limits. Sample matrix interference and/or non-homogeneity is suspected.

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 N 31 124H

Job ID: 890-4620-1
SDG: 03C1558214

Client Sample ID: PH05

Date Collected: 05/03/23 09:25
Date Received: 05/03/23 16:40
Sample Depth: 1'

Lab Sample ID: 890-4620-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.00606**	**F1 *+**	0.00198		mg/Kg		05/05/23 10:40	05/08/23 23:44	1
Toluene	**0.140**		0.100		mg/Kg		05/09/23 13:08	05/09/23 17:55	50
Ethylbenzene	<0.00198	U F1	0.00198		mg/Kg		05/05/23 10:40	05/08/23 23:44	1
m-Xylene & p-Xylene	**0.0219**	**F1 F2**	0.00397		mg/Kg		05/05/23 10:40	05/08/23 23:44	1
o-Xylene	**2.92**		0.100		mg/Kg		05/09/23 13:08	05/09/23 17:55	50
Xylenes, Total	**4.37**		0.201		mg/Kg		05/09/23 13:08	05/09/23 17:55	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*704*	*S1+*	*70 - 130*	*05/05/23 10:40*	*05/08/23 23:44*	*1*
1,4-Difluorobenzene (Surr)	*42*	*S1-*	*70 - 130*	*05/05/23 10:40*	*05/08/23 23:44*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**3.09**		0.00397		mg/Kg			05/09/23 13:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**6840**		49.9		mg/Kg			05/10/23 19:35	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	**898**	***-**	49.9		mg/Kg		05/10/23 10:07	05/10/23 17:43	1
Diesel Range Organics (Over C10-C28)	**5280**	***- *1**	49.9		mg/Kg		05/10/23 10:07	05/10/23 17:43	1
Oil Range Organics (Over C28-C36)	**660**		49.9		mg/Kg		05/10/23 10:07	05/10/23 17:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*151*	*S1+*	*70 - 130*	*05/10/23 10:07*	*05/10/23 17:43*	*1*
o-Terphenyl	*143*	*S1+*	*70 - 130*	*05/10/23 10:07*	*05/10/23 17:43*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**574**		4.99		mg/Kg			05/08/23 23:53	1

Client Sample ID: PH05A

Date Collected: 05/03/23 09:40
Date Received: 05/03/23 16:40
Sample Depth: 4'

Lab Sample ID: 890-4620-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *+	0.00200		mg/Kg		05/05/23 10:40	05/09/23 00:04	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/05/23 10:40	05/09/23 00:04	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/05/23 10:40	05/09/23 00:04	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/05/23 10:40	05/09/23 00:04	1
o-Xylene	**0.00629**		0.00200		mg/Kg		05/05/23 10:40	05/09/23 00:04	1
Xylenes, Total	**0.00629**		0.00399		mg/Kg		05/05/23 10:40	05/09/23 00:04	1

Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4620-1
SDG: 03C1558214

Client Sample ID: PH05A

Lab Sample ID: 890-4620-2
Matrix: Solid
Date Collected: 05/03/23 09:40
Date Received: 05/03/23 16:40
Sample Depth: 4'

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	127		70 - 130	05/05/23 10:40	05/09/23 00:04	1
1,4-Difluorobenzene (Surr)	93		70 - 130	05/05/23 10:40	05/09/23 00:04	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.00629**		0.00399	mg/Kg			05/09/23 13:22	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**152**		49.9	mg/Kg			05/10/23 19:35	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *-	49.9	mg/Kg		05/10/23 10:07	05/10/23 18:05	1
Diesel Range Organics (Over C10-C28)	**92.4**	***- *1**	49.9	mg/Kg		05/10/23 10:07	05/10/23 18:05	1
Oil Range Organics (Over C28-C36)	**59.9**		49.9	mg/Kg		05/10/23 10:07	05/10/23 18:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	134	S1+	70 - 130	05/10/23 10:07	05/10/23 18:05	1
o-Terphenyl	162	S1+	70 - 130	05/10/23 10:07	05/10/23 18:05	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**711**		5.02	mg/Kg			05/09/23 00:08	1

Client Sample ID: PH05B

Lab Sample ID: 890-4620-3
Matrix: Solid
Date Collected: 05/03/23 12:25
Date Received: 05/03/23 16:40
Sample Depth: 8'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U *+	0.00201	mg/Kg		05/05/23 10:40	05/09/23 00:25	1
Toluene	<0.00201	U	0.00201	mg/Kg		05/05/23 10:40	05/09/23 00:25	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/05/23 10:40	05/09/23 00:25	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		05/05/23 10:40	05/09/23 00:25	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		05/05/23 10:40	05/09/23 00:25	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/05/23 10:40	05/09/23 00:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	131	S1+	70 - 130	05/05/23 10:40	05/09/23 00:25	1
1,4-Difluorobenzene (Surr)	91		70 - 130	05/05/23 10:40	05/09/23 00:25	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			05/09/23 13:22	1

Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4620-1
SDG: 03C1558214

Client Sample ID: PH05B

Lab Sample ID: 890-4620-3
Matrix: Solid
Date Collected: 05/03/23 12:25
Date Received: 05/03/23 16:40
Sample Depth: 8'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			05/10/23 19:35	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *-	50.0		mg/Kg		05/10/23 10:07	05/10/23 18:27	1
Diesel Range Organics (Over C10-C28)	<50.0	U *- *1	50.0		mg/Kg		05/10/23 10:07	05/10/23 18:27	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/10/23 10:07	05/10/23 18:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*134*	*S1+*	*70 - 130*	*05/10/23 10:07*	*05/10/23 18:27*	*1*
o-Terphenyl	*160*	*S1+*	*70 - 130*	*05/10/23 10:07*	*05/10/23 18:27*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3040**		25.1		mg/Kg			05/09/23 00:13	5

Client Sample ID: PH05C

Lab Sample ID: 890-4620-4
Matrix: Solid
Date Collected: 05/03/23 14:40
Date Received: 05/03/23 16:40
Sample Depth: 16'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *+	0.00200		mg/Kg		05/05/23 10:40	05/09/23 00:45	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/05/23 10:40	05/09/23 00:45	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/05/23 10:40	05/09/23 00:45	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		05/05/23 10:40	05/09/23 00:45	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/05/23 10:40	05/09/23 00:45	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		05/05/23 10:40	05/09/23 00:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*124*		*70 - 130*	*05/05/23 10:40*	*05/09/23 00:45*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*05/05/23 10:40*	*05/09/23 00:45*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			05/09/23 13:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			05/10/23 19:35	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *-	49.9		mg/Kg		05/10/23 10:07	05/10/23 18:48	1
Diesel Range Organics (Over C10-C28)	<49.9	U *- *1	49.9		mg/Kg		05/10/23 10:07	05/10/23 18:48	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/10/23 10:07	05/10/23 18:48	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4620-1
SDG: 03C1558214

Client Sample ID: PH05C
Date Collected: 05/03/23 14:40
Date Received: 05/03/23 16:40
Sample Depth: 16'

Lab Sample ID: 890-4620-4
Matrix: Solid

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*131*	*S1+*	*70 - 130*	*05/10/23 10:07*	*05/10/23 18:48*	*1*
o-Terphenyl	*156*	*S1+*	*70 - 130*	*05/10/23 10:07*	*05/10/23 18:48*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1230**		5.00		mg/Kg			05/09/23 00:18	1

Surrogate Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4620-1
SDG: 03C1558214

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-28154-A-1-A MS	Matrix Spike	102	102
880-28154-A-1-B MSD	Matrix Spike Duplicate	94	104
890-4620-1	PH05	704 S1+	42 S1-
890-4620-1 MS	PH05	430 S1+	26 S1-
890-4620-1 MSD	PH05	483 S1+	43 S1-
890-4620-2	PH05A	127	93
890-4620-3	PH05B	131 S1+	91
890-4620-4	PH05C	124	86
LCS 880-52691/1-A	Lab Control Sample	114	89
LCS 880-52942/1-A	Lab Control Sample	99	108
LCSD 880-52691/2-A	Lab Control Sample Dup	121	111
LCSD 880-52942/2-A	Lab Control Sample Dup	99	111
MB 880-52691/5-A	Method Blank	97	94
MB 880-52803/5-A	Method Blank	105	94
MB 880-52942/5-A	Method Blank	62 S1-	94

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-28227-A-1-E MS	Matrix Spike	2 S1-	0.4 S1-
880-28227-A-1-F MSD	Matrix Spike Duplicate	170 S1+	176 S1+
890-4620-1	PH05	151 S1+	143 S1+
890-4620-2	PH05A	134 S1+	162 S1+
890-4620-3	PH05B	134 S1+	160 S1+
890-4620-4	PH05C	131 S1+	156 S1+
LCS 880-53014/2-A	Lab Control Sample	62 S1-	74
LCSD 880-53014/3-A	Lab Control Sample Dup	50 S1-	57 S1-
MB 880-53014/1-A	Method Blank	117	150 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4620-1
SDG: 03C1558214

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-52691/5-A
Matrix: Solid
Analysis Batch: 52798

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 52691

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/05/23 10:40	05/08/23 23:15	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/05/23 10:40	05/08/23 23:15	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/05/23 10:40	05/08/23 23:15	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/05/23 10:40	05/08/23 23:15	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/05/23 10:40	05/08/23 23:15	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/05/23 10:40	05/08/23 23:15	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*05/05/23 10:40*	*05/08/23 23:15*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*05/05/23 10:40*	*05/08/23 23:15*	*1*

Lab Sample ID: LCS 880-52691/1-A
Matrix: Solid
Analysis Batch: 52798

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 52691

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1124		mg/Kg		112	70 - 130		
Toluene			0.100	0.1066		mg/Kg		107	70 - 130		
Ethylbenzene			0.100	0.09678		mg/Kg		97	70 - 130		
m-Xylene & p-Xylene			0.200	0.2223		mg/Kg		111	70 - 130		
o-Xylene			0.100	0.1083		mg/Kg		108	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*

Lab Sample ID: LCSD 880-52691/2-A
Matrix: Solid
Analysis Batch: 52798

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 52691

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1485	*+	mg/Kg		148	70 - 130	28	35
Toluene			0.100	0.1132		mg/Kg		113	70 - 130	6	35
Ethylbenzene			0.100	0.1042		mg/Kg		104	70 - 130	7	35
m-Xylene & p-Xylene			0.200	0.2508		mg/Kg		125	70 - 130	12	35
o-Xylene			0.100	0.1233		mg/Kg		123	70 - 130	13	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*

Lab Sample ID: 890-4620-1 MS
Matrix: Solid
Analysis Batch: 52798

Client Sample ID: PH05
Prep Type: Total/NA
Prep Batch: 52691

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	0.00606	F1 *+	0.0998	0.03220	F1	mg/Kg		26	70 - 130		
Ethylbenzene	<0.00198	U F1	0.0998	0.3546	F1	mg/Kg		354	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4620-1
SDG: 03C1558214

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

Lab Sample ID: 890-4620-1 MS — **Client Sample ID: PH05**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 52798 — **Prep Batch: 52691**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
m-Xylene & p-Xylene	0.0219	F1 F2	0.200	0.2767		mg/Kg		128	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*430*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*26*	*S1-*	*70 - 130*

Lab Sample ID: 890-4620-1 MSD — **Client Sample ID: PH05**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 52798 — **Prep Batch: 52691**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.00606	F1 *+	0.100	0.04277	F1	mg/Kg		37	70 - 130	28	35
m-Xylene & p-Xylene	0.0219	F1 F2	0.200	0.5083	F1 F2	mg/Kg		243	70 - 130	59	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*483*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*43*	*S1-*	*70 - 130*

Lab Sample ID: MB 880-52803/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 52798 — **Prep Batch: 52803**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/08/23 09:13	05/08/23 11:38	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/08/23 09:13	05/08/23 11:38	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/08/23 09:13	05/08/23 11:38	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/08/23 09:13	05/08/23 11:38	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/08/23 09:13	05/08/23 11:38	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/08/23 09:13	05/08/23 11:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*05/08/23 09:13*	*05/08/23 11:38*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*05/08/23 09:13*	*05/08/23 11:38*	*1*

Lab Sample ID: MB 880-52942/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 52909 — **Prep Batch: 52942**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/09/23 13:08	05/09/23 14:29	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/09/23 13:08	05/09/23 14:29	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/09/23 13:08	05/09/23 14:29	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/09/23 13:08	05/09/23 14:29	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/09/23 13:08	05/09/23 14:29	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/09/23 13:08	05/09/23 14:29	1

QC Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4620-1
SDG: 03C1558214

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

Lab Sample ID: MB 880-52942/5-A
Matrix: Solid
Analysis Batch: 52909

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 52942

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	62	S1-	70 - 130	05/09/23 13:08	05/09/23 14:29	1
1,4-Difluorobenzene (Surr)	94		70 - 130	05/09/23 13:08	05/09/23 14:29	1

Lab Sample ID: LCS 880-52942/1-A
Matrix: Solid
Analysis Batch: 52909

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 52942

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1252		mg/Kg		125	70 - 130
Toluene	0.100	0.1122		mg/Kg		112	70 - 130
Ethylbenzene	0.100	0.1074		mg/Kg		107	70 - 130
m-Xylene & p-Xylene	0.200	0.2148		mg/Kg		107	70 - 130
o-Xylene	0.100	0.1048		mg/Kg		105	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	108		70 - 130

Lab Sample ID: LCSD 880-52942/2-A
Matrix: Solid
Analysis Batch: 52909

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 52942

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1282		mg/Kg		128	70 - 130	2	35
Toluene	0.100	0.1141		mg/Kg		114	70 - 130	2	35
Ethylbenzene	0.100	0.1094		mg/Kg		109	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.2170		mg/Kg		109	70 - 130	1	35
o-Xylene	0.100	0.1061		mg/Kg		106	70 - 130	1	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	111		70 - 130

Lab Sample ID: 880-28154-A-1-A MS
Matrix: Solid
Analysis Batch: 52909

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 52942

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00198	U	0.0998	0.1190		mg/Kg		119	70 - 130
Toluene	<0.00198	U	0.0998	0.1131		mg/Kg		112	70 - 130
Ethylbenzene	<0.00198	U	0.0998	0.1128		mg/Kg		113	70 - 130
m-Xylene & p-Xylene	<0.00396	U	0.200	0.2220		mg/Kg		111	70 - 130
o-Xylene	<0.00198	U	0.0998	0.1073		mg/Kg		107	70 - 130

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

QC Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4620-1
SDG: 03C1558214

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

Lab Sample ID: 880-28154-A-1-B MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 52909 — **Prep Batch: 52942**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00198	U	0.100	0.1089		mg/Kg		108	70 - 130	9	35
Toluene	<0.00198	U	0.100	0.09792		mg/Kg		97	70 - 130	14	35
Ethylbenzene	<0.00198	U	0.100	0.08990		mg/Kg		90	70 - 130	23	35
m-Xylene & p-Xylene	<0.00396	U	0.201	0.1787		mg/Kg		89	70 - 130	22	35
o-Xylene	<0.00198	U	0.100	0.08738		mg/Kg		87	70 - 130	20	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

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

Lab Sample ID: MB 880-53014/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 52999 — **Prep Batch: 53014**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/10/23 08:07	05/10/23 09:04	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/10/23 08:07	05/10/23 09:04	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/10/23 08:07	05/10/23 09:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*117*		*70 - 130*	*05/10/23 08:07*	*05/10/23 09:04*	*1*
o-Terphenyl	*150*	*S1+*	*70 - 130*	*05/10/23 08:07*	*05/10/23 09:04*	*1*

Lab Sample ID: LCS 880-53014/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 52999 — **Prep Batch: 53014**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	461.8	*-	mg/Kg		46	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	505.7	*-	mg/Kg		51	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*62*	*S1-*	*70 - 130*
o-Terphenyl	*74*		*70 - 130*

Lab Sample ID: LCSD 880-53014/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 52999 — **Prep Batch: 53014**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	448.4	*-	mg/Kg		45	70 - 130	3	20

QC Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4620-1
SDG: 03C1558214

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

Lab Sample ID: LCSD 880-53014/3-A
Matrix: Solid
Analysis Batch: 52999

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53014

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Diesel Range Organics (Over C10-C28)			1000	405.8	*- *1	mg/Kg		41	70 - 130	22	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*50*	*S1-*	*70 - 130*
o-Terphenyl	*57*	*S1-*	*70 - 130*

Lab Sample ID: 880-28227-A-1-E MS
Matrix: Solid
Analysis Batch: 52999

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 53014

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 F1 F2 *-	997	<49.9	U F1	mg/Kg		4	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U F1 F2 *- *1	997	<49.9	U F1	mg/Kg		2	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*2*	*S1-*	*70 - 130*
o-Terphenyl	*0.4*	*S1-*	*70 - 130*

Lab Sample ID: 880-28227-A-1-F MSD
Matrix: Solid
Analysis Batch: 52999

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 53014

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 F1 F2 *-	999	1268	F2	mg/Kg		127	70 - 130	187	20
Diesel Range Organics (Over C10-C28)	<49.9	U F1 F2 *- *1	999	1418	F1 F2	mg/Kg		142	70 - 130	196	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*170*	*S1+*	*70 - 130*
o-Terphenyl	*176*	*S1+*	*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-52837/1-A
Matrix: Solid
Analysis Batch: 52927

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/08/23 23:39	1

Lab Sample ID: LCS 880-52837/2-A
Matrix: Solid
Analysis Batch: 52927

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride			250	263.9		mg/Kg		106	90 - 110

QC Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4620-1
SDG: 03C1558214

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: LCSD 880-52837/3-A
Matrix: Solid
Analysis Batch: 52927

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	253.7		mg/Kg		101	90 - 110	4	20

Lab Sample ID: 890-4620-1 MS
Matrix: Solid
Analysis Batch: 52927

Client Sample ID: PH05
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	574		250	815.5		mg/Kg		97	90 - 110

Lab Sample ID: 890-4620-1 MSD
Matrix: Solid
Analysis Batch: 52927

Client Sample ID: PH05
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	574		250	814.9		mg/Kg		97	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4620-1
SDG: 03C1558214

GC VOA

Prep Batch: 52691

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4620-1	PH05	Total/NA	Solid	5035	
890-4620-2	PH05A	Total/NA	Solid	5035	
890-4620-3	PH05B	Total/NA	Solid	5035	
890-4620-4	PH05C	Total/NA	Solid	5035	
MB 880-52691/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-52691/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-52691/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4620-1 MS	PH05	Total/NA	Solid	5035	
890-4620-1 MSD	PH05	Total/NA	Solid	5035	

Analysis Batch: 52798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4620-1	PH05	Total/NA	Solid	8021B	52691
890-4620-2	PH05A	Total/NA	Solid	8021B	52691
890-4620-3	PH05B	Total/NA	Solid	8021B	52691
890-4620-4	PH05C	Total/NA	Solid	8021B	52691
MB 880-52691/5-A	Method Blank	Total/NA	Solid	8021B	52691
MB 880-52803/5-A	Method Blank	Total/NA	Solid	8021B	52803
LCS 880-52691/1-A	Lab Control Sample	Total/NA	Solid	8021B	52691
LCSD 880-52691/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	52691
890-4620-1 MS	PH05	Total/NA	Solid	8021B	52691
890-4620-1 MSD	PH05	Total/NA	Solid	8021B	52691

Prep Batch: 52803

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-52803/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 52909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4620-1	PH05	Total/NA	Solid	8021B	52942
MB 880-52942/5-A	Method Blank	Total/NA	Solid	8021B	52942
LCS 880-52942/1-A	Lab Control Sample	Total/NA	Solid	8021B	52942
LCSD 880-52942/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	52942
880-28154-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	52942
880-28154-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	52942

Prep Batch: 52942

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4620-1	PH05	Total/NA	Solid	5035	
MB 880-52942/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-52942/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-52942/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-28154-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-28154-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 52948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4620-1	PH05	Total/NA	Solid	Total BTEX	
890-4620-2	PH05A	Total/NA	Solid	Total BTEX	
890-4620-3	PH05B	Total/NA	Solid	Total BTEX	
890-4620-4	PH05C	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4620-1
SDG: 03C1558214

GC Semi VOA

Analysis Batch: 52999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4620-1	PH05	Total/NA	Solid	8015B NM	53014
890-4620-2	PH05A	Total/NA	Solid	8015B NM	53014
890-4620-3	PH05B	Total/NA	Solid	8015B NM	53014
890-4620-4	PH05C	Total/NA	Solid	8015B NM	53014
MB 880-53014/1-A	Method Blank	Total/NA	Solid	8015B NM	53014
LCS 880-53014/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	53014
LCSD 880-53014/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	53014
880-28227-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	53014
880-28227-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	53014

Prep Batch: 53014

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4620-1	PH05	Total/NA	Solid	8015NM Prep	
890-4620-2	PH05A	Total/NA	Solid	8015NM Prep	
890-4620-3	PH05B	Total/NA	Solid	8015NM Prep	
890-4620-4	PH05C	Total/NA	Solid	8015NM Prep	
MB 880-53014/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-53014/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-53014/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-28227-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-28227-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 53075

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4620-1	PH05	Total/NA	Solid	8015 NM	
890-4620-2	PH05A	Total/NA	Solid	8015 NM	
890-4620-3	PH05B	Total/NA	Solid	8015 NM	
890-4620-4	PH05C	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 52837

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4620-1	PH05	Soluble	Solid	DI Leach	
890-4620-2	PH05A	Soluble	Solid	DI Leach	
890-4620-3	PH05B	Soluble	Solid	DI Leach	
890-4620-4	PH05C	Soluble	Solid	DI Leach	
MB 880-52837/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-52837/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-52837/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4620-1 MS	PH05	Soluble	Solid	DI Leach	
890-4620-1 MSD	PH05	Soluble	Solid	DI Leach	

Analysis Batch: 52927

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4620-1	PH05	Soluble	Solid	300.0	52837
890-4620-2	PH05A	Soluble	Solid	300.0	52837
890-4620-3	PH05B	Soluble	Solid	300.0	52837
890-4620-4	PH05C	Soluble	Solid	300.0	52837
MB 880-52837/1-A	Method Blank	Soluble	Solid	300.0	52837
LCS 880-52837/2-A	Lab Control Sample	Soluble	Solid	300.0	52837

QC Association Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4620-1
SDG: 03C1558214

HPLC/IC (Continued)

Analysis Batch: 52927 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-52837/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	52837
890-4620-1 MS	PH05	Soluble	Solid	300.0	52837
890-4620-1 MSD	PH05	Soluble	Solid	300.0	52837

Lab Chronicle

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4620-1
SDG: 03C1558214

Client Sample ID: PH05

Date Collected: 05/03/23 09:25
Date Received: 05/03/23 16:40

Lab Sample ID: 890-4620-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	52691	05/05/23 10:40	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52798	05/08/23 23:44	MNR	EET MID
Total/NA	Prep	5035			4.98 g	5 mL	52942	05/09/23 13:08	MNR	EET MID
Total/NA	Analysis	8021B		50	5 mL	5 mL	52909	05/09/23 17:55	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52948	05/09/23 13:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			53075	05/10/23 19:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	53014	05/10/23 10:07	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52999	05/10/23 17:43	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	52837	05/08/23 13:38	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52927	05/08/23 23:53	SMC	EET MID

Client Sample ID: PH05A

Date Collected: 05/03/23 09:40
Date Received: 05/03/23 16:40

Lab Sample ID: 890-4620-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	52691	05/05/23 10:40	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52798	05/09/23 00:04	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52948	05/09/23 13:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			53075	05/10/23 19:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	53014	05/10/23 10:07	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52999	05/10/23 18:05	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	52837	05/08/23 13:38	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52927	05/09/23 00:08	SMC	EET MID

Client Sample ID: PH05B

Date Collected: 05/03/23 12:25
Date Received: 05/03/23 16:40

Lab Sample ID: 890-4620-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	52691	05/05/23 10:40	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52798	05/09/23 00:25	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52948	05/09/23 13:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			53075	05/10/23 19:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	53014	05/10/23 10:07	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52999	05/10/23 18:27	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	52837	05/08/23 13:38	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	52927	05/09/23 00:13	SMC	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4620-1
SDG: 03C1558214

Client Sample ID: PH05C

Date Collected: 05/03/23 14:40
Date Received: 05/03/23 16:40

Lab Sample ID: 890-4620-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	52691	05/05/23 10:40	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52798	05/09/23 00:45	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52948	05/09/23 13:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			53075	05/10/23 19:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	53014	05/10/23 10:07	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52999	05/10/23 18:48	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	52837	05/08/23 13:38	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52927	05/09/23 00:18	SMC	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4620-1
SDG: 03C1558214

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-25	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4620-1
SDG: 03C1558214

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 N 31 124H

Job ID: 890-4620-1
SDG: 03C1558214

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4620-1	PH05	Solid	05/03/23 09:25	05/03/23 16:40	1'
890-4620-2	PH05A	Solid	05/03/23 09:40	05/03/23 16:40	4'
890-4620-3	PH05B	Solid	05/03/23 12:25	05/03/23 16:40	8'
890-4620-4	PH05C	Solid	05/03/23 14:40	05/03/23 16:40	16'

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy, Inc
Address:	3122 Nat'l Parks Hwy	Address:	3104 E Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	337.257.8307 Email:		tmorrissey@ensolum.com

Work Order Comments

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

Project Name:	Remuda N 31 1241	Turn Around	
Project Number:	03C1558214	☑ Routine ☐ Rush	
Project Location:	32.25947, -103.92244	Due Date:	
Sampler's Name:	Meredith Roberts	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:	3.2
Total Containers:		Corrected Temperature:	3.0

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: BTEX	Chlorides	TPH	Sample Comments
PH05	S	5/3/23	0925	1'	G	1		X	X	X	Incident #: nAPP2233950022
PH05 A			0940	4'							
PH05 B			1225	8'							
PH05 C	↓	↓	1440	16'	↓	↓		↓	↓	↓	Cost Center: 1674811001

→ NE

890-4620 Chain of Custody

Preservative Codes

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Meredith	Clue Cyp	5.3.23 1640	2		
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4620-1
SDG Number: 03C1558214

Login Number: 4620
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4620-1
SDG Number: 03C1558214

Login Number: 4620
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 05/05/23 10:34 AM

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

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 5/8/2023 3:23:17 PM

JOB DESCRIPTION

Remuda N 31 124H
SDG NUMBER 03c1558214

JOB NUMBER

890-4621-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

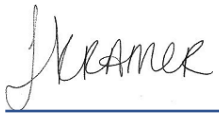
Eurofins Carlsbad

Job Notes

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

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

Authorization



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

Client: Ensolum
Project/Site: Remuda N 31 124H

Laboratory Job ID: 890-4621-1
SDG: 03c1558214

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4621-1
SDG: 03c1558214

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
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 N 31 124H

Job ID: 890-4621-1
SDG: 03c1558214

Job ID: 890-4621-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4621-1

Receipt
The samples were received on 5/3/2023 4:40 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 3.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: PH01 (890-4621-1), PH01A (890-4621-2), PH01B (890-4621-3), PH01C (890-4621-4), PH02 (890-4621-5), PH02A (890-4621-6), PH02B (890-4621-7), PH03 (890-4621-8), PH03A (890-4621-9), PH03B (890-4621-10), PH04 (890-4621-11), PH04A (890-4621-12) and PH04B (890-4621-13).

GC VOA
Method 8021B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 880-52630 and analytical batch 880-52672 recovered outside control limits for the following analytes: Benzene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-52679 and analytical batch 880-52761 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (890-4607-A-81-E). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (CCV 880-52761/20). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: PH04 (890-4621-11). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-52682 and 880-52682 and analytical batch 880-52706 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.The associated samples are: PH01 (890-4621-1), PH01A (890-4621-2), PH02 (890-4621-5), PH02A (890-4621-6), PH03 (890-4621-8), PH03A (890-4621-9), PH04 (890-4621-11), PH04A (890-4621-12), (890-4621-A-1-D MS) and (890-4621-A-1-E MSD).

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 N 31 124H

Job ID: 890-4621-1
SDG: 03c1558214

Client Sample ID: PH01

Date Collected: 05/03/23 12:30
Date Received: 05/03/23 16:40
Sample Depth: 1

Lab Sample ID: 890-4621-1

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *+	0.00199		mg/Kg		05/04/23 14:42	05/05/23 11:54	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/04/23 14:42	05/05/23 11:54	1
Ethylbenzene	**0.00287**		0.00199		mg/Kg		05/04/23 14:42	05/05/23 11:54	1
m-Xylene & p-Xylene	**0.00467**		0.00398		mg/Kg		05/04/23 14:42	05/05/23 11:54	1
o-Xylene	**0.00351**		0.00199		mg/Kg		05/04/23 14:42	05/05/23 11:54	1
Xylenes, Total	**0.00818**		0.00398		mg/Kg		05/04/23 14:42	05/05/23 11:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*139*	*S1+*	*70 - 130*	*05/04/23 14:42*	*05/05/23 11:54*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*05/04/23 14:42*	*05/05/23 11:54*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0111**		0.00398		mg/Kg			05/08/23 16:02	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**551**		49.8		mg/Kg			05/08/23 15:13	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		05/05/23 09:19	05/06/23 16:21	1
Diesel Range Organics (Over C10-C28)	**551**		49.8		mg/Kg		05/05/23 09:19	05/06/23 16:21	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/05/23 09:19	05/06/23 16:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*115*		*70 - 130*	*05/05/23 09:19*	*05/06/23 16:21*	*1*
o-Terphenyl	*122*		*70 - 130*	*05/05/23 09:19*	*05/06/23 16:21*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2260**	**F1**	25.1		mg/Kg			05/05/23 12:25	5

Client Sample ID: PH01A

Date Collected: 05/03/23 12:40
Date Received: 05/03/23 16:40
Sample Depth: 3

Lab Sample ID: 890-4621-2

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *+	0.00200		mg/Kg		05/04/23 14:42	05/05/23 12:14	1
Toluene	**0.0129**		0.00200		mg/Kg		05/04/23 14:42	05/05/23 12:14	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/04/23 14:42	05/05/23 12:14	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/04/23 14:42	05/05/23 12:14	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/04/23 14:42	05/05/23 12:14	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/04/23 14:42	05/05/23 12:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*05/04/23 14:42*	*05/05/23 12:14*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4621-1
SDG: 03c1558214

Client Sample ID: PH01A

Lab Sample ID: 890-4621-2
Matrix: Solid
Date Collected: 05/03/23 12:40
Date Received: 05/03/23 16:40
Sample Depth: 3

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*73*		*70 - 130*	*05/04/23 14:42*	*05/05/23 12:14*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0129**		0.00399	mg/Kg			05/08/23 16:02	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			05/08/23 15:13	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/05/23 09:19	05/06/23 16:43	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/05/23 09:19	05/06/23 16:43	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/05/23 09:19	05/06/23 16:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*107*		*70 - 130*	*05/05/23 09:19*	*05/06/23 16:43*	*1*
o-Terphenyl	*115*		*70 - 130*	*05/05/23 09:19*	*05/06/23 16:43*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**240**		5.00	mg/Kg			05/05/23 12:40	1

Client Sample ID: PH02

Lab Sample ID: 890-4621-5
Matrix: Solid
Date Collected: 05/03/23 13:15
Date Received: 05/03/23 16:40
Sample Depth: 1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U *+	0.00201	mg/Kg		05/04/23 14:42	05/05/23 12:35	1
Toluene	<0.00201	U	0.00201	mg/Kg		05/04/23 14:42	05/05/23 12:35	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/04/23 14:42	05/05/23 12:35	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		05/04/23 14:42	05/05/23 12:35	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		05/04/23 14:42	05/05/23 12:35	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/04/23 14:42	05/05/23 12:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*	*05/04/23 14:42*	*05/05/23 12:35*	*1*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*	*05/04/23 14:42*	*05/05/23 12:35*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			05/08/23 16:02	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			05/08/23 15:13	1

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Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4621-1
SDG: 03c1558214

Client Sample ID: PH02

Lab Sample ID: 890-4621-5
Matrix: Solid
Date Collected: 05/03/23 13:15
Date Received: 05/03/23 16:40
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/05/23 09:19	05/06/23 17:05	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/05/23 09:19	05/06/23 17:05	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/05/23 09:19	05/06/23 17:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*05/05/23 09:19*	*05/06/23 17:05*	*1*
o-Terphenyl	*118*		*70 - 130*	*05/05/23 09:19*	*05/06/23 17:05*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**87.3**		4.99		mg/Kg			05/05/23 12:45	1

Client Sample ID: PH02A

Lab Sample ID: 890-4621-6
Matrix: Solid
Date Collected: 05/03/23 13:20
Date Received: 05/03/23 16:40
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		05/04/23 14:42	05/05/23 12:55	1
Toluene	<0.00202	U	0.00202		mg/Kg		05/04/23 14:42	05/05/23 12:55	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		05/04/23 14:42	05/05/23 12:55	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		05/04/23 14:42	05/05/23 12:55	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		05/04/23 14:42	05/05/23 12:55	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		05/04/23 14:42	05/05/23 12:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*	*05/04/23 14:42*	*05/05/23 12:55*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*05/04/23 14:42*	*05/05/23 12:55*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			05/08/23 16:02	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			05/08/23 15:13	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/05/23 09:19	05/06/23 17:26	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/05/23 09:19	05/06/23 17:26	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/05/23 09:19	05/06/23 17:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*05/05/23 09:19*	*05/06/23 17:26*	*1*
o-Terphenyl	*119*		*70 - 130*	*05/05/23 09:19*	*05/06/23 17:26*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4621-1
SDG: 03c1558214

Client Sample ID: PH02A

Lab Sample ID: 890-4621-6
Matrix: Solid
Date Collected: 05/03/23 13:20
Date Received: 05/03/23 16:40
Sample Depth: 2

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	183		4.98		mg/Kg			05/05/23 12:50	1

Client Sample ID: PH03

Lab Sample ID: 890-4621-8
Matrix: Solid
Date Collected: 05/03/23 10:35
Date Received: 05/03/23 16:40
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *+	0.00199		mg/Kg		05/04/23 14:42	05/05/23 13:16	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/04/23 14:42	05/05/23 13:16	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/04/23 14:42	05/05/23 13:16	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/04/23 14:42	05/05/23 13:16	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/04/23 14:42	05/05/23 13:16	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/04/23 14:42	05/05/23 13:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*05/04/23 14:42*	*05/05/23 13:16*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*05/04/23 14:42*	*05/05/23 13:16*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/08/23 16:02	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			05/08/23 15:13	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/05/23 09:19	05/06/23 17:47	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/05/23 09:19	05/06/23 17:47	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/05/23 09:19	05/06/23 17:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*05/05/23 09:19*	*05/06/23 17:47*	*1*
o-Terphenyl	*116*		*70 - 130*	*05/05/23 09:19*	*05/06/23 17:47*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2600		25.2		mg/Kg			05/05/23 12:54	5

Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4621-1
SDG: 03c1558214

Client Sample ID: PH03A

Lab Sample ID: 890-4621-9
Matrix: Solid
Date Collected: 05/03/23 10:45
Date Received: 05/03/23 16:40
Sample Depth: 3

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *+	0.00199		mg/Kg		05/04/23 14:42	05/05/23 13:36	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/04/23 14:42	05/05/23 13:36	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/04/23 14:42	05/05/23 13:36	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/04/23 14:42	05/05/23 13:36	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/04/23 14:42	05/05/23 13:36	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/04/23 14:42	05/05/23 13:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*05/04/23 14:42*	*05/05/23 13:36*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*05/04/23 14:42*	*05/05/23 13:36*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/08/23 16:02	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			05/08/23 15:13	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		05/05/23 09:19	05/06/23 18:09	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/05/23 09:19	05/06/23 18:09	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/05/23 09:19	05/06/23 18:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*116*		*70 - 130*	*05/05/23 09:19*	*05/06/23 18:09*	*1*
o-Terphenyl	*126*		*70 - 130*	*05/05/23 09:19*	*05/06/23 18:09*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**72.0**		5.03		mg/Kg			05/05/23 13:09	1

Client Sample ID: PH04

Lab Sample ID: 890-4621-11
Matrix: Solid
Date Collected: 05/03/23 09:50
Date Received: 05/03/23 16:40
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *+	0.00200		mg/Kg		05/04/23 14:42	05/05/23 13:57	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/04/23 14:42	05/05/23 13:57	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/04/23 14:42	05/05/23 13:57	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/04/23 14:42	05/05/23 13:57	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/04/23 14:42	05/05/23 13:57	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/04/23 14:42	05/05/23 13:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*	*05/04/23 14:42*	*05/05/23 13:57*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4621-1
SDG: 03c1558214

Client Sample ID: PH04

Lab Sample ID: 890-4621-11
Matrix: Solid
Date Collected: 05/03/23 09:50
Date Received: 05/03/23 16:40
Sample Depth: 1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*71*		*70 - 130*	*05/04/23 14:42*	*05/05/23 13:57*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			05/08/23 16:02	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			05/08/23 15:13	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/05/23 09:19	05/06/23 18:30	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/05/23 09:19	05/06/23 18:30	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/05/23 09:19	05/06/23 18:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*134*	*S1+*	*70 - 130*	*05/05/23 09:19*	*05/06/23 18:30*	*1*
o-Terphenyl	*146*	*S1+*	*70 - 130*	*05/05/23 09:19*	*05/06/23 18:30*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**68.8**		5.00	mg/Kg			05/05/23 13:14	1

Client Sample ID: PH04A

Lab Sample ID: 890-4621-12
Matrix: Solid
Date Collected: 05/03/23 10:05
Date Received: 05/03/23 16:40
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		05/04/23 14:42	05/05/23 14:17	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/04/23 14:42	05/05/23 14:17	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/04/23 14:42	05/05/23 14:17	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		05/04/23 14:42	05/05/23 14:17	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/04/23 14:42	05/05/23 14:17	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		05/04/23 14:42	05/05/23 14:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*79*		*70 - 130*	*05/04/23 14:42*	*05/05/23 14:17*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*05/04/23 14:42*	*05/05/23 14:17*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			05/08/23 16:02	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			05/08/23 15:13	1

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Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4621-1
SDG: 03c1558214

Client Sample ID: PH04A

Date Collected: 05/03/23 10:05
Date Received: 05/03/23 16:40
Sample Depth: 4

Lab Sample ID: 890-4621-12

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	<50.0	U	50.0		mg/Kg		05/05/23 09:19	05/06/23 18:52	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/05/23 09:19	05/06/23 18:52	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/05/23 09:19	05/06/23 18:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*05/05/23 09:19*	*05/06/23 18:52*	*1*
o-Terphenyl	*123*		*70 - 130*	*05/05/23 09:19*	*05/06/23 18:52*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**184**		4.97		mg/Kg			05/05/23 13:19	1

Surrogate Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4621-1
SDG: 03c1558214

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-27940-A-81-A MS	Matrix Spike	113	104
880-27940-A-81-B MSD	Matrix Spike Duplicate	116	108
890-4621-1	PH01	139 S1+	99
890-4621-2	PH01A	104	73
890-4621-5	PH02	91	77
890-4621-6	PH02A	83	91
890-4621-8	PH03	80	90
890-4621-9	PH03A	80	93
890-4621-11	PH04	84	71
890-4621-12	PH04A	79	84
LCS 880-52630/1-A	Lab Control Sample	101	105
LCSD 880-52630/2-A	Lab Control Sample Dup	103	114
MB 880-52630/5-A	Method Blank	65 S1-	92

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-4607-A-81-F MS	Matrix Spike	107	107
890-4607-A-81-G MSD	Matrix Spike Duplicate	110	108
890-4621-1	PH01	115	122
890-4621-2	PH01A	107	115
890-4621-5	PH02	109	118
890-4621-6	PH02A	109	119
890-4621-8	PH03	109	116
890-4621-9	PH03A	116	126
890-4621-11	PH04	134 S1+	146 S1+
890-4621-12	PH04A	113	123
LCS 880-52679/2-A	Lab Control Sample	106	113
LCSD 880-52679/3-A	Lab Control Sample Dup	95	105
MB 880-52679/1-A	Method Blank	166 S1+	201 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4621-1
SDG: 03c1558214

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-52630/5-A
Matrix: Solid
Analysis Batch: 52672

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 52630

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/04/23 14:42	05/05/23 10:51	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/04/23 14:42	05/05/23 10:51	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/04/23 14:42	05/05/23 10:51	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/04/23 14:42	05/05/23 10:51	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/04/23 14:42	05/05/23 10:51	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/04/23 14:42	05/05/23 10:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*65*	*S1-*	*70 - 130*	*05/04/23 14:42*	*05/05/23 10:51*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*05/04/23 14:42*	*05/05/23 10:51*	*1*

Lab Sample ID: LCS 880-52630/1-A
Matrix: Solid
Analysis Batch: 52672

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 52630

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1286		mg/Kg		129	70 - 130		
Toluene			0.100	0.1129		mg/Kg		113	70 - 130		
Ethylbenzene			0.100	0.1083		mg/Kg		108	70 - 130		
m-Xylene & p-Xylene			0.200	0.2229		mg/Kg		111	70 - 130		
o-Xylene			0.100	0.1085		mg/Kg		108	70 - 130		

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

Lab Sample ID: LCSD 880-52630/2-A
Matrix: Solid
Analysis Batch: 52672

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 52630

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1500	*+	mg/Kg		150	70 - 130	15	35
Toluene			0.100	0.1254		mg/Kg		125	70 - 130	10	35
Ethylbenzene			0.100	0.1254		mg/Kg		125	70 - 130	15	35
m-Xylene & p-Xylene			0.200	0.2540		mg/Kg		127	70 - 130	13	35
o-Xylene			0.100	0.1242		mg/Kg		124	70 - 130	13	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*

Lab Sample ID: 880-27940-A-81-A MS
Matrix: Solid
Analysis Batch: 52672

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 52630

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U *+	0.0998	0.09348		mg/Kg		94	70 - 130		
Toluene	<0.00200	U	0.0998	0.09512		mg/Kg		95	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4621-1
SDG: 03c1558214

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

Lab Sample ID: 880-27940-A-81-A MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 52672 — **Prep Batch: 52630**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.0998	0.09897		mg/Kg		99	70 - 130
m-Xylene & p-Xylene	<0.00401	U	0.200	0.1925		mg/Kg		96	70 - 130
o-Xylene	<0.00200	U	0.0998	0.09650		mg/Kg		97	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: 880-27940-A-81-B MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 52672 — **Prep Batch: 52630**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U *+	0.100	0.1057		mg/Kg		106	70 - 130	12	35
Toluene	<0.00200	U	0.100	0.1033		mg/Kg		103	70 - 130	8	35
Ethylbenzene	<0.00200	U	0.100	0.1094		mg/Kg		109	70 - 130	10	35
m-Xylene & p-Xylene	<0.00401	U	0.200	0.2241		mg/Kg		112	70 - 130	15	35
o-Xylene	<0.00200	U	0.100	0.1126		mg/Kg		112	70 - 130	15	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

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

Lab Sample ID: MB 880-52679/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 52761 — **Prep Batch: 52679**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/05/23 09:19	05/06/23 08:27	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/05/23 09:19	05/06/23 08:27	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/05/23 09:19	05/06/23 08:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*166*	*S1+*	*70 - 130*	*05/05/23 09:19*	*05/06/23 08:27*	*1*
o-Terphenyl	*201*	*S1+*	*70 - 130*	*05/05/23 09:19*	*05/06/23 08:27*	*1*

Lab Sample ID: LCS 880-52679/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 52761 — **Prep Batch: 52679**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	931.6		mg/Kg		93	70 - 130
Diesel Range Organics (Over C10-C28)	1000	722.2		mg/Kg		72	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4621-1
SDG: 03c1558214

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

Lab Sample ID: LCS 880-52679/2-A
Matrix: Solid
Analysis Batch: 52761

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 52679

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	106		70 - 130
o-Terphenyl	113		70 - 130

Lab Sample ID: LCSD 880-52679/3-A
Matrix: Solid
Analysis Batch: 52761

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 52679

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	807.2		mg/Kg		81	70 - 130	14	20
Diesel Range Organics (Over C10-C28)			1000	809.8		mg/Kg		81	70 - 130	11	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	95		70 - 130
o-Terphenyl	105		70 - 130

Lab Sample ID: 890-4607-A-81-F MS
Matrix: Solid
Analysis Batch: 52761

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 52679

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	841.4		mg/Kg		83	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	999	873.6		mg/Kg		85	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	107		70 - 130
o-Terphenyl	107		70 - 130

Lab Sample ID: 890-4607-A-81-G MSD
Matrix: Solid
Analysis Batch: 52761

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 52679

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	882.0		mg/Kg		87	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<50.0	U	999	895.3		mg/Kg		87	70 - 130	2	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	110		70 - 130
o-Terphenyl	108		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4621-1
SDG: 03c1558214

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-52682/1-A
Matrix: Solid
Analysis Batch: 52706

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/05/23 12:11	1

Lab Sample ID: LCS 880-52682/2-A
Matrix: Solid
Analysis Batch: 52706

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	254.4		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-52682/3-A
Matrix: Solid
Analysis Batch: 52706

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	250.0		mg/Kg		100	90 - 110	2	20

Lab Sample ID: 890-4621-1 MS
Matrix: Solid
Analysis Batch: 52706

Client Sample ID: PH01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	2260	F1	1260	3808	F1	mg/Kg		123	90 - 110		

Lab Sample ID: 890-4621-1 MSD
Matrix: Solid
Analysis Batch: 52706

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	2260	F1	1260	3803	F1	mg/Kg		123	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4621-1
SDG: 03c1558214

GC VOA

Prep Batch: 52630

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4621-1	PH01	Total/NA	Solid	5035	
890-4621-2	PH01A	Total/NA	Solid	5035	
890-4621-5	PH02	Total/NA	Solid	5035	
890-4621-6	PH02A	Total/NA	Solid	5035	
890-4621-8	PH03	Total/NA	Solid	5035	
890-4621-9	PH03A	Total/NA	Solid	5035	
890-4621-11	PH04	Total/NA	Solid	5035	
890-4621-12	PH04A	Total/NA	Solid	5035	
MB 880-52630/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-52630/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-52630/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-27940-A-81-A MS	Matrix Spike	Total/NA	Solid	5035	
880-27940-A-81-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 52672

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4621-1	PH01	Total/NA	Solid	8021B	52630
890-4621-2	PH01A	Total/NA	Solid	8021B	52630
890-4621-5	PH02	Total/NA	Solid	8021B	52630
890-4621-6	PH02A	Total/NA	Solid	8021B	52630
890-4621-8	PH03	Total/NA	Solid	8021B	52630
890-4621-9	PH03A	Total/NA	Solid	8021B	52630
890-4621-11	PH04	Total/NA	Solid	8021B	52630
890-4621-12	PH04A	Total/NA	Solid	8021B	52630
MB 880-52630/5-A	Method Blank	Total/NA	Solid	8021B	52630
LCS 880-52630/1-A	Lab Control Sample	Total/NA	Solid	8021B	52630
LCSD 880-52630/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	52630
880-27940-A-81-A MS	Matrix Spike	Total/NA	Solid	8021B	52630
880-27940-A-81-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	52630

Analysis Batch: 52858

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4621-1	PH01	Total/NA	Solid	Total BTEX	
890-4621-2	PH01A	Total/NA	Solid	Total BTEX	
890-4621-5	PH02	Total/NA	Solid	Total BTEX	
890-4621-6	PH02A	Total/NA	Solid	Total BTEX	
890-4621-8	PH03	Total/NA	Solid	Total BTEX	
890-4621-9	PH03A	Total/NA	Solid	Total BTEX	
890-4621-11	PH04	Total/NA	Solid	Total BTEX	
890-4621-12	PH04A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 52679

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4621-1	PH01	Total/NA	Solid	8015NM Prep	
890-4621-2	PH01A	Total/NA	Solid	8015NM Prep	
890-4621-5	PH02	Total/NA	Solid	8015NM Prep	
890-4621-6	PH02A	Total/NA	Solid	8015NM Prep	
890-4621-8	PH03	Total/NA	Solid	8015NM Prep	
890-4621-9	PH03A	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4621-1
SDG: 03c1558214

GC Semi VOA (Continued)

Prep Batch: 52679 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4621-11	PH04	Total/NA	Solid	8015NM Prep	
890-4621-12	PH04A	Total/NA	Solid	8015NM Prep	
MB 880-52679/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-52679/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-52679/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4607-A-81-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4607-A-81-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 52761

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4621-1	PH01	Total/NA	Solid	8015B NM	52679
890-4621-2	PH01A	Total/NA	Solid	8015B NM	52679
890-4621-5	PH02	Total/NA	Solid	8015B NM	52679
890-4621-6	PH02A	Total/NA	Solid	8015B NM	52679
890-4621-8	PH03	Total/NA	Solid	8015B NM	52679
890-4621-9	PH03A	Total/NA	Solid	8015B NM	52679
890-4621-11	PH04	Total/NA	Solid	8015B NM	52679
890-4621-12	PH04A	Total/NA	Solid	8015B NM	52679
MB 880-52679/1-A	Method Blank	Total/NA	Solid	8015B NM	52679
LCS 880-52679/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	52679
LCSD 880-52679/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	52679
890-4607-A-81-F MS	Matrix Spike	Total/NA	Solid	8015B NM	52679
890-4607-A-81-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	52679

Analysis Batch: 52854

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4621-1	PH01	Total/NA	Solid	8015 NM	
890-4621-2	PH01A	Total/NA	Solid	8015 NM	
890-4621-5	PH02	Total/NA	Solid	8015 NM	
890-4621-6	PH02A	Total/NA	Solid	8015 NM	
890-4621-8	PH03	Total/NA	Solid	8015 NM	
890-4621-9	PH03A	Total/NA	Solid	8015 NM	
890-4621-11	PH04	Total/NA	Solid	8015 NM	
890-4621-12	PH04A	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 52682

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4621-1	PH01	Soluble	Solid	DI Leach	
890-4621-2	PH01A	Soluble	Solid	DI Leach	
890-4621-5	PH02	Soluble	Solid	DI Leach	
890-4621-6	PH02A	Soluble	Solid	DI Leach	
890-4621-8	PH03	Soluble	Solid	DI Leach	
890-4621-9	PH03A	Soluble	Solid	DI Leach	
890-4621-11	PH04	Soluble	Solid	DI Leach	
890-4621-12	PH04A	Soluble	Solid	DI Leach	
MB 880-52682/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-52682/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-52682/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4621-1 MS	PH01	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4621-1
SDG: 03c1558214

HPLC/IC (Continued)

Leach Batch: 52682 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4621-1 MSD	PH01	Soluble	Solid	DI Leach	

Analysis Batch: 52706

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4621-1	PH01	Soluble	Solid	300.0	52682
890-4621-2	PH01A	Soluble	Solid	300.0	52682
890-4621-5	PH02	Soluble	Solid	300.0	52682
890-4621-6	PH02A	Soluble	Solid	300.0	52682
890-4621-8	PH03	Soluble	Solid	300.0	52682
890-4621-9	PH03A	Soluble	Solid	300.0	52682
890-4621-11	PH04	Soluble	Solid	300.0	52682
890-4621-12	PH04A	Soluble	Solid	300.0	52682
MB 880-52682/1-A	Method Blank	Soluble	Solid	300.0	52682
LCS 880-52682/2-A	Lab Control Sample	Soluble	Solid	300.0	52682
LCSD 880-52682/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	52682
890-4621-1 MS	PH01	Soluble	Solid	300.0	52682
890-4621-1 MSD	PH01	Soluble	Solid	300.0	52682

Lab Chronicle

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4621-1
SDG: 03c1558214

Client Sample ID: PH01

Date Collected: 05/03/23 12:30
Date Received: 05/03/23 16:40

Lab Sample ID: 890-4621-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	52630	05/04/23 14:42	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52672	05/05/23 11:54	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52858	05/08/23 16:02	AJ	EET MID
Total/NA	Analysis	8015 NM		1			52854	05/08/23 15:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	52679	05/05/23 09:19	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52761	05/06/23 16:21	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	52682	05/05/23 09:45	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	52706	05/05/23 12:25	SMC	EET MID

Client Sample ID: PH01A

Date Collected: 05/03/23 12:40
Date Received: 05/03/23 16:40

Lab Sample ID: 890-4621-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	52630	05/04/23 14:42	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52672	05/05/23 12:14	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52858	05/08/23 16:02	AJ	EET MID
Total/NA	Analysis	8015 NM		1			52854	05/08/23 15:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	52679	05/05/23 09:19	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52761	05/06/23 16:43	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	52682	05/05/23 09:45	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52706	05/05/23 12:40	SMC	EET MID

Client Sample ID: PH02

Date Collected: 05/03/23 13:15
Date Received: 05/03/23 16:40

Lab Sample ID: 890-4621-5
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	52630	05/04/23 14:42	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52672	05/05/23 12:35	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52858	05/08/23 16:02	AJ	EET MID
Total/NA	Analysis	8015 NM		1			52854	05/08/23 15:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	52679	05/05/23 09:19	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52761	05/06/23 17:05	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	52682	05/05/23 09:45	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52706	05/05/23 12:45	SMC	EET MID

Client Sample ID: PH02A

Date Collected: 05/03/23 13:20
Date Received: 05/03/23 16:40

Lab Sample ID: 890-4621-6
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			4.95 g	5 mL	52630	05/04/23 14:42	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52672	05/05/23 12:55	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52858	05/08/23 16:02	AJ	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4621-1
SDG: 03c1558214

Client Sample ID: PH02A
Date Collected: 05/03/23 13:20
Date Received: 05/03/23 16:40

Lab Sample ID: 890-4621-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			52854	05/08/23 15:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	52679	05/05/23 09:19	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52761	05/06/23 17:26	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	52682	05/05/23 09:45	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52706	05/05/23 12:50	SMC	EET MID

Client Sample ID: PH03
Date Collected: 05/03/23 10:35
Date Received: 05/03/23 16:40

Lab Sample ID: 890-4621-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	52630	05/04/23 14:42	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52672	05/05/23 13:16	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52858	05/08/23 16:02	AJ	EET MID
Total/NA	Analysis	8015 NM		1			52854	05/08/23 15:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	52679	05/05/23 09:19	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52761	05/06/23 17:47	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	52682	05/05/23 09:45	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	52706	05/05/23 12:54	SMC	EET MID

Client Sample ID: PH03A
Date Collected: 05/03/23 10:45
Date Received: 05/03/23 16:40

Lab Sample ID: 890-4621-9
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			5.03 g	5 mL	52630	05/04/23 14:42	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52672	05/05/23 13:36	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52858	05/08/23 16:02	AJ	EET MID
Total/NA	Analysis	8015 NM		1			52854	05/08/23 15:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	52679	05/05/23 09:19	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52761	05/06/23 18:09	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	52682	05/05/23 09:45	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52706	05/05/23 13:09	SMC	EET MID

Client Sample ID: PH04
Date Collected: 05/03/23 09:50
Date Received: 05/03/23 16:40

Lab Sample ID: 890-4621-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	52630	05/04/23 14:42	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52672	05/05/23 13:57	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52858	05/08/23 16:02	AJ	EET MID
Total/NA	Analysis	8015 NM		1			52854	05/08/23 15:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	52679	05/05/23 09:19	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52761	05/06/23 18:30	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4621-1
SDG: 03c1558214

Client Sample ID: PH04

Date Collected: 05/03/23 09:50
Date Received: 05/03/23 16:40

Lab Sample ID: 890-4621-11

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 g	50 mL	52682	05/05/23 09:45	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52706	05/05/23 13:14	SMC	EET MID

Client Sample ID: PH04A

Date Collected: 05/03/23 10:05
Date Received: 05/03/23 16:40

Lab Sample ID: 890-4621-12

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			4.99 g	5 mL	52630	05/04/23 14:42	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52672	05/05/23 14:17	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52858	05/08/23 16:02	AJ	EET MID
Total/NA	Analysis	8015 NM		1			52854	05/08/23 15:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	52679	05/05/23 09:19	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52761	05/06/23 18:52	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	52682	05/05/23 09:45	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52706	05/05/23 13:19	SMC	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4621-1
SDG: 03c1558214

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-25	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4621-1
SDG: 03c1558214

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 N 31 124H

Job ID: 890-4621-1
SDG: 03c1558214

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4621-1	PH01	Solid	05/03/23 12:30	05/03/23 16:40	1
890-4621-2	PH01A	Solid	05/03/23 12:40	05/03/23 16:40	3
890-4621-5	PH02	Solid	05/03/23 13:15	05/03/23 16:40	1
890-4621-6	PH02A	Solid	05/03/23 13:20	05/03/23 16:40	2
890-4621-8	PH03	Solid	05/03/23 10:35	05/03/23 16:40	1
890-4621-9	PH03A	Solid	05/03/23 10:45	05/03/23 16:40	3
890-4621-11	PH04	Solid	05/03/23 09:50	05/03/23 16:40	1
890-4621-12	PH04A	Solid	05/03/23 10:05	05/03/23 16:40	4

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 2

Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy, Inc
Address:	3122 Nat'l Parks Hwy	Address:	3104 E Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	337-257-8307	Email:	tmorrissey@ensolum.com

Work Order Comments

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

Project Name:	Remuda N 31 124H	Turn Around	☒ Routine ☐ Rush
Project Number:	03C1558214		
Project Location:	32.25947, -103.92244	Due Date:	24HR
Sampler's Name:	Meredith Roberts	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:	3.2
Total Containers:		Corrected Temperature:	3.0

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	BTEX	Chlorides	TPH	Sample Comments
PH01	S	5/3/23	1230	1'	G	1	X	X	X	Incident #: nAPP2233950022
PH01A			1240	3'					HOLD	
PH01B			1245	4'					HOLD	
PH01C			1255	6'						Cost Center: 1674811001
PH02			1315	1'						
PH02A			1320	2'						
PH02B			1330	4'					HOLD	
PH03			1035	1'						
PH03A			1045	3'						mroberts@ensolum.com
PH03B			1100	6'					HOLD	

890-4621 Chain of Custody

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			5.3.23 1640	4		
3				6		
5						

Revised Date: 08/25/2020 Rev. 2020.2

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 2 of 2

Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy, Inc
Address:	3122 Nat'l Parks Hwy	Address:	3104 E Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	337-257-8307 Email:		tmorrissey@ensolum.com

Work Order Comments

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

Project Name:	Remuda N 31244	Turn Around	
Project Number:	~~32.~~ 034558214	☐ Routine ☑ Rush	
Project Location:	32.25947, -103.92244	Due Date:	24 Hr
Sampler's Name:	Meredith Roberts	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

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

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_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	BTEX	Chlorides	TPH		Sample Comments
PH04	S	5/3/23	0930	1'	G	1		X	X	X		Incident #: nAPP2233950022
PH04 A			1005	4'								
PH04 B			1010	6'							HOLD	
~~PH05~~			0925	1'							→ M	Cost Center: 167481101D1
~~PH05 A~~			0940	4'							→ ME	
~~PH05 B~~			1225	8'							→ MA	
~~PH05 C~~			1440	16'							→ MR	
										→ MR		

mroberts@ensolum.com
Sorry about the mess y'all.

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

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

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

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4621-1
SDG Number: 03c1558214

Login Number: 4621
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: 890-4621-1
SDG Number: 03c1558214

Login Number: 4621
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 05/05/23 10:34 AM

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

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ANALYTICAL REPORT

PREPARED FOR

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

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JOB DESCRIPTION

Remuda N 31 124H
SDG NUMBER 03C1558214

JOB NUMBER

890-4628-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

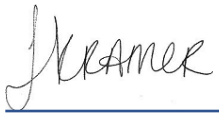
Eurofins Carlsbad

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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5/12/2023 4:14:15 PM

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

Client: Ensolum
Project/Site: Remuda N 31 124H

Laboratory Job ID: 890-4628-1
SDG: 03C1558214

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-4628-1
Project/Site: Remuda N 31 124H SDG: 03C1558214

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*1	LCS/LCSD RPD exceeds control limits.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

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 N 31 124H

Job ID: 890-4628-1
SDG: 03C1558214

Job ID: 890-4628-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4628-1

Receipt
The samples were received on 5/8/2023 8:09 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 3.4°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: FS01 (890-4628-1), FS02 (890-4628-2), FS03 (890-4628-3), FS04 (890-4628-4), FS05 (890-4628-5), FS06 (890-4628-6), FS07 (890-4628-7), FS08 (890-4628-8), FS09 (890-4628-9), SW01 (890-4628-10) and SW02 (890-4628-11).

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-52913 and analytical batch 880-52910 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.

GC Semi VOA
Method 8015MOD_NM: Surrogate compounds were inadvertently omitted during the extraction process for the following samples: (880-28227-A-1-D) and (880-28227-A-1-E MS).

Method 8015MOD_NM: An incorrect volume of spiking solution was inadvertently added to the laboratory control sample (LCS), laboratory control sample (LCSD) associated with preparation batch 880-53014 and analytical batch 880-52999. Percent recoveries are based on the amount spiked.

Method 8015MOD_NM: Spike compounds were inadvertently omitted during the extraction process for the matrix spike (MS); therefore, matrix spike recoveries are unavailable for preparation batch 880-53014 and analytical batch 880-52999. The associated laboratory control sample (LCS) met acceptance criteria.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-53014 and analytical batch 880-52999 was outside control limits. Sample matrix interference and/or non-homogeneity is suspected.

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-53015 and analytical batch 880-52997 was outside the upper control limits.

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-53014 and analytical batch 880-52999 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-53014/2-A) and (LCSD 880-53014/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (880-28227-A-1-F MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: FS05 (890-4628-5) and FS06 (890-4628-6). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-53140 and analytical batch 880-53083 was outside the upper control limits.

Case Narrative

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4628-1
SDG: 03C1558214

Job ID: 890-4628-1 (Continued)

Laboratory: Eurofins Carlsbad (Continued)

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

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 N 31 124H

Job ID: 890-4628-1
SDG: 03C1558214

Client Sample ID: FS01

Lab Sample ID: 890-4628-1
Matrix: Solid
Date Collected: 05/05/23 09:00
Date Received: 05/08/23 08:09
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		05/09/23 08:33	05/09/23 13:37	1
Toluene	**0.00207**		0.00200		mg/Kg		05/09/23 08:33	05/09/23 13:37	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/09/23 08:33	05/09/23 13:37	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		05/09/23 08:33	05/09/23 13:37	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/09/23 08:33	05/09/23 13:37	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		05/09/23 08:33	05/09/23 13:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*05/09/23 08:33*	*05/09/23 13:37*	*1*
1,4-Difluorobenzene (Surr)	*121*		*70 - 130*	*05/09/23 08:33*	*05/09/23 13:37*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			05/09/23 15:36	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			05/12/23 09:50	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/11/23 12:23	05/11/23 22:27	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/11/23 12:23	05/11/23 22:27	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/11/23 12:23	05/11/23 22:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*120*		*70 - 130*	*05/11/23 12:23*	*05/11/23 22:27*	*1*
o-Terphenyl	*90*		*70 - 130*	*05/11/23 12:23*	*05/11/23 22:27*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**358**		4.97		mg/Kg			05/12/23 14:35	1

Client Sample ID: FS02

Lab Sample ID: 890-4628-2
Matrix: Solid
Date Collected: 05/05/23 10:10
Date Received: 05/08/23 08:09
Sample Depth: 3.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/09/23 08:33	05/09/23 13:57	1
Toluene	**0.00204**		0.00199		mg/Kg		05/09/23 08:33	05/09/23 13:57	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/09/23 08:33	05/09/23 13:57	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/09/23 08:33	05/09/23 13:57	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/09/23 08:33	05/09/23 13:57	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/09/23 08:33	05/09/23 13:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*05/09/23 08:33*	*05/09/23 13:57*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4628-1
SDG: 03C1558214

Client Sample ID: FS02

Lab Sample ID: 890-4628-2
Matrix: Solid
Date Collected: 05/05/23 10:10
Date Received: 05/08/23 08:09
Sample Depth: 3.5'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*121*		*70 - 130*	*05/09/23 08:33*	*05/09/23 13:57*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			05/09/23 15:36	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			05/12/23 09:50	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		05/11/23 12:23	05/11/23 22:49	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		05/11/23 12:23	05/11/23 22:49	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		05/11/23 12:23	05/11/23 22:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*120*		*70 - 130*	*05/11/23 12:23*	*05/11/23 22:49*	*1*
o-Terphenyl	*91*		*70 - 130*	*05/11/23 12:23*	*05/11/23 22:49*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**220**		4.97	mg/Kg			05/12/23 14:40	1

Client Sample ID: FS03

Lab Sample ID: 890-4628-3
Matrix: Solid
Date Collected: 05/05/23 10:15
Date Received: 05/08/23 08:09
Sample Depth: 3.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		05/09/23 08:33	05/09/23 16:24	1
Toluene	<0.00202	U	0.00202	mg/Kg		05/09/23 08:33	05/09/23 16:24	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		05/09/23 08:33	05/09/23 16:24	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		05/09/23 08:33	05/09/23 16:24	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		05/09/23 08:33	05/09/23 16:24	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		05/09/23 08:33	05/09/23 16:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*05/09/23 08:33*	*05/09/23 16:24*	*1*
1,4-Difluorobenzene (Surr)	*123*		*70 - 130*	*05/09/23 08:33*	*05/09/23 16:24*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			05/10/23 10:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			05/12/23 09:50	1

Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4628-1
SDG: 03C1558214

Client Sample ID: FS03

Lab Sample ID: 890-4628-3
Matrix: Solid
Date Collected: 05/05/23 10:15
Date Received: 05/08/23 08:09
Sample Depth: 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	<50.0	U	50.0		mg/Kg		05/11/23 12:23	05/11/23 23:11	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/11/23 12:23	05/11/23 23:11	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/11/23 12:23	05/11/23 23:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*120*		*70 - 130*	*05/11/23 12:23*	*05/11/23 23:11*	*1*
o-Terphenyl	*90*		*70 - 130*	*05/11/23 12:23*	*05/11/23 23:11*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**183**		4.99		mg/Kg			05/12/23 14:45	1

Client Sample ID: FS04

Lab Sample ID: 890-4628-4
Matrix: Solid
Date Collected: 05/04/23 15:05
Date Received: 05/08/23 08:09
Sample Depth: 2'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/09/23 08:33	05/09/23 16:45	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/09/23 08:33	05/09/23 16:45	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/09/23 08:33	05/09/23 16:45	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/09/23 08:33	05/09/23 16:45	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/09/23 08:33	05/09/23 16:45	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/09/23 08:33	05/09/23 16:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*05/09/23 08:33*	*05/09/23 16:45*	*1*
1,4-Difluorobenzene (Surr)	*124*		*70 - 130*	*05/09/23 08:33*	*05/09/23 16:45*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/10/23 10:16	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			05/12/23 09:50	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		05/11/23 12:23	05/11/23 23:32	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/11/23 12:23	05/11/23 23:32	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/11/23 12:23	05/11/23 23:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*125*		*70 - 130*	*05/11/23 12:23*	*05/11/23 23:32*	*1*
o-Terphenyl	*95*		*70 - 130*	*05/11/23 12:23*	*05/11/23 23:32*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4628-1
SDG: 03C1558214

Client Sample ID: FS04
Date Collected: 05/04/23 15:05
Date Received: 05/08/23 08:09
Sample Depth: 2'

Lab Sample ID: 890-4628-4
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	115		5.05		mg/Kg			05/12/23 15:01	1

Client Sample ID: FS05
Date Collected: 05/04/23 15:10
Date Received: 05/08/23 08:09
Sample Depth: 2'

Lab Sample ID: 890-4628-5
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/09/23 08:33	05/09/23 17:06	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/09/23 08:33	05/09/23 17:06	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/09/23 08:33	05/09/23 17:06	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/09/23 08:33	05/09/23 17:06	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/09/23 08:33	05/09/23 17:06	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/09/23 08:33	05/09/23 17:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*05/09/23 08:33*	*05/09/23 17:06*	*1*
1,4-Difluorobenzene (Surr)	*118*		*70 - 130*	*05/09/23 08:33*	*05/09/23 17:06*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/10/23 10:16	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			05/11/23 12:38	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *-	50.0		mg/Kg		05/10/23 10:07	05/10/23 19:09	1
Diesel Range Organics (Over C10-C28)	<50.0	U *- *1	50.0		mg/Kg		05/10/23 10:07	05/10/23 19:09	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/10/23 10:07	05/10/23 19:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*120*		*70 - 130*	*05/10/23 10:07*	*05/10/23 19:09*	*1*
o-Terphenyl	*144*	*S1+*	*70 - 130*	*05/10/23 10:07*	*05/10/23 19:09*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	179		4.95		mg/Kg			05/12/23 15:07	1

Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4628-1
SDG: 03C1558214

Client Sample ID: FS06

Lab Sample ID: 890-4628-6
Matrix: Solid
Date Collected: 05/04/23 15:15
Date Received: 05/08/23 08:09
Sample Depth: 2'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/09/23 08:33	05/09/23 17:26	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/09/23 08:33	05/09/23 17:26	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/09/23 08:33	05/09/23 17:26	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/09/23 08:33	05/09/23 17:26	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/09/23 08:33	05/09/23 17:26	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/09/23 08:33	05/09/23 17:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*05/09/23 08:33*	*05/09/23 17:26*	*1*
1,4-Difluorobenzene (Surr)	*121*		*70 - 130*	*05/09/23 08:33*	*05/09/23 17:26*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/10/23 10:16	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			05/11/23 12:38	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *-	49.9		mg/Kg		05/10/23 10:07	05/10/23 19:31	1
Diesel Range Organics (Over C10-C28)	<49.9	U *- *1	49.9		mg/Kg		05/10/23 10:07	05/10/23 19:31	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/10/23 10:07	05/10/23 19:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*134*	*S1+*	*70 - 130*	*05/10/23 10:07*	*05/10/23 19:31*	*1*
o-Terphenyl	*160*	*S1+*	*70 - 130*	*05/10/23 10:07*	*05/10/23 19:31*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**139**		5.02		mg/Kg			05/12/23 15:23	1

Client Sample ID: FS07

Lab Sample ID: 890-4628-7
Matrix: Solid
Date Collected: 05/04/23 15:20
Date Received: 05/08/23 08:09
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		05/09/23 08:33	05/09/23 17:47	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/09/23 08:33	05/09/23 17:47	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/09/23 08:33	05/09/23 17:47	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		05/09/23 08:33	05/09/23 17:47	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/09/23 08:33	05/09/23 17:47	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		05/09/23 08:33	05/09/23 17:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*05/09/23 08:33*	*05/09/23 17:47*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4628-1
SDG: 03C1558214

Client Sample ID: FS07

Lab Sample ID: 890-4628-7
Matrix: Solid
Date Collected: 05/04/23 15:20
Date Received: 05/08/23 08:09
Sample Depth: 2'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*125*		*70 - 130*	*05/09/23 08:33*	*05/09/23 17:47*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			05/10/23 10:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			05/11/23 10:42	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/10/23 10:09	05/10/23 19:31	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/10/23 10:09	05/10/23 19:31	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/10/23 10:09	05/10/23 19:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*119*		*70 - 130*	*05/10/23 10:09*	*05/10/23 19:31*	*1*
o-Terphenyl	*90*		*70 - 130*	*05/10/23 10:09*	*05/10/23 19:31*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**167**		5.02	mg/Kg			05/12/23 15:28	1

Client Sample ID: FS08

Lab Sample ID: 890-4628-8
Matrix: Solid
Date Collected: 05/04/23 13:35
Date Received: 05/08/23 08:09
Sample Depth: 1'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/09/23 08:33	05/09/23 18:08	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/09/23 08:33	05/09/23 18:08	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/09/23 08:33	05/09/23 18:08	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		05/09/23 08:33	05/09/23 18:08	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/09/23 08:33	05/09/23 18:08	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/09/23 08:33	05/09/23 18:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*05/09/23 08:33*	*05/09/23 18:08*	*1*
1,4-Difluorobenzene (Surr)	*117*		*70 - 130*	*05/09/23 08:33*	*05/09/23 18:08*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			05/10/23 10:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			05/12/23 09:50	1

Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4628-1
SDG: 03C1558214

Client Sample ID: FS08

Lab Sample ID: 890-4628-8
Matrix: Solid
Date Collected: 05/04/23 13:35
Date Received: 05/08/23 08:09
Sample Depth: 1'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/11/23 12:23	05/11/23 23:54	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/11/23 12:23	05/11/23 23:54	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/11/23 12:23	05/11/23 23:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*129*		*70 - 130*	*05/11/23 12:23*	*05/11/23 23:54*	*1*
o-Terphenyl	*99*		*70 - 130*	*05/11/23 12:23*	*05/11/23 23:54*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**121**		4.98		mg/Kg			05/12/23 15:33	1

Client Sample ID: FS09

Lab Sample ID: 890-4628-9
Matrix: Solid
Date Collected: 05/04/23 13:40
Date Received: 05/08/23 08:09
Sample Depth: 1'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		05/09/23 08:33	05/09/23 18:29	1
Toluene	<0.00201	U	0.00201		mg/Kg		05/09/23 08:33	05/09/23 18:29	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		05/09/23 08:33	05/09/23 18:29	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		05/09/23 08:33	05/09/23 18:29	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		05/09/23 08:33	05/09/23 18:29	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		05/09/23 08:33	05/09/23 18:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*05/09/23 08:33*	*05/09/23 18:29*	*1*
1,4-Difluorobenzene (Surr)	*119*		*70 - 130*	*05/09/23 08:33*	*05/09/23 18:29*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			05/10/23 10:16	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			05/12/23 09:50	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/11/23 12:23	05/12/23 00:16	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/11/23 12:23	05/12/23 00:16	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/11/23 12:23	05/12/23 00:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*123*		*70 - 130*	*05/11/23 12:23*	*05/12/23 00:16*	*1*
o-Terphenyl	*94*		*70 - 130*	*05/11/23 12:23*	*05/12/23 00:16*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4628-1
SDG: 03C1558214

Client Sample ID: FS09

Lab Sample ID: 890-4628-9
Matrix: Solid
Date Collected: 05/04/23 13:40
Date Received: 05/08/23 08:09
Sample Depth: 1'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	182		4.96		mg/Kg			05/12/23 15:39	1

Client Sample ID: SW01

Lab Sample ID: 890-4628-10
Matrix: Solid
Date Collected: 05/05/23 10:25
Date Received: 05/08/23 08:09
Sample Depth: 0-3.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/09/23 08:33	05/09/23 18:49	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/09/23 08:33	05/09/23 18:49	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/09/23 08:33	05/09/23 18:49	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/09/23 08:33	05/09/23 18:49	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/09/23 08:33	05/09/23 18:49	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/09/23 08:33	05/09/23 18:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*05/09/23 08:33*	*05/09/23 18:49*	*1*
1,4-Difluorobenzene (Surr)	*117*		*70 - 130*	*05/09/23 08:33*	*05/09/23 18:49*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/10/23 10:16	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			05/12/23 09:50	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/11/23 12:23	05/12/23 00:37	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/11/23 12:23	05/12/23 00:37	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/11/23 12:23	05/12/23 00:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*124*		*70 - 130*	*05/11/23 12:23*	*05/12/23 00:37*	*1*
o-Terphenyl	*96*		*70 - 130*	*05/11/23 12:23*	*05/12/23 00:37*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	147		4.97		mg/Kg			05/12/23 15:44	1

Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4628-1
SDG: 03C1558214

Client Sample ID: SW02

Date Collected: 05/05/23 10:35
Date Received: 05/08/23 08:09
Sample Depth: 0-3.5'

Lab Sample ID: 890-4628-11

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/09/23 08:33	05/09/23 19:10	1
Toluene	**0.00209**		0.00199		mg/Kg		05/09/23 08:33	05/09/23 19:10	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/09/23 08:33	05/09/23 19:10	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/09/23 08:33	05/09/23 19:10	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/09/23 08:33	05/09/23 19:10	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/09/23 08:33	05/09/23 19:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*05/09/23 08:33*	*05/09/23 19:10*	*1*
1,4-Difluorobenzene (Surr)	*126*		*70 - 130*	*05/09/23 08:33*	*05/09/23 19:10*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/10/23 10:16	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			05/12/23 09:50	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/11/23 12:23	05/12/23 00:59	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/11/23 12:23	05/12/23 00:59	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/11/23 12:23	05/12/23 00:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*122*		*70 - 130*	*05/11/23 12:23*	*05/12/23 00:59*	*1*
o-Terphenyl	*93*		*70 - 130*	*05/11/23 12:23*	*05/12/23 00:59*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**140**		5.00		mg/Kg			05/12/23 15:49	1

Surrogate Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4628-1
SDG: 03C1558214

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-28114-A-1-A MS	Matrix Spike	107	103
880-28114-A-1-B MSD	Matrix Spike Duplicate	97	100
890-4628-1	FS01	103	121
890-4628-2	FS02	97	121
890-4628-3	FS03	103	123
890-4628-4	FS04	106	124
890-4628-5	FS05	103	118
890-4628-6	FS06	102	121
890-4628-7	FS07	110	125
890-4628-8	FS08	97	117
890-4628-9	FS09	107	119
890-4628-10	SW01	104	117
890-4628-11	SW02	108	126
LCS 880-52913/1-A	Lab Control Sample	99	101
LCSD 880-52913/2-A	Lab Control Sample Dup	96	105
MB 880-52913/5-A	Method Blank	99	104

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-28227-A-1-E MS	Matrix Spike	2 S1-	0.4 S1-
880-28227-A-1-F MSD	Matrix Spike Duplicate	170 S1+	176 S1+
890-4628-1	FS01	120	90
890-4628-2	FS02	120	91
890-4628-3	FS03	120	90
890-4628-4	FS04	125	95
890-4628-5	FS05	120	144 S1+
890-4628-6	FS06	134 S1+	160 S1+
890-4628-7	FS07	119	90
890-4628-8	FS08	129	99
890-4628-9	FS09	123	94
890-4628-10	SW01	124	96
890-4628-11	SW02	122	93
890-4629-A-1-E MS	Matrix Spike	107	77
890-4629-A-1-F MSD	Matrix Spike Duplicate	101	74
890-4637-A-2-D MS	Matrix Spike	123	88
890-4637-A-2-E MSD	Matrix Spike Duplicate	118	84
LCS 880-53014/2-A	Lab Control Sample	62 S1-	74
LCS 880-53015/2-A	Lab Control Sample	106	82
LCS 880-53140/2-A	Lab Control Sample	111	87
LCSD 880-53014/3-A	Lab Control Sample Dup	50 S1-	57 S1-
LCSD 880-53015/3-A	Lab Control Sample Dup	119	91
LCSD 880-53140/3-A	Lab Control Sample Dup	118	92

Surrogate Summary

Client: Ensolum Job ID: 890-4628-1
Project/Site: Remuda N 31 124H SDG: 03C1558214

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

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

		Percent Surrogate Recovery (Acceptance Limits)									
		1CO1	OTPH1								
Lab Sample ID	Client Sample ID	(70-130)	(70-130)								
MB 880-53014/1-A	Method Blank	117	150 S1+								
MB 880-53015/1-A	Method Blank	137 S1+	110								
MB 880-53140/1-A	Method Blank	151 S1+	123								

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4628-1
SDG: 03C1558214

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-52913/5-A
Matrix: Solid
Analysis Batch: 52910

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 52913

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/09/23 08:33	05/09/23 11:05	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/09/23 08:33	05/09/23 11:05	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/09/23 08:33	05/09/23 11:05	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/09/23 08:33	05/09/23 11:05	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/09/23 08:33	05/09/23 11:05	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/09/23 08:33	05/09/23 11:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*05/09/23 08:33*	*05/09/23 11:05*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*05/09/23 08:33*	*05/09/23 11:05*	*1*

Lab Sample ID: LCS 880-52913/1-A
Matrix: Solid
Analysis Batch: 52910

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 52913

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1199		mg/Kg		120	70 - 130		
Toluene			0.100	0.1026		mg/Kg		103	70 - 130		
Ethylbenzene			0.100	0.1063		mg/Kg		106	70 - 130		
m-Xylene & p-Xylene			0.200	0.2149		mg/Kg		107	70 - 130		
o-Xylene			0.100	0.1056		mg/Kg		106	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 880-52913/2-A
Matrix: Solid
Analysis Batch: 52910

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 52913

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1234		mg/Kg		123	70 - 130	3	35
Toluene			0.100	0.1022		mg/Kg		102	70 - 130	0	35
Ethylbenzene			0.100	0.1033		mg/Kg		103	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.2078		mg/Kg		104	70 - 130	3	35
o-Xylene			0.100	0.1018		mg/Kg		102	70 - 130	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: 880-28114-A-1-A MS
Matrix: Solid
Analysis Batch: 52910

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 52913

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U	0.0998	0.09751		mg/Kg		97	70 - 130		
Toluene	0.00475		0.0998	0.07897		mg/Kg		74	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4628-1
SDG: 03C1558214

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

Lab Sample ID: 880-28114-A-1-A MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 52910 — **Prep Batch: 52913**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U F1	0.0998	0.06930	F1	mg/Kg		68	70 - 130
m-Xylene & p-Xylene	0.0387	F1	0.200	0.1487	F1	mg/Kg		55	70 - 130
o-Xylene	0.0173	F1	0.0998	0.07054	F1	mg/Kg		53	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: 880-28114-A-1-B MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 52910 — **Prep Batch: 52913**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.100	0.09765		mg/Kg		97	70 - 130	0	35
Toluene	0.00475		0.100	0.07873		mg/Kg		74	70 - 130	0	35
Ethylbenzene	<0.00199	U F1	0.100	0.06986	F1	mg/Kg		68	70 - 130	1	35
m-Xylene & p-Xylene	0.0387	F1	0.201	0.1447	F1	mg/Kg		53	70 - 130	3	35
o-Xylene	0.0173	F1	0.100	0.06920	F1	mg/Kg		52	70 - 130	2	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

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

Lab Sample ID: MB 880-53014/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 52999 — **Prep Batch: 53014**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/10/23 08:07	05/10/23 09:04	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/10/23 08:07	05/10/23 09:04	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/10/23 08:07	05/10/23 09:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*117*		*70 - 130*	*05/10/23 08:07*	*05/10/23 09:04*	*1*
o-Terphenyl	*150*	*S1+*	*70 - 130*	*05/10/23 08:07*	*05/10/23 09:04*	*1*

Lab Sample ID: LCS 880-53014/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 52999 — **Prep Batch: 53014**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	461.8	*-	mg/Kg		46	70 - 130
Diesel Range Organics (Over C10-C28)			1000	505.7	*-	mg/Kg		51	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4628-1
SDG: 03C1558214

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

Lab Sample ID: LCS 880-53014/2-A
Matrix: Solid
Analysis Batch: 52999

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53014

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	62	S1-	70 - 130
o-Terphenyl	74		70 - 130

Lab Sample ID: LCSD 880-53014/3-A
Matrix: Solid
Analysis Batch: 52999

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53014

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	448.4	*-	mg/Kg		45	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	405.8	*- *1	mg/Kg		41	70 - 130	22	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	50	S1-	70 - 130
o-Terphenyl	57	S1-	70 - 130

Lab Sample ID: 880-28227-A-1-E MS
Matrix: Solid
Analysis Batch: 52999

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 53014

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 *- F1 F2	997	<49.9	U F1	mg/Kg		4	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U *- *1 F1 F2	997	<49.9	U F1	mg/Kg		2	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	2	S1-	70 - 130
o-Terphenyl	0.4	S1-	70 - 130

Lab Sample ID: 880-28227-A-1-F MSD
Matrix: Solid
Analysis Batch: 52999

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 53014

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 *- F1 F2	999	1268	F2	mg/Kg		127	70 - 130	187	20
Diesel Range Organics (Over C10-C28)	<49.9	U *- *1 F1 F2	999	1418	F1 F2	mg/Kg		142	70 - 130	196	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	170	S1+	70 - 130
o-Terphenyl	176	S1+	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4628-1
SDG: 03C1558214

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

Lab Sample ID: MB 880-53015/1-A
Matrix: Solid
Analysis Batch: 52997

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53015

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/10/23 08:09	05/10/23 09:04	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/10/23 08:09	05/10/23 09:04	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/10/23 08:09	05/10/23 09:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*137*	*S1+*	*70 - 130*	*05/10/23 08:09*	*05/10/23 09:04*	*1*
o-Terphenyl	*110*		*70 - 130*	*05/10/23 08:09*	*05/10/23 09:04*	*1*

Lab Sample ID: LCS 880-53015/2-A
Matrix: Solid
Analysis Batch: 52997

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53015

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	982.4		mg/Kg		98	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1028		mg/Kg		103	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*106*		*70 - 130*
o-Terphenyl	*82*		*70 - 130*

Lab Sample ID: LCSD 880-53015/3-A
Matrix: Solid
Analysis Batch: 52997

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53015

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1012		mg/Kg		101	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	1085		mg/Kg		109	70 - 130	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*119*		*70 - 130*
o-Terphenyl	*91*		*70 - 130*

Lab Sample ID: 890-4629-A-1-E MS
Matrix: Solid
Analysis Batch: 52997

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 53015

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	996	870.1		mg/Kg		87	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	996	780.5		mg/Kg		76	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4628-1
SDG: 03C1558214

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

Lab Sample ID: 890-4629-A-1-E MS
Matrix: Solid
Analysis Batch: 52997

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 53015

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	107		70 - 130
o-Terphenyl	77		70 - 130

Lab Sample ID: 890-4629-A-1-F MSD
Matrix: Solid
Analysis Batch: 52997

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 53015

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	996	830.0		mg/Kg		83	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<49.9	U	996	745.3		mg/Kg		72	70 - 130	5	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	101		70 - 130
o-Terphenyl	74		70 - 130

Lab Sample ID: MB 880-53140/1-A
Matrix: Solid
Analysis Batch: 53083

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53140

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/11/23 12:23	05/11/23 20:17	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/11/23 12:23	05/11/23 20:17	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/11/23 12:23	05/11/23 20:17	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	151	S1+	70 - 130	05/11/23 12:23	05/11/23 20:17	1
o-Terphenyl	123		70 - 130	05/11/23 12:23	05/11/23 20:17	1

Lab Sample ID: LCS 880-53140/2-A
Matrix: Solid
Analysis Batch: 53083

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53140

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	873.9		mg/Kg		87	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	942.2		mg/Kg		94	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	111		70 - 130
o-Terphenyl	87		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4628-1
SDG: 03C1558214

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

Lab Sample ID: LCSD 880-53140/3-A
Matrix: Solid
Analysis Batch: 53083

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53140

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	863.0		mg/Kg		86	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	897.7		mg/Kg		90	70 - 130	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*118*		*70 - 130*
o-Terphenyl	*92*		*70 - 130*

Lab Sample ID: 890-4637-A-2-D MS
Matrix: Solid
Analysis Batch: 53083

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 53140

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	997	1029		mg/Kg		100	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	997	1032		mg/Kg		103	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*123*		*70 - 130*
o-Terphenyl	*88*		*70 - 130*

Lab Sample ID: 890-4637-A-2-E MSD
Matrix: Solid
Analysis Batch: 53083

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 53140

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	996.5		mg/Kg		97	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<50.0	U	999	980.6		mg/Kg		98	70 - 130	5	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*118*		*70 - 130*
o-Terphenyl	*84*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-52962/1-A
Matrix: Solid
Analysis Batch: 53188

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/12/23 13:14	1

QC Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4628-1
SDG: 03C1558214

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-52962/2-A
Matrix: Solid
Analysis Batch: 53188

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	270.0		mg/Kg		108	90 - 110		

Lab Sample ID: LCSD 880-52962/3-A
Matrix: Solid
Analysis Batch: 53188

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	269.9		mg/Kg		108	90 - 110	0	20

Lab Sample ID: 890-4628-3 MS
Matrix: Solid
Analysis Batch: 53188

Client Sample ID: FS03
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	183		250	416.0		mg/Kg		93	90 - 110		

Lab Sample ID: 890-4628-3 MSD
Matrix: Solid
Analysis Batch: 53188

Client Sample ID: FS03
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	183		250	413.5		mg/Kg		92	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4628-1
SDG: 03C1558214

GC VOA

Analysis Batch: 52910

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4628-1	FS01	Total/NA	Solid	8021B	52913
890-4628-2	FS02	Total/NA	Solid	8021B	52913
890-4628-3	FS03	Total/NA	Solid	8021B	52913
890-4628-4	FS04	Total/NA	Solid	8021B	52913
890-4628-5	FS05	Total/NA	Solid	8021B	52913
890-4628-6	FS06	Total/NA	Solid	8021B	52913
890-4628-7	FS07	Total/NA	Solid	8021B	52913
890-4628-8	FS08	Total/NA	Solid	8021B	52913
890-4628-9	FS09	Total/NA	Solid	8021B	52913
890-4628-10	SW01	Total/NA	Solid	8021B	52913
890-4628-11	SW02	Total/NA	Solid	8021B	52913
MB 880-52913/5-A	Method Blank	Total/NA	Solid	8021B	52913
LCS 880-52913/1-A	Lab Control Sample	Total/NA	Solid	8021B	52913
LCSD 880-52913/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	52913
880-28114-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	52913
880-28114-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	52913

Prep Batch: 52913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4628-1	FS01	Total/NA	Solid	5035	
890-4628-2	FS02	Total/NA	Solid	5035	
890-4628-3	FS03	Total/NA	Solid	5035	
890-4628-4	FS04	Total/NA	Solid	5035	
890-4628-5	FS05	Total/NA	Solid	5035	
890-4628-6	FS06	Total/NA	Solid	5035	
890-4628-7	FS07	Total/NA	Solid	5035	
890-4628-8	FS08	Total/NA	Solid	5035	
890-4628-9	FS09	Total/NA	Solid	5035	
890-4628-10	SW01	Total/NA	Solid	5035	
890-4628-11	SW02	Total/NA	Solid	5035	
MB 880-52913/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-52913/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-52913/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-28114-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-28114-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 52965

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4628-1	FS01	Total/NA	Solid	Total BTEX	
890-4628-2	FS02	Total/NA	Solid	Total BTEX	
890-4628-3	FS03	Total/NA	Solid	Total BTEX	
890-4628-4	FS04	Total/NA	Solid	Total BTEX	
890-4628-5	FS05	Total/NA	Solid	Total BTEX	
890-4628-6	FS06	Total/NA	Solid	Total BTEX	
890-4628-7	FS07	Total/NA	Solid	Total BTEX	
890-4628-8	FS08	Total/NA	Solid	Total BTEX	
890-4628-9	FS09	Total/NA	Solid	Total BTEX	
890-4628-10	SW01	Total/NA	Solid	Total BTEX	
890-4628-11	SW02	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4628-1
SDG: 03C1558214

GC Semi VOA

Analysis Batch: 52997

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4628-7	FS07	Total/NA	Solid	8015B NM	53015
MB 880-53015/1-A	Method Blank	Total/NA	Solid	8015B NM	53015
LCS 880-53015/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	53015
LCSD 880-53015/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	53015
890-4629-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	53015
890-4629-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	53015

Analysis Batch: 52999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4628-5	FS05	Total/NA	Solid	8015B NM	53014
890-4628-6	FS06	Total/NA	Solid	8015B NM	53014
MB 880-53014/1-A	Method Blank	Total/NA	Solid	8015B NM	53014
LCS 880-53014/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	53014
LCSD 880-53014/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	53014
880-28227-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	53014
880-28227-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	53014

Prep Batch: 53014

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4628-5	FS05	Total/NA	Solid	8015NM Prep	
890-4628-6	FS06	Total/NA	Solid	8015NM Prep	
MB 880-53014/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-53014/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-53014/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-28227-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-28227-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Prep Batch: 53015

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4628-7	FS07	Total/NA	Solid	8015NM Prep	
MB 880-53015/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-53015/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-53015/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4629-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4629-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 53083

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4628-1	FS01	Total/NA	Solid	8015B NM	53140
890-4628-2	FS02	Total/NA	Solid	8015B NM	53140
890-4628-3	FS03	Total/NA	Solid	8015B NM	53140
890-4628-4	FS04	Total/NA	Solid	8015B NM	53140
890-4628-8	FS08	Total/NA	Solid	8015B NM	53140
890-4628-9	FS09	Total/NA	Solid	8015B NM	53140
890-4628-10	SW01	Total/NA	Solid	8015B NM	53140
890-4628-11	SW02	Total/NA	Solid	8015B NM	53140
MB 880-53140/1-A	Method Blank	Total/NA	Solid	8015B NM	53140
LCS 880-53140/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	53140
LCSD 880-53140/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	53140
890-4637-A-2-D MS	Matrix Spike	Total/NA	Solid	8015B NM	53140
890-4637-A-2-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	53140

QC Association Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4628-1
SDG: 03C1558214

GC Semi VOA

Analysis Batch: 53127

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4628-1	FS01	Total/NA	Solid	8015 NM	
890-4628-2	FS02	Total/NA	Solid	8015 NM	
890-4628-3	FS03	Total/NA	Solid	8015 NM	
890-4628-4	FS04	Total/NA	Solid	8015 NM	
890-4628-5	FS05	Total/NA	Solid	8015 NM	
890-4628-6	FS06	Total/NA	Solid	8015 NM	
890-4628-7	FS07	Total/NA	Solid	8015 NM	
890-4628-8	FS08	Total/NA	Solid	8015 NM	
890-4628-9	FS09	Total/NA	Solid	8015 NM	
890-4628-10	SW01	Total/NA	Solid	8015 NM	
890-4628-11	SW02	Total/NA	Solid	8015 NM	

Prep Batch: 53140

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4628-1	FS01	Total/NA	Solid	8015NM Prep	
890-4628-2	FS02	Total/NA	Solid	8015NM Prep	
890-4628-3	FS03	Total/NA	Solid	8015NM Prep	
890-4628-4	FS04	Total/NA	Solid	8015NM Prep	
890-4628-8	FS08	Total/NA	Solid	8015NM Prep	
890-4628-9	FS09	Total/NA	Solid	8015NM Prep	
890-4628-10	SW01	Total/NA	Solid	8015NM Prep	
890-4628-11	SW02	Total/NA	Solid	8015NM Prep	
MB 880-53140/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-53140/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-53140/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4637-A-2-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4637-A-2-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 52962

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4628-1	FS01	Soluble	Solid	DI Leach	
890-4628-2	FS02	Soluble	Solid	DI Leach	
890-4628-3	FS03	Soluble	Solid	DI Leach	
890-4628-4	FS04	Soluble	Solid	DI Leach	
890-4628-5	FS05	Soluble	Solid	DI Leach	
890-4628-6	FS06	Soluble	Solid	DI Leach	
890-4628-7	FS07	Soluble	Solid	DI Leach	
890-4628-8	FS08	Soluble	Solid	DI Leach	
890-4628-9	FS09	Soluble	Solid	DI Leach	
890-4628-10	SW01	Soluble	Solid	DI Leach	
890-4628-11	SW02	Soluble	Solid	DI Leach	
MB 880-52962/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-52962/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-52962/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4628-3 MS	FS03	Soluble	Solid	DI Leach	
890-4628-3 MSD	FS03	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4628-1
SDG: 03C1558214

HPLC/IC

Analysis Batch: 53188

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4628-1	FS01	Soluble	Solid	300.0	52962
890-4628-2	FS02	Soluble	Solid	300.0	52962
890-4628-3	FS03	Soluble	Solid	300.0	52962
890-4628-4	FS04	Soluble	Solid	300.0	52962
890-4628-5	FS05	Soluble	Solid	300.0	52962
890-4628-6	FS06	Soluble	Solid	300.0	52962
890-4628-7	FS07	Soluble	Solid	300.0	52962
890-4628-8	FS08	Soluble	Solid	300.0	52962
890-4628-9	FS09	Soluble	Solid	300.0	52962
890-4628-10	SW01	Soluble	Solid	300.0	52962
890-4628-11	SW02	Soluble	Solid	300.0	52962
MB 880-52962/1-A	Method Blank	Soluble	Solid	300.0	52962
LCS 880-52962/2-A	Lab Control Sample	Soluble	Solid	300.0	52962
LCSD 880-52962/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	52962
890-4628-3 MS	FS03	Soluble	Solid	300.0	52962
890-4628-3 MSD	FS03	Soluble	Solid	300.0	52962

Lab Chronicle

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4628-1
SDG: 03C1558214

Client Sample ID: FS01

Lab Sample ID: 890-4628-1
Matrix: Solid
Date Collected: 05/05/23 09:00
Date Received: 05/08/23 08:09

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	52913	05/09/23 08:33	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52910	05/09/23 13:37	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52965	05/09/23 15:36	SM	EET MID
Total/NA	Analysis	8015 NM		1			53127	05/12/23 09:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	53140	05/11/23 12:23	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53083	05/11/23 22:27	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	52962	05/09/23 14:13	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53188	05/12/23 14:35	SMC	EET MID

Client Sample ID: FS02

Lab Sample ID: 890-4628-2
Matrix: Solid
Date Collected: 05/05/23 10:10
Date Received: 05/08/23 08:09

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	52913	05/09/23 08:33	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52910	05/09/23 13:57	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52965	05/09/23 15:36	SM	EET MID
Total/NA	Analysis	8015 NM		1			53127	05/12/23 09:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	53140	05/11/23 12:23	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53083	05/11/23 22:49	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	52962	05/09/23 14:13	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53188	05/12/23 14:40	SMC	EET MID

Client Sample ID: FS03

Lab Sample ID: 890-4628-3
Matrix: Solid
Date Collected: 05/05/23 10:15
Date Received: 05/08/23 08:09

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	52913	05/09/23 08:33	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52910	05/09/23 16:24	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52965	05/10/23 10:16	SM	EET MID
Total/NA	Analysis	8015 NM		1			53127	05/12/23 09:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	53140	05/11/23 12:23	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53083	05/11/23 23:11	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	52962	05/09/23 14:13	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53188	05/12/23 14:45	SMC	EET MID

Client Sample ID: FS04

Lab Sample ID: 890-4628-4
Matrix: Solid
Date Collected: 05/04/23 15:05
Date Received: 05/08/23 08:09

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	52913	05/09/23 08:33	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52910	05/09/23 16:45	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52965	05/10/23 10:16	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4628-1
SDG: 03C1558214

Client Sample ID: FS04

Date Collected: 05/04/23 15:05
Date Received: 05/08/23 08:09

Lab Sample ID: 890-4628-4

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			53127	05/12/23 09:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	53140	05/11/23 12:23	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53083	05/11/23 23:32	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	52962	05/09/23 14:13	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53188	05/12/23 15:01	SMC	EET MID

Client Sample ID: FS05

Date Collected: 05/04/23 15:10
Date Received: 05/08/23 08:09

Lab Sample ID: 890-4628-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	52913	05/09/23 08:33	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52910	05/09/23 17:06	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52965	05/10/23 10:16	SM	EET MID
Total/NA	Analysis	8015 NM		1			53127	05/11/23 12:38	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	53014	05/10/23 10:07	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52999	05/10/23 19:09	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	52962	05/09/23 14:13	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53188	05/12/23 15:07	SMC	EET MID

Client Sample ID: FS06

Date Collected: 05/04/23 15:15
Date Received: 05/08/23 08:09

Lab Sample ID: 890-4628-6

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	52913	05/09/23 08:33	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52910	05/09/23 17:26	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52965	05/10/23 10:16	SM	EET MID
Total/NA	Analysis	8015 NM		1			53127	05/11/23 12:38	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	53014	05/10/23 10:07	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52999	05/10/23 19:31	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	52962	05/09/23 14:13	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53188	05/12/23 15:23	SMC	EET MID

Client Sample ID: FS07

Date Collected: 05/04/23 15:20
Date Received: 05/08/23 08:09

Lab Sample ID: 890-4628-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	52913	05/09/23 08:33	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52910	05/09/23 17:47	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52965	05/10/23 10:16	SM	EET MID
Total/NA	Analysis	8015 NM		1			53127	05/11/23 10:42	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	53015	05/10/23 10:09	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52997	05/10/23 19:31	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4628-1
SDG: 03C1558214

Client Sample ID: FS07

Lab Sample ID: 890-4628-7
Matrix: Solid
Date Collected: 05/04/23 15:20
Date Received: 05/08/23 08:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.98 g	50 mL	52962	05/09/23 14:13	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53188	05/12/23 15:28	SMC	EET MID

Client Sample ID: FS08

Lab Sample ID: 890-4628-8
Matrix: Solid
Date Collected: 05/04/23 13:35
Date Received: 05/08/23 08:09

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	52913	05/09/23 08:33	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52910	05/09/23 18:08	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52965	05/10/23 10:16	SM	EET MID
Total/NA	Analysis	8015 NM		1			53127	05/12/23 09:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	53140	05/11/23 12:23	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53083	05/11/23 23:54	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	52962	05/09/23 14:13	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53188	05/12/23 15:33	SMC	EET MID

Client Sample ID: FS09

Lab Sample ID: 890-4628-9
Matrix: Solid
Date Collected: 05/04/23 13:40
Date Received: 05/08/23 08:09

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	52913	05/09/23 08:33	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52910	05/09/23 18:29	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52965	05/10/23 10:16	SM	EET MID
Total/NA	Analysis	8015 NM		1			53127	05/12/23 09:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	53140	05/11/23 12:23	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53083	05/12/23 00:16	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	52962	05/09/23 14:13	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53188	05/12/23 15:39	SMC	EET MID

Client Sample ID: SW01

Lab Sample ID: 890-4628-10
Matrix: Solid
Date Collected: 05/05/23 10:25
Date Received: 05/08/23 08:09

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	52913	05/09/23 08:33	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52910	05/09/23 18:49	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52965	05/10/23 10:16	SM	EET MID
Total/NA	Analysis	8015 NM		1			53127	05/12/23 09:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	53140	05/11/23 12:23	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53083	05/12/23 00:37	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	52962	05/09/23 14:13	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53188	05/12/23 15:44	SMC	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4628-1
SDG: 03C1558214

Client Sample ID: SW02

Date Collected: 05/05/23 10:35
Date Received: 05/08/23 08:09

Lab Sample ID: 890-4628-11

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	52913	05/09/23 08:33	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52910	05/09/23 19:10	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52965	05/10/23 10:16	SM	EET MID
Total/NA	Analysis	8015 NM		1			53127	05/12/23 09:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	53140	05/11/23 12:23	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53083	05/12/23 00:59	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	52962	05/09/23 14:13	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53188	05/12/23 15:49	SMC	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4628-1
SDG: 03C1558214

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-25	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4628-1
SDG: 03C1558214

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 N 31 124H

Job ID: 890-4628-1
SDG: 03C1558214

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4628-1	FS01	Solid	05/05/23 09:00	05/08/23 08:09	2.5'
890-4628-2	FS02	Solid	05/05/23 10:10	05/08/23 08:09	3.5'
890-4628-3	FS03	Solid	05/05/23 10:15	05/08/23 08:09	3.5'
890-4628-4	FS04	Solid	05/04/23 15:05	05/08/23 08:09	2'
890-4628-5	FS05	Solid	05/04/23 15:10	05/08/23 08:09	2'
890-4628-6	FS06	Solid	05/04/23 15:15	05/08/23 08:09	2'
890-4628-7	FS07	Solid	05/04/23 15:20	05/08/23 08:09	2'
890-4628-8	FS08	Solid	05/04/23 13:35	05/08/23 08:09	1'
890-4628-9	FS09	Solid	05/04/23 13:40	05/08/23 08:09	1'
890-4628-10	SW01	Solid	05/05/23 10:25	05/08/23 08:09	0-3.5'
890-4628-11	SW02	Solid	05/05/23 10:35	05/08/23 08:09	0-3.5'

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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 2

Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy
Address:	3122 Nat'l Parks Hwy	Address:	3104 E Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	337-257-8307 Email:		tmorrissey@ensolum.com

Work Order Comments

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

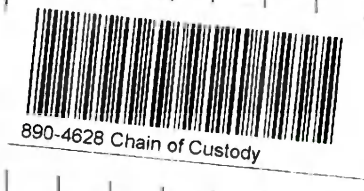
Project Name:	Remuda N 31 124H	Turn Around	
Project Number:	03C1558214	☑ Routine ☐ Rush	
Project Location:	32.25947, -103.92244	Due Date:	
Sampler's Name:	Meredith Roberts	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	TNM-007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	3.6
Total Containers:		Corrected Temperature:	3.4

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: BTEX	TPH	Chlorides	Sample Comments
FS01	S	5/5/23	0900	2.5'	C	1		X	X	X	Incident #:
FS02		↓	1010	3.5'							nAPP2233950022
FS03			1015	3.5'							
FS04		5/4/23	1505	2'							Cost Center:
FS05			1510								1670481101
FS06			1515								
FS07			1520	↓							mroberts@ensolum.com
FS08			1335	1'							
FS09		↓	1340	↓							
SW01	↓	5/5/23	1025	0-3.5'	↓	↓		↓	↓	↓	



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	MRobbs	Amanda Stiff	5/8/23 0809			
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:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy, Inc
Address:	3122 Nat'l Parks Hwy	Address:	3104 E Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	337.257.8307 Email:		tmorrissey@ensolum.com

Work Order Comments

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

Project Name:	Remuda N 31 124H	Turn Around	
Project Number:	03C1558214	☑ Routine ☐ Rush	
Project Location:	32.25947, -103.92244	Due Date:	
Sampler's Name:	Meredith Roberts	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	BTEX	Chlorides	TPH	Sample Comments
SW02	S	5/5/23	1035	0-3.5'	C	1		X	X	X	Incident #: nAPP2233950022
											Cost Center: 1674811001
											mroberts@ensolum.com

Preservative Codes

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Meeks	Amanda Stutz	5/8/23 0809			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

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

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s)	COC No: 890-1271 1
Client Contact: Shipping/Receiving	Phone	E-Mail: Jessica.Kramer@et.eurofinsus.com	State of Origin: New Mexico	Page: Page 1 of 2
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-4628-1
Address: 1211 W Florida Ave	Due Date Requested: 5/12/2023			
City: Midland	TAT Requested (days):			
State, Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: Remuda N 31 124H	Project #: 89000093			
Site	SSOW#:			

Preservation Codes

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

Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8016NM_S_Prep (MOD) Full TPH	8015MOD_Calc	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc (MOD) BTEX	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
FS01 (890-4628-1)	5/5/23	09 00 Mountain		Solid			X	X	X	X	X	1	
FS02 (890-4628-2)	5/5/23	10 10 Mountain		Solid			X	X	X	X	X	1	
FS03 (890-4628-3)	5/5/23	10 15 Mountain		Solid			X	X	X	X	X	1	
FS04 (890-4628-4)	5/4/23	15 05 Mountain		Solid			X	X	X	X	X	1	
FS05 (890-4628-5)	5/4/23	15 10 Mountain		Solid			X	X	X	X	X	1	
FS06 (890-4628-6)	5/4/23	15 15 Mountain		Solid			X	X	X	X	X	1	
FS07 (890-4628-7)	5/4/23	15 20 Mountain		Solid			X	X	X	X	X	1	
FS08 (890-4628-8)	5/4/23	13 35 Mountain		Solid			X	X	X	X	X	1	
FS09 (890-4628-9)	5/4/23	13 40 Mountain		Solid			X	X	X	X	X	1	

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

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

Empty Kit Relinquished by	Date	Time	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time:	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time:	Company	Received by	Date/Time	Company

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

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4628-1
SDG Number: 03C1558214

Login Number: 4628
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4628-1
SDG Number: 03C1558214

Login Number: 4628
List Number: 2
Creator: Teel, Brianna

List Source: Eurofins Midland
List Creation: 05/09/23 11:28 AM

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

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 5/19/2023 11:03:42 AM

JOB DESCRIPTION

Remuda N 31 124H
SDG NUMBER 03C1558214

JOB NUMBER

890-4653-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

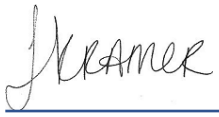
Eurofins Carlsbad

Job Notes

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

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

Authorization



Generated
5/19/2023 11:03:42 AM

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

Client: Ensolum
Project/Site: Remuda N 31 124H

Laboratory Job ID: 890-4653-1
SDG: 03C1558214

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4653-1
SDG: 03C1558214

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
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 N 31 124H

Job ID: 890-4653-1
SDG: 03C1558214

Job ID: 890-4653-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4653-1

Receipt
The samples were received on 5/11/2023 4:07 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 4.4°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: FS10 (890-4653-1), FS12 (890-4653-2), FS14 (890-4653-3), FS19 (890-4653-4), FS11 (890-4653-5), FS13 (890-4653-6), FS15 (890-4653-7), FS16 (890-4653-8), FS17 (890-4653-9), FS18 (890-4653-10), FS19 (890-4653-11), FS20 (890-4653-12), FS21 (890-4653-13), FS22 (890-4653-14), FS23 (890-4653-15) and FS24 (890-4653-16).

GC VOA
Method 8021B: The continuing calibration verification (CCV) associated with batch 880-53588 recovered above the upper control limit for Benzene, Toluene, Ethylbenzene, m-Xylene & p-Xylene, o-Xylene and Xylenes, Total. The samples associated with this CCV were non-detects for the affected analytes

Method 8021B: Surrogate recovery for the following samples were outside control limits: FS23 (890-4653-15) and FS24 (890-4653-16). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following samples were outside control limits: (CCV 880-53588/2), (CCV 880-53588/20), (CCV 880-53588/33), (CCV 880-53588/51), (LCS 880-53497/1-A) and (LCSD 880-53497/2-A). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (890-4660-A-1-I). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following samples were outside control limits: (890-4660-A-1-G MS) and (890-4660-A-1-H MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 880-53497 and analytical batch 880-53588 recovered outside control limits for the following analytes: Benzene, Toluene, Ethylbenzene, m-Xylene & p-Xylene, o-Xylene and Xylenes, Total. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-53497 and analytical batch 880-53588 were outside control limits for one or more analytes. These analytes were biased high and were not detected in the associated samples; therefore, the data have been reported.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-53494 and analytical batch 880-53673 was outside the upper control limits.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-53326/15), (CCV 880-53326/31), (CCV 880-53326/42) and (LCSD 880-53388/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-53388 and analytical batch 880-53326 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: FS12 (890-4653-2) and FS14

Case Narrative

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4653-1
SDG: 03C1558214

Job ID: 890-4653-1 (Continued)

Laboratory: Eurofins Carlsbad (Continued)

(890-4653-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: FS16 (890-4653-8) and FS18 (890-4653-10). 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: FS19 (890-4653-11), FS20 (890-4653-12) and FS21 (890-4653-13). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: FS24 (890-4653-16). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-53361 and 880-53361 and analytical batch 880-53529 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method 300_ORGFM_28D: Samples ran within hold. FS10 (890-4653-1), FS12 (890-4653-2), FS14 (890-4653-3), FS19 (890-4653-4), FS11 (890-4653-5), FS13 (890-4653-6), FS15 (890-4653-7), FS16 (890-4653-8), FS17 (890-4653-9), FS18 (890-4653-10), FS19 (890-4653-11), FS20 (890-4653-12), FS21 (890-4653-13), FS22 (890-4653-14), FS23 (890-4653-15) and FS24 (890-4653-16)

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 N 31 124H

Job ID: 890-4653-1
SDG: 03C1558214

Client Sample ID: FS10

Lab Sample ID: 890-4653-1
Matrix: Solid

Date Collected: 05/10/23 12:05
Date Received: 05/11/23 16:07
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		05/16/23 14:55	05/18/23 16:43	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/16/23 14:55	05/18/23 16:43	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/16/23 14:55	05/18/23 16:43	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/16/23 14:55	05/18/23 16:43	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/16/23 14:55	05/18/23 16:43	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/16/23 14:55	05/18/23 16:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*76*		*70 - 130*	*05/16/23 14:55*	*05/18/23 16:43*	*1*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*	*05/16/23 14:55*	*05/18/23 16:43*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			05/19/23 10:46	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			05/16/23 12:24	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		05/15/23 13:21	05/15/23 16:32	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/15/23 13:21	05/15/23 16:32	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/15/23 13:21	05/15/23 16:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*127*		*70 - 130*	*05/15/23 13:21*	*05/15/23 16:32*	*1*
o-Terphenyl	*141*	*S1+*	*70 - 130*	*05/15/23 13:21*	*05/15/23 16:32*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**266**	**H**	5.02		mg/Kg			05/16/23 20:29	1

Client Sample ID: FS12

Lab Sample ID: 890-4653-2
Matrix: Solid

Date Collected: 05/10/23 12:15
Date Received: 05/11/23 16:07
Sample Depth: 2'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		05/16/23 14:55	05/18/23 17:03	1
Toluene	<0.00201	U	0.00201		mg/Kg		05/16/23 14:55	05/18/23 17:03	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		05/16/23 14:55	05/18/23 17:03	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		05/16/23 14:55	05/18/23 17:03	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		05/16/23 14:55	05/18/23 17:03	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		05/16/23 14:55	05/18/23 17:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*78*		*70 - 130*	*05/16/23 14:55*	*05/18/23 17:03*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4653-1
SDG: 03C1558214

Client Sample ID: FS12

Lab Sample ID: 890-4653-2
Matrix: Solid
Date Collected: 05/10/23 12:15
Date Received: 05/11/23 16:07
Sample Depth: 2'

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*05/16/23 14:55*	*05/18/23 17:03*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			05/19/23 10:46	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			05/16/23 12:24	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/15/23 13:21	05/15/23 17:37	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/15/23 13:21	05/15/23 17:37	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/15/23 13:21	05/15/23 17:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*108*		*70 - 130*	*05/15/23 13:21*	*05/15/23 17:37*	*1*
o-Terphenyl	*131*	*S1+*	*70 - 130*	*05/15/23 13:21*	*05/15/23 17:37*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**445**	**H**	5.04	mg/Kg			05/16/23 20:45	1

Client Sample ID: FS14

Lab Sample ID: 890-4653-3
Matrix: Solid
Date Collected: 05/10/23 12:35
Date Received: 05/11/23 16:07
Sample Depth: 2'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/16/23 14:55	05/18/23 17:24	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/16/23 14:55	05/18/23 17:24	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/16/23 14:55	05/18/23 17:24	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/16/23 14:55	05/18/23 17:24	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/16/23 14:55	05/18/23 17:24	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/16/23 14:55	05/18/23 17:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*	*05/16/23 14:55*	*05/18/23 17:24*	*1*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*05/16/23 14:55*	*05/18/23 17:24*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			05/19/23 10:46	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			05/16/23 12:24	1

Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4653-1
SDG: 03C1558214

Client Sample ID: FS14

Lab Sample ID: 890-4653-3
Matrix: Solid
Date Collected: 05/10/23 12:35
Date Received: 05/11/23 16:07
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	<49.9	U	49.9		mg/Kg		05/15/23 13:21	05/15/23 17:59	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/15/23 13:21	05/15/23 17:59	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/15/23 13:21	05/15/23 17:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*128*		*70 - 130*	*05/15/23 13:21*	*05/15/23 17:59*	*1*
o-Terphenyl	*145*	*S1+*	*70 - 130*	*05/15/23 13:21*	*05/15/23 17:59*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**669**	**H**	5.01		mg/Kg			05/16/23 20:50	1

Client Sample ID: FS19

Lab Sample ID: 890-4653-4
Matrix: Solid
Date Collected: 05/10/23 14:00
Date Received: 05/11/23 16:07
Sample Depth: 2'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		05/16/23 14:55	05/18/23 17:44	1
Toluene	<0.00198	U	0.00198		mg/Kg		05/16/23 14:55	05/18/23 17:44	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		05/16/23 14:55	05/18/23 17:44	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		05/16/23 14:55	05/18/23 17:44	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		05/16/23 14:55	05/18/23 17:44	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		05/16/23 14:55	05/18/23 17:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*	*05/16/23 14:55*	*05/18/23 17:44*	*1*
1,4-Difluorobenzene (Surr)	*75*		*70 - 130*	*05/16/23 14:55*	*05/18/23 17:44*	*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			05/19/23 10:46	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			05/16/23 12:24	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/15/23 13:21	05/15/23 18:20	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/15/23 13:21	05/15/23 18:20	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/15/23 13:21	05/15/23 18:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*05/15/23 13:21*	*05/15/23 18:20*	*1*
o-Terphenyl	*129*		*70 - 130*	*05/15/23 13:21*	*05/15/23 18:20*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4653-1
SDG: 03C1558214

Client Sample ID: FS19

Lab Sample ID: 890-4653-4
Matrix: Solid
Date Collected: 05/10/23 14:00
Date Received: 05/11/23 16:07
Sample Depth: 2'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	365	H	5.00		mg/Kg			05/16/23 20:56	1

Client Sample ID: FS11

Lab Sample ID: 890-4653-5
Matrix: Solid
Date Collected: 05/11/23 10:05
Date Received: 05/11/23 16:07
Sample Depth: 3'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/16/23 14:55	05/18/23 18:05	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/16/23 14:55	05/18/23 18:05	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/16/23 14:55	05/18/23 18:05	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/16/23 14:55	05/18/23 18:05	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/16/23 14:55	05/18/23 18:05	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/16/23 14:55	05/18/23 18:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*	*05/16/23 14:55*	*05/18/23 18:05*	*1*
1,4-Difluorobenzene (Surr)	*79*		*70 - 130*	*05/16/23 14:55*	*05/18/23 18:05*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			05/19/23 10:46	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			05/16/23 12:24	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/15/23 13:21	05/15/23 18:41	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/15/23 13:21	05/15/23 18:41	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/15/23 13:21	05/15/23 18:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*105*		*70 - 130*	*05/15/23 13:21*	*05/15/23 18:41*	*1*
o-Terphenyl	*127*		*70 - 130*	*05/15/23 13:21*	*05/15/23 18:41*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	268	H	5.02		mg/Kg			05/16/23 21:01	1

Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4653-1
SDG: 03C1558214

Client Sample ID: FS13

Lab Sample ID: 890-4653-6
Matrix: Solid
Date Collected: 05/11/23 10:10
Date Received: 05/11/23 16:07
Sample Depth: 3'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		05/16/23 14:55	05/18/23 18:25	1
Toluene	<0.00201	U	0.00201		mg/Kg		05/16/23 14:55	05/18/23 18:25	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		05/16/23 14:55	05/18/23 18:25	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		05/16/23 14:55	05/18/23 18:25	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		05/16/23 14:55	05/18/23 18:25	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		05/16/23 14:55	05/18/23 18:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*	*05/16/23 14:55*	*05/18/23 18:25*	*1*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*05/16/23 14:55*	*05/18/23 18:25*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			05/19/23 10:46	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			05/16/23 12:24	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		05/15/23 13:21	05/15/23 19:03	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/15/23 13:21	05/15/23 19:03	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/15/23 13:21	05/15/23 19:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*05/15/23 13:21*	*05/15/23 19:03*	*1*
o-Terphenyl	*127*		*70 - 130*	*05/15/23 13:21*	*05/15/23 19:03*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**943**	**H**	4.97		mg/Kg			05/16/23 21:06	1

Client Sample ID: FS15

Lab Sample ID: 890-4653-7
Matrix: Solid
Date Collected: 05/11/23 10:15
Date Received: 05/11/23 16:07
Sample Depth: 3'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		05/16/23 14:55	05/18/23 18:46	1
Toluene	<0.00202	U	0.00202		mg/Kg		05/16/23 14:55	05/18/23 18:46	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		05/16/23 14:55	05/18/23 18:46	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		05/16/23 14:55	05/18/23 18:46	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		05/16/23 14:55	05/18/23 18:46	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		05/16/23 14:55	05/18/23 18:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*	*05/16/23 14:55*	*05/18/23 18:46*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4653-1
SDG: 03C1558214

Client Sample ID: FS15

Lab Sample ID: 890-4653-7
Matrix: Solid
Date Collected: 05/11/23 10:15
Date Received: 05/11/23 16:07
Sample Depth: 3'

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*78*		*70 - 130*	*05/16/23 14:55*	*05/18/23 18:46*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			05/19/23 10:46	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			05/16/23 12:24	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/15/23 13:21	05/15/23 19:24	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/15/23 13:21	05/15/23 19:24	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/15/23 13:21	05/15/23 19:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*105*		*70 - 130*	*05/15/23 13:21*	*05/15/23 19:24*	*1*
o-Terphenyl	*129*		*70 - 130*	*05/15/23 13:21*	*05/15/23 19:24*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**975**	**H F1**	4.99	mg/Kg			05/16/23 21:12	1

Client Sample ID: FS16

Lab Sample ID: 890-4653-8
Matrix: Solid
Date Collected: 05/11/23 10:20
Date Received: 05/11/23 16:07
Sample Depth: 3'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/16/23 14:55	05/18/23 19:06	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/16/23 14:55	05/18/23 19:06	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/16/23 14:55	05/18/23 19:06	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/16/23 14:55	05/18/23 19:06	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/16/23 14:55	05/18/23 19:06	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/16/23 14:55	05/18/23 19:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*05/16/23 14:55*	*05/18/23 19:06*	*1*
1,4-Difluorobenzene (Surr)	*76*		*70 - 130*	*05/16/23 14:55*	*05/18/23 19:06*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			05/19/23 10:46	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			05/16/23 12:24	1

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Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4653-1
SDG: 03C1558214

Client Sample ID: FS16

Lab Sample ID: 890-4653-8
Matrix: Solid
Date Collected: 05/11/23 10:20
Date Received: 05/11/23 16:07
Sample Depth: 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	<50.0	U	50.0		mg/Kg		05/15/23 13:21	05/15/23 19:46	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/15/23 13:21	05/15/23 19:46	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/15/23 13:21	05/15/23 19:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*107*		*70 - 130*	*05/15/23 13:21*	*05/15/23 19:46*	*1*
o-Terphenyl	*131*	*S1+*	*70 - 130*	*05/15/23 13:21*	*05/15/23 19:46*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1170**	**H**	5.04		mg/Kg			05/16/23 21:28	1

Client Sample ID: FS17

Lab Sample ID: 890-4653-9
Matrix: Solid
Date Collected: 05/11/23 10:30
Date Received: 05/11/23 16:07
Sample Depth: 3'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/16/23 14:55	05/18/23 19:27	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/16/23 14:55	05/18/23 19:27	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/16/23 14:55	05/18/23 19:27	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/16/23 14:55	05/18/23 19:27	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/16/23 14:55	05/18/23 19:27	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/16/23 14:55	05/18/23 19:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*	*05/16/23 14:55*	*05/18/23 19:27*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*05/16/23 14:55*	*05/18/23 19:27*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/19/23 10:46	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			05/16/23 12:24	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/15/23 13:21	05/15/23 20:08	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/15/23 13:21	05/15/23 20:08	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/15/23 13:21	05/15/23 20:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*05/15/23 13:21*	*05/15/23 20:08*	*1*
o-Terphenyl	*129*		*70 - 130*	*05/15/23 13:21*	*05/15/23 20:08*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4653-1
SDG: 03C1558214

Client Sample ID: FS17

Lab Sample ID: 890-4653-9
Matrix: Solid
Date Collected: 05/11/23 10:30
Date Received: 05/11/23 16:07
Sample Depth: 3'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	398	H	5.03		mg/Kg			05/16/23 21:33	1

Client Sample ID: FS18

Lab Sample ID: 890-4653-10
Matrix: Solid
Date Collected: 05/11/23 10:55
Date Received: 05/11/23 16:07
Sample Depth: 3'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		05/16/23 14:55	05/18/23 19:47	1
Toluene	<0.00198	U	0.00198		mg/Kg		05/16/23 14:55	05/18/23 19:47	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		05/16/23 14:55	05/18/23 19:47	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		05/16/23 14:55	05/18/23 19:47	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		05/16/23 14:55	05/18/23 19:47	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		05/16/23 14:55	05/18/23 19:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*05/16/23 14:55*	*05/18/23 19:47*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*05/16/23 14:55*	*05/18/23 19:47*	*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			05/19/23 10:46	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			05/16/23 12:24	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/15/23 13:21	05/15/23 20:29	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/15/23 13:21	05/15/23 20:29	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/15/23 13:21	05/15/23 20:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*05/15/23 13:21*	*05/15/23 20:29*	*1*
o-Terphenyl	*131*	*S1+*	*70 - 130*	*05/15/23 13:21*	*05/15/23 20:29*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	471	H	4.99		mg/Kg			05/16/23 21:49	1

Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4653-1
SDG: 03C1558214

Client Sample ID: FS19

Lab Sample ID: 890-4653-11
Matrix: Solid
Date Collected: 05/11/23 12:35
Date Received: 05/11/23 16:07
Sample Depth: 3'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/16/23 14:55	05/18/23 21:10	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/16/23 14:55	05/18/23 21:10	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/16/23 14:55	05/18/23 21:10	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/16/23 14:55	05/18/23 21:10	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/16/23 14:55	05/18/23 21:10	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/16/23 14:55	05/18/23 21:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*05/16/23 14:55*	*05/18/23 21:10*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*05/16/23 14:55*	*05/18/23 21:10*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			05/19/23 10:46	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			05/16/23 12:24	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		05/15/23 13:21	05/15/23 21:13	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/15/23 13:21	05/15/23 21:13	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/15/23 13:21	05/15/23 21:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*121*		*70 - 130*	*05/15/23 13:21*	*05/15/23 21:13*	*1*
o-Terphenyl	*139*	*S1+*	*70 - 130*	*05/15/23 13:21*	*05/15/23 21:13*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**432**	**H**	5.02		mg/Kg			05/16/23 21:54	1

Client Sample ID: FS20

Lab Sample ID: 890-4653-12
Matrix: Solid
Date Collected: 05/11/23 12:40
Date Received: 05/11/23 16:07
Sample Depth: 3'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		05/16/23 14:55	05/18/23 21:30	1
Toluene	<0.00201	U	0.00201		mg/Kg		05/16/23 14:55	05/18/23 21:30	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		05/16/23 14:55	05/18/23 21:30	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		05/16/23 14:55	05/18/23 21:30	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		05/16/23 14:55	05/18/23 21:30	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		05/16/23 14:55	05/18/23 21:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*	*05/16/23 14:55*	*05/18/23 21:30*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4653-1
SDG: 03C1558214

Client Sample ID: FS20

Lab Sample ID: 890-4653-12
Matrix: Solid
Date Collected: 05/11/23 12:40
Date Received: 05/11/23 16:07
Sample Depth: 3'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*75*		*70 - 130*	*05/16/23 14:55*	*05/18/23 21:30*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			05/19/23 10:46	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			05/16/23 12:24	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/15/23 13:21	05/15/23 21:34	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/15/23 13:21	05/15/23 21:34	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/15/23 13:21	05/15/23 21:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*109*		*70 - 130*	*05/15/23 13:21*	*05/15/23 21:34*	*1*
o-Terphenyl	*134*	*S1+*	*70 - 130*	*05/15/23 13:21*	*05/15/23 21:34*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**104**	**H**	5.03	mg/Kg			05/16/23 22:00	1

Client Sample ID: FS21

Lab Sample ID: 890-4653-13
Matrix: Solid
Date Collected: 05/11/23 12:45
Date Received: 05/11/23 16:07
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		05/16/23 14:55	05/18/23 21:51	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/16/23 14:55	05/18/23 21:51	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/16/23 14:55	05/18/23 21:51	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		05/16/23 14:55	05/18/23 21:51	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/16/23 14:55	05/18/23 21:51	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		05/16/23 14:55	05/18/23 21:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*79*		*70 - 130*	*05/16/23 14:55*	*05/18/23 21:51*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*05/16/23 14:55*	*05/18/23 21:51*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			05/19/23 10:46	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			05/16/23 12:24	1

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Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4653-1
SDG: 03C1558214

Client Sample ID: FS21

Lab Sample ID: 890-4653-13
Matrix: Solid
Date Collected: 05/11/23 12:45
Date Received: 05/11/23 16:07
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	<49.9	U	49.9		mg/Kg		05/15/23 13:21	05/15/23 21:55	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/15/23 13:21	05/15/23 21:55	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/15/23 13:21	05/15/23 21:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*125*		*70 - 130*	*05/15/23 13:21*	*05/15/23 21:55*	*1*
o-Terphenyl	*145*	*S1+*	*70 - 130*	*05/15/23 13:21*	*05/15/23 21:55*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**789**	**H**	5.01		mg/Kg			05/16/23 22:05	1

Client Sample ID: FS22

Lab Sample ID: 890-4653-14
Matrix: Solid
Date Collected: 05/11/23 12:50
Date Received: 05/11/23 16:07
Sample Depth: 2'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		05/16/23 14:55	05/18/23 22:11	1
Toluene	<0.00198	U	0.00198		mg/Kg		05/16/23 14:55	05/18/23 22:11	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		05/16/23 14:55	05/18/23 22:11	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		05/16/23 14:55	05/18/23 22:11	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		05/16/23 14:55	05/18/23 22:11	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		05/16/23 14:55	05/18/23 22:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*05/16/23 14:55*	*05/18/23 22:11*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*05/16/23 14:55*	*05/18/23 22:11*	*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			05/19/23 10:46	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			05/16/23 12:24	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/15/23 13:21	05/15/23 22:17	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/15/23 13:21	05/15/23 22:17	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/15/23 13:21	05/15/23 22:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*05/15/23 13:21*	*05/15/23 22:17*	*1*
o-Terphenyl	*126*		*70 - 130*	*05/15/23 13:21*	*05/15/23 22:17*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4653-1
SDG: 03C1558214

Client Sample ID: FS22

Lab Sample ID: 890-4653-14
Matrix: Solid
Date Collected: 05/11/23 12:50
Date Received: 05/11/23 16:07
Sample Depth: 2'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1650	H	24.9		mg/Kg			05/16/23 22:11	5

Client Sample ID: FS23

Lab Sample ID: 890-4653-15
Matrix: Solid
Date Collected: 05/11/23 12:55
Date Received: 05/11/23 16:07
Sample Depth: 3'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *+	0.00199		mg/Kg		05/16/23 15:29	05/18/23 11:04	1
Toluene	<0.00199	U *+	0.00199		mg/Kg		05/16/23 15:29	05/18/23 11:04	1
Ethylbenzene	<0.00199	U *+	0.00199		mg/Kg		05/16/23 15:29	05/18/23 11:04	1
m-Xylene & p-Xylene	<0.00398	U *+	0.00398		mg/Kg		05/16/23 15:29	05/18/23 11:04	1
o-Xylene	<0.00199	U *+	0.00199		mg/Kg		05/16/23 15:29	05/18/23 11:04	1
Xylenes, Total	<0.00398	U *+	0.00398		mg/Kg		05/16/23 15:29	05/18/23 11:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*216*	*S1+*	*70 - 130*	*05/16/23 15:29*	*05/18/23 11:04*	*1*
1,4-Difluorobenzene (Surr)	*74*		*70 - 130*	*05/16/23 15:29*	*05/18/23 11:04*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/18/23 15:49	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			05/16/23 12:24	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/15/23 13:21	05/15/23 22:39	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/15/23 13:21	05/15/23 22:39	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/15/23 13:21	05/15/23 22:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*103*		*70 - 130*	*05/15/23 13:21*	*05/15/23 22:39*	*1*
o-Terphenyl	*130*		*70 - 130*	*05/15/23 13:21*	*05/15/23 22:39*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	307	H	4.97		mg/Kg			05/16/23 22:16	1

Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4653-1
SDG: 03C1558214

Client Sample ID: FS24

Date Collected: 05/11/23 13:15
Date Received: 05/11/23 16:07
Sample Depth: 3'

Lab Sample ID: 890-4653-16

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *+	0.00199		mg/Kg		05/16/23 15:29	05/18/23 11:30	1
Toluene	<0.00199	U *+	0.00199		mg/Kg		05/16/23 15:29	05/18/23 11:30	1
Ethylbenzene	<0.00199	U *+	0.00199		mg/Kg		05/16/23 15:29	05/18/23 11:30	1
m-Xylene & p-Xylene	<0.00398	U *+	0.00398		mg/Kg		05/16/23 15:29	05/18/23 11:30	1
o-Xylene	<0.00199	U *+	0.00199		mg/Kg		05/16/23 15:29	05/18/23 11:30	1
Xylenes, Total	<0.00398	U *+	0.00398		mg/Kg		05/16/23 15:29	05/18/23 11:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*235*	*S1+*	*70 - 130*	*05/16/23 15:29*	*05/18/23 11:30*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*05/16/23 15:29*	*05/18/23 11:30*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/18/23 15:49	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			05/16/23 12:24	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/15/23 13:21	05/15/23 23:00	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/15/23 13:21	05/15/23 23:00	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/15/23 13:21	05/15/23 23:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*120*		*70 - 130*	*05/15/23 13:21*	*05/15/23 23:00*	*1*
o-Terphenyl	*137*	*S1+*	*70 - 130*	*05/15/23 13:21*	*05/15/23 23:00*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**315**	**H**	4.99		mg/Kg			05/16/23 22:21	1

Surrogate Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4653-1
SDG: 03C1558214

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)										
890-4653-1	FS10	76	81										
890-4653-1 MS	FS10	81	115										
890-4653-1 MSD	FS10	115	103										
890-4653-2	FS12	78	92										
890-4653-3	FS14	86	83										
890-4653-4	FS19	86	75										
890-4653-5	FS11	87	79										
890-4653-6	FS13	84	83										
890-4653-7	FS15	86	78										
890-4653-8	FS16	89	76										
890-4653-9	FS17	88	91										
890-4653-10	FS18	113	103										
890-4653-11	FS19	109	104										
890-4653-12	FS20	86	75										
890-4653-13	FS21	79	96										
890-4653-14	FS22	97	88										
890-4653-15	FS23	216 S1+	74										
890-4653-16	FS24	235 S1+	91										
890-4660-A-1-G MS	Matrix Spike	203 S1+	103										
890-4660-A-1-H MSD	Matrix Spike Duplicate	173 S1+	91										
LCS 880-53494/1-A	Lab Control Sample	94	97										
LCS 880-53497/1-A	Lab Control Sample	196 S1+	93										
LCSD 880-53494/2-A	Lab Control Sample Dup	112	106										
LCSD 880-53497/2-A	Lab Control Sample Dup	198 S1+	88										
MB 880-53494/5-A	Method Blank	68 S1-	85										
MB 880-53497/5-A	Method Blank	106	76										
MB 880-53508/5-A	Method Blank	102	80										

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)											
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)										
890-4653-1	FS10	127	141 S1+										
890-4653-1 MS	FS10	102	115										
890-4653-1 MSD	FS10	102	113										
890-4653-2	FS12	108	131 S1+										
890-4653-3	FS14	128	145 S1+										
890-4653-4	FS19	106	129										
890-4653-5	FS11	105	127										
890-4653-6	FS13	104	127										
890-4653-7	FS15	105	129										
890-4653-8	FS16	107	131 S1+										
890-4653-9	FS17	104	129										
890-4653-10	FS18	106	131 S1+										

Surrogate Summary

Client: Ensolum Job ID: 890-4653-1
Project/Site: Remuda N 31 124H SDG: 03C1558214

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

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

		Percent Surrogate Recovery (Acceptance Limits)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
890-4653-11	FS19	121	139 S1+										
890-4653-12	FS20	109	134 S1+										
890-4653-13	FS21	125	145 S1+										
890-4653-14	FS22	102	126										
890-4653-15	FS23	103	130										
890-4653-16	FS24	120	137 S1+										
LCS 880-53388/2-A	Lab Control Sample	105	127										
LCSD 880-53388/3-A	Lab Control Sample Dup	99	131 S1+										
MB 880-53388/1-A	Method Blank	145 S1+	188 S1+										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4653-1
SDG: 03C1558214

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-53494/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 53673 — **Prep Batch: 53494**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/16/23 14:55	05/18/23 16:09	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/16/23 14:55	05/18/23 16:09	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/16/23 14:55	05/18/23 16:09	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/16/23 14:55	05/18/23 16:09	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/16/23 14:55	05/18/23 16:09	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/16/23 14:55	05/18/23 16:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*68*	*S1-*	*70 - 130*	*05/16/23 14:55*	*05/18/23 16:09*	*1*
1,4-Difluorobenzene (Surr)	*85*		*70 - 130*	*05/16/23 14:55*	*05/18/23 16:09*	*1*

Lab Sample ID: LCS 880-53494/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 53673 — **Prep Batch: 53494**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09702		mg/Kg		97	70 - 130		
Toluene			0.100	0.09851		mg/Kg		99	70 - 130		
Ethylbenzene			0.100	0.1096		mg/Kg		110	70 - 130		
m-Xylene & p-Xylene			0.200	0.2014		mg/Kg		101	70 - 130		
o-Xylene			0.100	0.09829		mg/Kg		98	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: LCSD 880-53494/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 53673 — **Prep Batch: 53494**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1145		mg/Kg		115	70 - 130	17	35
Toluene			0.100	0.1080		mg/Kg		108	70 - 130	9	35
Ethylbenzene			0.100	0.1088		mg/Kg		109	70 - 130	1	35
m-Xylene & p-Xylene			0.200	0.2305		mg/Kg		115	70 - 130	14	35
o-Xylene			0.100	0.1148		mg/Kg		115	70 - 130	16	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: 890-4653-1 MS — **Client Sample ID: FS10**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 53673 — **Prep Batch: 53494**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U	0.0998	0.1202		mg/Kg		120	70 - 130		
Toluene	<0.00200	U	0.0998	0.09234		mg/Kg		92	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4653-1
SDG: 03C1558214

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

Lab Sample ID: 890-4653-1 MS — **Client Sample ID: FS10**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 53673 — **Prep Batch: 53494**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.0998	0.08222		mg/Kg		82	70 - 130
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1593		mg/Kg		80	70 - 130
o-Xylene	<0.00200	U	0.0998	0.07902		mg/Kg		79	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*81*		*70 - 130*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*

Lab Sample ID: 890-4653-1 MSD — **Client Sample ID: FS10**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 53673 — **Prep Batch: 53494**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0990	0.1140		mg/Kg		115	70 - 130	5	35
Toluene	<0.00200	U	0.0990	0.1041		mg/Kg		105	70 - 130	12	35
Ethylbenzene	<0.00200	U	0.0990	0.1078		mg/Kg		109	70 - 130	27	35
m-Xylene & p-Xylene	<0.00399	U	0.198	0.2248		mg/Kg		114	70 - 130	34	35
o-Xylene	<0.00200	U	0.0990	0.1128		mg/Kg		114	70 - 130	35	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: MB 880-53497/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 53588 — **Prep Batch: 53497**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/16/23 15:29	05/18/23 04:11	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/16/23 15:29	05/18/23 04:11	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/16/23 15:29	05/18/23 04:11	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/16/23 15:29	05/18/23 04:11	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/16/23 15:29	05/18/23 04:11	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/16/23 15:29	05/18/23 04:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*05/16/23 15:29*	*05/18/23 04:11*	*1*
1,4-Difluorobenzene (Surr)	*76*		*70 - 130*	*05/16/23 15:29*	*05/18/23 04:11*	*1*

Lab Sample ID: LCS 880-53497/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 53588 — **Prep Batch: 53497**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1501	*+	mg/Kg		150	70 - 130
Toluene	0.100	0.1589	*+	mg/Kg		159	70 - 130
Ethylbenzene	0.100	0.1429	*+	mg/Kg		143	70 - 130
m-Xylene & p-Xylene	0.200	0.3204	*+	mg/Kg		160	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4653-1
SDG: 03C1558214

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

Lab Sample ID: LCS 880-53497/1-A
Matrix: Solid
Analysis Batch: 53588

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53497

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
o-Xylene			0.100	0.1494	*+	mg/Kg		149	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*196*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

Lab Sample ID: LCSD 880-53497/2-A
Matrix: Solid
Analysis Batch: 53588

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53497

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1376	*+	mg/Kg		138	70 - 130	9	35
Toluene			0.100	0.1387	*+	mg/Kg		139	70 - 130	14	35
Ethylbenzene			0.100	0.1324	*+	mg/Kg		132	70 - 130	8	35
m-Xylene & p-Xylene			0.200	0.2988	*+	mg/Kg		149	70 - 130	7	35
o-Xylene			0.100	0.1354	*+	mg/Kg		135	70 - 130	10	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*198*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*

Lab Sample ID: 890-4660-A-1-G MS
Matrix: Solid
Analysis Batch: 53588

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 53497

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U *+ F1	0.0998	0.1372	F1	mg/Kg		137	70 - 130		
Toluene	<0.00202	U *+ F1	0.0998	0.1371	F1	mg/Kg		137	70 - 130		
Ethylbenzene	<0.00202	U *+	0.0998	0.1191		mg/Kg		119	70 - 130		
m-Xylene & p-Xylene	<0.00404	U *+ F1	0.200	0.2887	F1	mg/Kg		145	70 - 130		
o-Xylene	<0.00202	U *+ F1	0.0998	0.1356	F1	mg/Kg		136	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*203*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: 890-4660-A-1-H MSD
Matrix: Solid
Analysis Batch: 53588

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 53497

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U *+ F1	0.0990	0.1284		mg/Kg		130	70 - 130	7	35
Toluene	<0.00202	U *+ F1	0.0990	0.1357	F1	mg/Kg		137	70 - 130	1	35
Ethylbenzene	<0.00202	U *+	0.0990	0.1188		mg/Kg		120	70 - 130	0	35
m-Xylene & p-Xylene	<0.00404	U *+ F1	0.198	0.2600	F1	mg/Kg		131	70 - 130	10	35
o-Xylene	<0.00202	U *+ F1	0.0990	0.1225		mg/Kg		124	70 - 130	10	35

QC Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4653-1
SDG: 03C1558214

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

Lab Sample ID: 890-4660-A-1-H MSD
Matrix: Solid
Analysis Batch: 53588

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 53497

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*173*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*

Lab Sample ID: MB 880-53508/5-A
Matrix: Solid
Analysis Batch: 53588

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53508

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/16/23 16:07	05/17/23 14:52	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/16/23 16:07	05/17/23 14:52	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/16/23 16:07	05/17/23 14:52	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/16/23 16:07	05/17/23 14:52	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/16/23 16:07	05/17/23 14:52	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/16/23 16:07	05/17/23 14:52	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*05/16/23 16:07*	*05/17/23 14:52*	*1*
1,4-Difluorobenzene (Surr)	*80*		*70 - 130*	*05/16/23 16:07*	*05/17/23 14:52*	*1*

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

Lab Sample ID: MB 880-53388/1-A
Matrix: Solid
Analysis Batch: 53326

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53388

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/15/23 13:21	05/15/23 14:57	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/15/23 13:21	05/15/23 14:57	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/15/23 13:21	05/15/23 14:57	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*145*	*S1+*	*70 - 130*	*05/15/23 13:21*	*05/15/23 14:57*	*1*
o-Terphenyl	*188*	*S1+*	*70 - 130*	*05/15/23 13:21*	*05/15/23 14:57*	*1*

Lab Sample ID: LCS 880-53388/2-A
Matrix: Solid
Analysis Batch: 53326

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53388

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	936.7		mg/Kg		94	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1036		mg/Kg		104	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	*105*		*70 - 130*
o-Terphenyl	*127*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4653-1
SDG: 03C1558214

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

Lab Sample ID: LCSD 880-53388/3-A
Matrix: Solid
Analysis Batch: 53326

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53388

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	840.6		mg/Kg		84	70 - 130	11	20
Diesel Range Organics (Over C10-C28)			1000	895.9		mg/Kg		90	70 - 130	15	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*99*		*70 - 130*
o-Terphenyl	*131*	*S1+*	*70 - 130*

Lab Sample ID: 890-4653-1 MS
Matrix: Solid
Analysis Batch: 53326

Client Sample ID: FS10
Prep Type: Total/NA
Prep Batch: 53388

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	999	1171		mg/Kg		117	70 - 130
Diesel Range Organics (Over C10-C28)	<49.8	U	999	932.9		mg/Kg		93	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*102*		*70 - 130*
o-Terphenyl	*115*		*70 - 130*

Lab Sample ID: 890-4653-1 MSD
Matrix: Solid
Analysis Batch: 53326

Client Sample ID: FS10
Prep Type: Total/NA
Prep Batch: 53388

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	<49.8	U	997	1174		mg/Kg		118	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	<49.8	U	997	929.3		mg/Kg		93	70 - 130	0	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*102*		*70 - 130*
o-Terphenyl	*113*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-53361/1-A
Matrix: Solid
Analysis Batch: 53529

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/16/23 19:40	1

QC Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4653-1
SDG: 03C1558214

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-53361/2-A
Matrix: Solid
Analysis Batch: 53529

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	242.6		mg/Kg		97	90 - 110		

Lab Sample ID: LCSD 880-53361/3-A
Matrix: Solid
Analysis Batch: 53529

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	242.9		mg/Kg		97	90 - 110	0	20

Lab Sample ID: 890-4653-7 MS
Matrix: Solid
Analysis Batch: 53529

Client Sample ID: FS15
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	975	H F1	250	1138	F1	mg/Kg		65	90 - 110		

Lab Sample ID: 890-4653-7 MSD
Matrix: Solid
Analysis Batch: 53529

Client Sample ID: FS15
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	975	H F1	250	1137	F1	mg/Kg		65	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4653-1
SDG: 03C1558214

GC VOA

Prep Batch: 53494

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4653-1	FS10	Total/NA	Solid	5035	
890-4653-2	FS12	Total/NA	Solid	5035	
890-4653-3	FS14	Total/NA	Solid	5035	
890-4653-4	FS19	Total/NA	Solid	5035	
890-4653-5	FS11	Total/NA	Solid	5035	
890-4653-6	FS13	Total/NA	Solid	5035	
890-4653-7	FS15	Total/NA	Solid	5035	
890-4653-8	FS16	Total/NA	Solid	5035	
890-4653-9	FS17	Total/NA	Solid	5035	
890-4653-10	FS18	Total/NA	Solid	5035	
890-4653-11	FS19	Total/NA	Solid	5035	
890-4653-12	FS20	Total/NA	Solid	5035	
890-4653-13	FS21	Total/NA	Solid	5035	
890-4653-14	FS22	Total/NA	Solid	5035	
MB 880-53494/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-53494/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-53494/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4653-1 MS	FS10	Total/NA	Solid	5035	
890-4653-1 MSD	FS10	Total/NA	Solid	5035	

Prep Batch: 53497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4653-15	FS23	Total/NA	Solid	5035	
890-4653-16	FS24	Total/NA	Solid	5035	
MB 880-53497/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-53497/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-53497/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4660-A-1-G MS	Matrix Spike	Total/NA	Solid	5035	
890-4660-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 53508

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-53508/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 53588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4653-15	FS23	Total/NA	Solid	8021B	53497
890-4653-16	FS24	Total/NA	Solid	8021B	53497
MB 880-53497/5-A	Method Blank	Total/NA	Solid	8021B	53497
MB 880-53508/5-A	Method Blank	Total/NA	Solid	8021B	53508
LCS 880-53497/1-A	Lab Control Sample	Total/NA	Solid	8021B	53497
LCSD 880-53497/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	53497
890-4660-A-1-G MS	Matrix Spike	Total/NA	Solid	8021B	53497
890-4660-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	53497

Analysis Batch: 53673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4653-1	FS10	Total/NA	Solid	8021B	53494
890-4653-2	FS12	Total/NA	Solid	8021B	53494
890-4653-3	FS14	Total/NA	Solid	8021B	53494
890-4653-4	FS19	Total/NA	Solid	8021B	53494

QC Association Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4653-1
SDG: 03C1558214

GC VOA (Continued)

Analysis Batch: 53673 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4653-5	FS11	Total/NA	Solid	8021B	53494
890-4653-6	FS13	Total/NA	Solid	8021B	53494
890-4653-7	FS15	Total/NA	Solid	8021B	53494
890-4653-8	FS16	Total/NA	Solid	8021B	53494
890-4653-9	FS17	Total/NA	Solid	8021B	53494
890-4653-10	FS18	Total/NA	Solid	8021B	53494
890-4653-11	FS19	Total/NA	Solid	8021B	53494
890-4653-12	FS20	Total/NA	Solid	8021B	53494
890-4653-13	FS21	Total/NA	Solid	8021B	53494
890-4653-14	FS22	Total/NA	Solid	8021B	53494
MB 880-53494/5-A	Method Blank	Total/NA	Solid	8021B	53494
LCS 880-53494/1-A	Lab Control Sample	Total/NA	Solid	8021B	53494
LCSD 880-53494/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	53494
890-4653-1 MS	FS10	Total/NA	Solid	8021B	53494
890-4653-1 MSD	FS10	Total/NA	Solid	8021B	53494

Analysis Batch: 53696

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4653-1	FS10	Total/NA	Solid	Total BTEX	
890-4653-2	FS12	Total/NA	Solid	Total BTEX	
890-4653-3	FS14	Total/NA	Solid	Total BTEX	
890-4653-4	FS19	Total/NA	Solid	Total BTEX	
890-4653-5	FS11	Total/NA	Solid	Total BTEX	
890-4653-6	FS13	Total/NA	Solid	Total BTEX	
890-4653-7	FS15	Total/NA	Solid	Total BTEX	
890-4653-8	FS16	Total/NA	Solid	Total BTEX	
890-4653-9	FS17	Total/NA	Solid	Total BTEX	
890-4653-10	FS18	Total/NA	Solid	Total BTEX	
890-4653-11	FS19	Total/NA	Solid	Total BTEX	
890-4653-12	FS20	Total/NA	Solid	Total BTEX	
890-4653-13	FS21	Total/NA	Solid	Total BTEX	
890-4653-14	FS22	Total/NA	Solid	Total BTEX	
890-4653-15	FS23	Total/NA	Solid	Total BTEX	
890-4653-16	FS24	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 53326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4653-1	FS10	Total/NA	Solid	8015B NM	53388
890-4653-2	FS12	Total/NA	Solid	8015B NM	53388
890-4653-3	FS14	Total/NA	Solid	8015B NM	53388
890-4653-4	FS19	Total/NA	Solid	8015B NM	53388
890-4653-5	FS11	Total/NA	Solid	8015B NM	53388
890-4653-6	FS13	Total/NA	Solid	8015B NM	53388
890-4653-7	FS15	Total/NA	Solid	8015B NM	53388
890-4653-8	FS16	Total/NA	Solid	8015B NM	53388
890-4653-9	FS17	Total/NA	Solid	8015B NM	53388
890-4653-10	FS18	Total/NA	Solid	8015B NM	53388
890-4653-11	FS19	Total/NA	Solid	8015B NM	53388
890-4653-12	FS20	Total/NA	Solid	8015B NM	53388

QC Association Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4653-1
SDG: 03C1558214

GC Semi VOA (Continued)

Analysis Batch: 53326 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4653-13	FS21	Total/NA	Solid	8015B NM	53388
890-4653-14	FS22	Total/NA	Solid	8015B NM	53388
890-4653-15	FS23	Total/NA	Solid	8015B NM	53388
890-4653-16	FS24	Total/NA	Solid	8015B NM	53388
MB 880-53388/1-A	Method Blank	Total/NA	Solid	8015B NM	53388
LCS 880-53388/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	53388
LCSD 880-53388/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	53388
890-4653-1 MS	FS10	Total/NA	Solid	8015B NM	53388
890-4653-1 MSD	FS10	Total/NA	Solid	8015B NM	53388

Prep Batch: 53388

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4653-1	FS10	Total/NA	Solid	8015NM Prep	
890-4653-2	FS12	Total/NA	Solid	8015NM Prep	
890-4653-3	FS14	Total/NA	Solid	8015NM Prep	
890-4653-4	FS19	Total/NA	Solid	8015NM Prep	
890-4653-5	FS11	Total/NA	Solid	8015NM Prep	
890-4653-6	FS13	Total/NA	Solid	8015NM Prep	
890-4653-7	FS15	Total/NA	Solid	8015NM Prep	
890-4653-8	FS16	Total/NA	Solid	8015NM Prep	
890-4653-9	FS17	Total/NA	Solid	8015NM Prep	
890-4653-10	FS18	Total/NA	Solid	8015NM Prep	
890-4653-11	FS19	Total/NA	Solid	8015NM Prep	
890-4653-12	FS20	Total/NA	Solid	8015NM Prep	
890-4653-13	FS21	Total/NA	Solid	8015NM Prep	
890-4653-14	FS22	Total/NA	Solid	8015NM Prep	
890-4653-15	FS23	Total/NA	Solid	8015NM Prep	
890-4653-16	FS24	Total/NA	Solid	8015NM Prep	
MB 880-53388/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-53388/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-53388/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4653-1 MS	FS10	Total/NA	Solid	8015NM Prep	
890-4653-1 MSD	FS10	Total/NA	Solid	8015NM Prep	

Analysis Batch: 53481

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4653-1	FS10	Total/NA	Solid	8015 NM	
890-4653-2	FS12	Total/NA	Solid	8015 NM	
890-4653-3	FS14	Total/NA	Solid	8015 NM	
890-4653-4	FS19	Total/NA	Solid	8015 NM	
890-4653-5	FS11	Total/NA	Solid	8015 NM	
890-4653-6	FS13	Total/NA	Solid	8015 NM	
890-4653-7	FS15	Total/NA	Solid	8015 NM	
890-4653-8	FS16	Total/NA	Solid	8015 NM	
890-4653-9	FS17	Total/NA	Solid	8015 NM	
890-4653-10	FS18	Total/NA	Solid	8015 NM	
890-4653-11	FS19	Total/NA	Solid	8015 NM	
890-4653-12	FS20	Total/NA	Solid	8015 NM	
890-4653-13	FS21	Total/NA	Solid	8015 NM	
890-4653-14	FS22	Total/NA	Solid	8015 NM	
890-4653-15	FS23	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4653-1
SDG: 03C1558214

GC Semi VOA (Continued)

Analysis Batch: 53481 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4653-16	FS24	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 53361

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4653-1	FS10	Soluble	Solid	DI Leach	
890-4653-2	FS12	Soluble	Solid	DI Leach	
890-4653-3	FS14	Soluble	Solid	DI Leach	
890-4653-4	FS19	Soluble	Solid	DI Leach	
890-4653-5	FS11	Soluble	Solid	DI Leach	
890-4653-6	FS13	Soluble	Solid	DI Leach	
890-4653-7	FS15	Soluble	Solid	DI Leach	
890-4653-8	FS16	Soluble	Solid	DI Leach	
890-4653-9	FS17	Soluble	Solid	DI Leach	
890-4653-10	FS18	Soluble	Solid	DI Leach	
890-4653-11	FS19	Soluble	Solid	DI Leach	
890-4653-12	FS20	Soluble	Solid	DI Leach	
890-4653-13	FS21	Soluble	Solid	DI Leach	
890-4653-14	FS22	Soluble	Solid	DI Leach	
890-4653-15	FS23	Soluble	Solid	DI Leach	
890-4653-16	FS24	Soluble	Solid	DI Leach	
MB 880-53361/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-53361/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-53361/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4653-7 MS	FS15	Soluble	Solid	DI Leach	
890-4653-7 MSD	FS15	Soluble	Solid	DI Leach	

Analysis Batch: 53529

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4653-1	FS10	Soluble	Solid	300.0	53361
890-4653-2	FS12	Soluble	Solid	300.0	53361
890-4653-3	FS14	Soluble	Solid	300.0	53361
890-4653-4	FS19	Soluble	Solid	300.0	53361
890-4653-5	FS11	Soluble	Solid	300.0	53361
890-4653-6	FS13	Soluble	Solid	300.0	53361
890-4653-7	FS15	Soluble	Solid	300.0	53361
890-4653-8	FS16	Soluble	Solid	300.0	53361
890-4653-9	FS17	Soluble	Solid	300.0	53361
890-4653-10	FS18	Soluble	Solid	300.0	53361
890-4653-11	FS19	Soluble	Solid	300.0	53361
890-4653-12	FS20	Soluble	Solid	300.0	53361
890-4653-13	FS21	Soluble	Solid	300.0	53361
890-4653-14	FS22	Soluble	Solid	300.0	53361
890-4653-15	FS23	Soluble	Solid	300.0	53361
890-4653-16	FS24	Soluble	Solid	300.0	53361
MB 880-53361/1-A	Method Blank	Soluble	Solid	300.0	53361
LCS 880-53361/2-A	Lab Control Sample	Soluble	Solid	300.0	53361
LCSD 880-53361/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	53361
890-4653-7 MS	FS15	Soluble	Solid	300.0	53361
890-4653-7 MSD	FS15	Soluble	Solid	300.0	53361

Lab Chronicle

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4653-1
SDG: 03C1558214

Client Sample ID: FS10

Lab Sample ID: 890-4653-1
Matrix: Solid
Date Collected: 05/10/23 12:05
Date Received: 05/11/23 16:07

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	53494	05/16/23 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53673	05/18/23 16:43	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53696	05/19/23 10:46	SM	EET MID
Total/NA	Analysis	8015 NM		1			53481	05/16/23 12:24	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	53388	05/15/23 13:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53326	05/15/23 16:32	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	53361	05/15/23 11:42	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53529	05/16/23 20:29	CH	EET MID

Client Sample ID: FS12

Lab Sample ID: 890-4653-2
Matrix: Solid
Date Collected: 05/10/23 12:15
Date Received: 05/11/23 16:07

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	53494	05/16/23 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53673	05/18/23 17:03	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53696	05/19/23 10:46	SM	EET MID
Total/NA	Analysis	8015 NM		1			53481	05/16/23 12:24	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	53388	05/15/23 13:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53326	05/15/23 17:37	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	53361	05/15/23 11:42	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53529	05/16/23 20:45	CH	EET MID

Client Sample ID: FS14

Lab Sample ID: 890-4653-3
Matrix: Solid
Date Collected: 05/10/23 12:35
Date Received: 05/11/23 16:07

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	53494	05/16/23 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53673	05/18/23 17:24	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53696	05/19/23 10:46	SM	EET MID
Total/NA	Analysis	8015 NM		1			53481	05/16/23 12:24	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	53388	05/15/23 13:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53326	05/15/23 17:59	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	53361	05/15/23 11:42	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53529	05/16/23 20:50	CH	EET MID

Client Sample ID: FS19

Lab Sample ID: 890-4653-4
Matrix: Solid
Date Collected: 05/10/23 14:00
Date Received: 05/11/23 16:07

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	53494	05/16/23 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53673	05/18/23 17:44	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53696	05/19/23 10:46	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4653-1
SDG: 03C1558214

Client Sample ID: FS19

Lab Sample ID: 890-4653-4
Matrix: Solid
Date Collected: 05/10/23 14:00
Date Received: 05/11/23 16:07

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			53481	05/16/23 12:24	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	53388	05/15/23 13:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53326	05/15/23 18:20	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	53361	05/15/23 11:42	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53529	05/16/23 20:56	CH	EET MID

Client Sample ID: FS11

Lab Sample ID: 890-4653-5
Matrix: Solid
Date Collected: 05/11/23 10:05
Date Received: 05/11/23 16:07

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	53494	05/16/23 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53673	05/18/23 18:05	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53696	05/19/23 10:46	SM	EET MID
Total/NA	Analysis	8015 NM		1			53481	05/16/23 12:24	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	53388	05/15/23 13:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53326	05/15/23 18:41	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	53361	05/15/23 11:42	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53529	05/16/23 21:01	CH	EET MID

Client Sample ID: FS13

Lab Sample ID: 890-4653-6
Matrix: Solid
Date Collected: 05/11/23 10:10
Date Received: 05/11/23 16:07

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	53494	05/16/23 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53673	05/18/23 18:25	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53696	05/19/23 10:46	SM	EET MID
Total/NA	Analysis	8015 NM		1			53481	05/16/23 12:24	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	53388	05/15/23 13:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53326	05/15/23 19:03	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	53361	05/15/23 11:42	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53529	05/16/23 21:06	CH	EET MID

Client Sample ID: FS15

Lab Sample ID: 890-4653-7
Matrix: Solid
Date Collected: 05/11/23 10:15
Date Received: 05/11/23 16:07

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	53494	05/16/23 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53673	05/18/23 18:46	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53696	05/19/23 10:46	SM	EET MID
Total/NA	Analysis	8015 NM		1			53481	05/16/23 12:24	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	53388	05/15/23 13:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53326	05/15/23 19:24	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4653-1
SDG: 03C1558214

Client Sample ID: FS15
Date Collected: 05/11/23 10:15
Date Received: 05/11/23 16:07

Lab Sample ID: 890-4653-7
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	53361	05/15/23 11:42	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53529	05/16/23 21:12	CH	EET MID

Client Sample ID: FS16
Date Collected: 05/11/23 10:20
Date Received: 05/11/23 16:07

Lab Sample ID: 890-4653-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	53494	05/16/23 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53673	05/18/23 19:06	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53696	05/19/23 10:46	SM	EET MID
Total/NA	Analysis	8015 NM		1			53481	05/16/23 12:24	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	53388	05/15/23 13:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53326	05/15/23 19:46	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	53361	05/15/23 11:42	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53529	05/16/23 21:28	CH	EET MID

Client Sample ID: FS17
Date Collected: 05/11/23 10:30
Date Received: 05/11/23 16:07

Lab Sample ID: 890-4653-9
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			5.03 g	5 mL	53494	05/16/23 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53673	05/18/23 19:27	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53696	05/19/23 10:46	SM	EET MID
Total/NA	Analysis	8015 NM		1			53481	05/16/23 12:24	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	53388	05/15/23 13:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53326	05/15/23 20:08	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	53361	05/15/23 11:42	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53529	05/16/23 21:33	CH	EET MID

Client Sample ID: FS18
Date Collected: 05/11/23 10:55
Date Received: 05/11/23 16:07

Lab Sample ID: 890-4653-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	53494	05/16/23 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53673	05/18/23 19:47	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53696	05/19/23 10:46	SM	EET MID
Total/NA	Analysis	8015 NM		1			53481	05/16/23 12:24	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	53388	05/15/23 13:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53326	05/15/23 20:29	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	53361	05/15/23 11:42	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53529	05/16/23 21:49	CH	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4653-1
SDG: 03C1558214

Client Sample ID: FS19

Lab Sample ID: 890-4653-11
Matrix: Solid
Date Collected: 05/11/23 12:35
Date Received: 05/11/23 16:07

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	53494	05/16/23 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53673	05/18/23 21:10	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53696	05/19/23 10:46	SM	EET MID
Total/NA	Analysis	8015 NM		1			53481	05/16/23 12:24	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	53388	05/15/23 13:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53326	05/15/23 21:13	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	53361	05/15/23 11:42	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53529	05/16/23 21:54	CH	EET MID

Client Sample ID: FS20

Lab Sample ID: 890-4653-12
Matrix: Solid
Date Collected: 05/11/23 12:40
Date Received: 05/11/23 16:07

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	53494	05/16/23 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53673	05/18/23 21:30	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53696	05/19/23 10:46	SM	EET MID
Total/NA	Analysis	8015 NM		1			53481	05/16/23 12:24	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	53388	05/15/23 13:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53326	05/15/23 21:34	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	53361	05/15/23 11:42	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53529	05/16/23 22:00	CH	EET MID

Client Sample ID: FS21

Lab Sample ID: 890-4653-13
Matrix: Solid
Date Collected: 05/11/23 12:45
Date Received: 05/11/23 16:07

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	53494	05/16/23 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53673	05/18/23 21:51	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53696	05/19/23 10:46	SM	EET MID
Total/NA	Analysis	8015 NM		1			53481	05/16/23 12:24	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	53388	05/15/23 13:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53326	05/15/23 21:55	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	53361	05/15/23 11:42	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53529	05/16/23 22:05	CH	EET MID

Client Sample ID: FS22

Lab Sample ID: 890-4653-14
Matrix: Solid
Date Collected: 05/11/23 12:50
Date Received: 05/11/23 16:07

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	53494	05/16/23 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53673	05/18/23 22:11	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53696	05/19/23 10:46	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4653-1
SDG: 03C1558214

Client Sample ID: FS22

Lab Sample ID: 890-4653-14
Matrix: Solid
Date Collected: 05/11/23 12:50
Date Received: 05/11/23 16:07

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			53481	05/16/23 12:24	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	53388	05/15/23 13:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53326	05/15/23 22:17	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	53361	05/15/23 11:42	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	53529	05/16/23 22:11	CH	EET MID

Client Sample ID: FS23

Lab Sample ID: 890-4653-15
Matrix: Solid
Date Collected: 05/11/23 12:55
Date Received: 05/11/23 16:07

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	53497	05/16/23 15:29	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53588	05/18/23 11:04	EL	EET MID
Total/NA	Analysis	Total BTEX		1			53696	05/18/23 15:49	SM	EET MID
Total/NA	Analysis	8015 NM		1			53481	05/16/23 12:24	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	53388	05/15/23 13:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53326	05/15/23 22:39	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	53361	05/15/23 11:42	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53529	05/16/23 22:16	CH	EET MID

Client Sample ID: FS24

Lab Sample ID: 890-4653-16
Matrix: Solid
Date Collected: 05/11/23 13:15
Date Received: 05/11/23 16:07

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	53497	05/16/23 15:29	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53588	05/18/23 11:30	EL	EET MID
Total/NA	Analysis	Total BTEX		1			53696	05/18/23 15:49	SM	EET MID
Total/NA	Analysis	8015 NM		1			53481	05/16/23 12:24	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	53388	05/15/23 13:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53326	05/15/23 23:00	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	53361	05/15/23 11:42	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53529	05/16/23 22:21	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 N 31 124H

Job ID: 890-4653-1
SDG: 03C1558214

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-25	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4653-1
SDG: 03C1558214

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 N 31 124H

Job ID: 890-4653-1
SDG: 03C1558214

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4653-1	FS10	Solid	05/10/23 12:05	05/11/23 16:07	2'
890-4653-2	FS12	Solid	05/10/23 12:15	05/11/23 16:07	2'
890-4653-3	FS14	Solid	05/10/23 12:35	05/11/23 16:07	2'
890-4653-4	FS19	Solid	05/10/23 14:00	05/11/23 16:07	2'
890-4653-5	FS11	Solid	05/11/23 10:05	05/11/23 16:07	3'
890-4653-6	FS13	Solid	05/11/23 10:10	05/11/23 16:07	3'
890-4653-7	FS15	Solid	05/11/23 10:15	05/11/23 16:07	3'
890-4653-8	FS16	Solid	05/11/23 10:20	05/11/23 16:07	3'
890-4653-9	FS17	Solid	05/11/23 10:30	05/11/23 16:07	3'
890-4653-10	FS18	Solid	05/11/23 10:55	05/11/23 16:07	3'
890-4653-11	FS19	Solid	05/11/23 12:35	05/11/23 16:07	3'
890-4653-12	FS20	Solid	05/11/23 12:40	05/11/23 16:07	3'
890-4653-13	FS21	Solid	05/11/23 12:45	05/11/23 16:07	2'
890-4653-14	FS22	Solid	05/11/23 12:50	05/11/23 16:07	2'
890-4653-15	FS23	Solid	05/11/23 12:55	05/11/23 16:07	3'
890-4653-16	FS24	Solid	05/11/23 13:15	05/11/23 16:07	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:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Green St.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	303-887-2946	Email:	Garrett.Green@ExxonMobil.com

Work Order Comments

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

Project Name:	Remuda N 31 124H	Turn Around	☒ Routine ☐ Rush
Project Number:	03C1558214	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:	TJM007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	4.6
Total Containers:		Corrected Temperature:	4.4

ANALYSIS REQUEST

Pres. Code | Parameters: CHLORIDES (EPA: 3000.0) | TPH (8015) | BTEX (8021)

890-4653 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
FS10	S	5/10/23	1205	2'	G	1
FS12			1215	2'		1
FS14			1235	2'		1
FS19			2:00	2'		1
FS11		5/11/23	10:05	3'		1
FS13			10:10	3'		1
FS15			10:15	3'		1
FS16			1020	3'		1
FS17			10:30	3'		1
FS18			10:35	3'		1

Sample Comments

Incident ID: nAPP2233950022

Cost Center: 1674811001

AFE: [redacted]

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

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		5.11.23 1609			
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:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Green St.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	303-887-2946	Email:	Garrett.Green@ExxonMobil.com

Work Order Comments

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

Project Name:	Remuda N 31 124H	Turn Around	☑ Routine ☐ Rush
Project Number:	03C1558214	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

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)
FS19	S	5/11/23	12:35	3'	G	1				
FS20			12:40	3'		1				
FS21			12:45	2'		1				
FS22			12:50	2'		1				
FS23			12:55	3'		1				
FS24	↓	↓	1:15	3'	↓	1				

Parameters

Sample Comments
Incident ID:
nAPP2233950022
Cost Center:
1674811001
AFE:
[redacted]

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

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		5.11.23 1609	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4653-1
SDG Number: 03C1558214

Login Number: 4653
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4653-1
SDG Number: 03C1558214

Login Number: 4653
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 05/15/23 08:35 AM

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

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 5/26/2023 4:42:05 PM

JOB DESCRIPTION

Remuda N 31 124H
SDG NUMBER 03C1558214

JOB NUMBER

890-4662-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

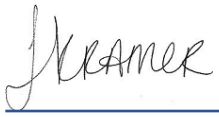
Eurofins Carlsbad

Job Notes

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

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

Authorization



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

Client: Ensolum
Project/Site: Remuda N 31 124H

Laboratory Job ID: 890-4662-1
SDG: 03C1558214

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-4662-1
Project/Site: Remuda N 31 124H SDG: 03C1558214

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4662-1
SDG: 03C1558214

Job ID: 890-4662-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4662-1

Receipt
The samples were received on 5/15/2023 9:36 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: FS25 (890-4662-1), FS26 (890-4662-2), FS27 (890-4662-3), FS28 (890-4662-4), FS29 (890-4662-5), FS30 (890-4662-6), FS31 (890-4662-7), FS32 (890-4662-8), SW03 (890-4662-9), SW04 (890-4662-10), SW05 (890-4662-11), SW06 (890-4662-12), SW07 (890-4662-13), SW08 (890-4662-14), SW09 (890-4662-15) and SW10 (890-4662-16).

GC VOA
Method 8021B: The matrix spike duplicate (MSD) recoveries for preparation batch 880-53663 and analytical batch 880-53967 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: The laboratory control sample (LCS) for preparation batch 880-53663 and analytical batch 880-53967 recovered outside control limits for the following analytes: Benzene. Since only an acceptable LCS or LCSD is required per the method, the LCSD shows recovery for the batch and the data has been qualified and reported.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (MB 880-53970/5-A). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following samples were outside control limits: SW07 (890-4662-13), SW09 (890-4662-15) and SW10 (890-4662-16). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-53486 and analytical batch 880-53447 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-53447/31) and (LCS 880-53486/2-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: FS25 (890-4662-1). 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: FS26 (890-4662-2), FS28 (890-4662-4) and FS29 (890-4662-5). 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: FS32 (890-4662-8), SW03 (890-4662-9) and SW04 (890-4662-10). 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: (CCV 880-53447/47) and (CCV 880-53447/58). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: SW07 (890-4662-13) and SW09 (890-4662-15). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Case Narrative

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4662-1
SDG: 03C1558214

Job ID: 890-4662-1 (Continued)

Laboratory: Eurofins Carlsbad (Continued)

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

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 N 31 124H

Job ID: 890-4662-1
SDG: 03C1558214

Client Sample ID: FS25

Lab Sample ID: 890-4662-1
Matrix: Solid
Date Collected: 05/12/23 09:30
Date Received: 05/15/23 09:36
Sample Depth: 3'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U F1 *+	0.00200		mg/Kg		05/18/23 11:59	05/24/23 01:37	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/18/23 11:59	05/24/23 01:37	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/18/23 11:59	05/24/23 01:37	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		05/18/23 11:59	05/24/23 01:37	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/18/23 11:59	05/24/23 01:37	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		05/18/23 11:59	05/24/23 01:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*05/18/23 11:59*	*05/24/23 01:37*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*05/18/23 11:59*	*05/24/23 01:37*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			05/24/23 11:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			05/17/23 10:58	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/16/23 13:04	05/16/23 20:51	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/16/23 13:04	05/16/23 20:51	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/16/23 13:04	05/16/23 20:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*118*		*70 - 130*	*05/16/23 13:04*	*05/16/23 20:51*	*1*
o-Terphenyl	*135*	*S1+*	*70 - 130*	*05/16/23 13:04*	*05/16/23 20:51*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**270**		5.03		mg/Kg			05/18/23 03:21	1

Client Sample ID: FS26

Lab Sample ID: 890-4662-2
Matrix: Solid
Date Collected: 05/12/23 09:35
Date Received: 05/15/23 09:36
Sample Depth: 3'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U *+	0.00202		mg/Kg		05/18/23 11:59	05/24/23 01:58	1
Toluene	<0.00202	U	0.00202		mg/Kg		05/18/23 11:59	05/24/23 01:58	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		05/18/23 11:59	05/24/23 01:58	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		05/18/23 11:59	05/24/23 01:58	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		05/18/23 11:59	05/24/23 01:58	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		05/18/23 11:59	05/24/23 01:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*05/18/23 11:59*	*05/24/23 01:58*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4662-1
SDG: 03C1558214

Client Sample ID: FS26

Lab Sample ID: 890-4662-2
Matrix: Solid
Date Collected: 05/12/23 09:35
Date Received: 05/15/23 09:36
Sample Depth: 3'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*05/18/23 11:59*	*05/24/23 01:58*	*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			05/24/23 11:22	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			05/17/23 10:58	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		05/16/23 13:04	05/16/23 21:51	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		05/16/23 13:04	05/16/23 21:51	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		05/16/23 13:04	05/16/23 21:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*124*		*70 - 130*	*05/16/23 13:04*	*05/16/23 21:51*	*1*
o-Terphenyl	*151*	*S1+*	*70 - 130*	*05/16/23 13:04*	*05/16/23 21:51*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**739**		5.01	mg/Kg			05/18/23 03:37	1

Client Sample ID: FS27

Lab Sample ID: 890-4662-3
Matrix: Solid
Date Collected: 05/12/23 10:05
Date Received: 05/15/23 09:36
Sample Depth: 3'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *+	0.00199	mg/Kg		05/18/23 11:59	05/24/23 02:18	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/18/23 11:59	05/24/23 02:18	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/18/23 11:59	05/24/23 02:18	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/18/23 11:59	05/24/23 02:18	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/18/23 11:59	05/24/23 02:18	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/18/23 11:59	05/24/23 02:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*05/18/23 11:59*	*05/24/23 02:18*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*05/18/23 11:59*	*05/24/23 02:18*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			05/24/23 11:22	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			05/17/23 10:58	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4662-1
SDG: 03C1558214

Client Sample ID: FS27

Lab Sample ID: 890-4662-3
Matrix: Solid
Date Collected: 05/12/23 10:05
Date Received: 05/15/23 09:36
Sample Depth: 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	<50.0	U	50.0		mg/Kg		05/16/23 13:04	05/16/23 22:11	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/16/23 13:04	05/16/23 22:11	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/16/23 13:04	05/16/23 22:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*107*		*70 - 130*	*05/16/23 13:04*	*05/16/23 22:11*	*1*
o-Terphenyl	*119*		*70 - 130*	*05/16/23 13:04*	*05/16/23 22:11*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2490**		24.9		mg/Kg			05/18/23 03:43	5

Client Sample ID: FS28

Lab Sample ID: 890-4662-4
Matrix: Solid
Date Collected: 05/12/23 09:40
Date Received: 05/15/23 09:36
Sample Depth: 3'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *+	0.00199		mg/Kg		05/18/23 11:59	05/24/23 02:39	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/18/23 11:59	05/24/23 02:39	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/18/23 11:59	05/24/23 02:39	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/18/23 11:59	05/24/23 02:39	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/18/23 11:59	05/24/23 02:39	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/18/23 11:59	05/24/23 02:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*05/18/23 11:59*	*05/24/23 02:39*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*05/18/23 11:59*	*05/24/23 02:39*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/24/23 11:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			05/17/23 10:58	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		05/16/23 13:04	05/16/23 22:31	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/16/23 13:04	05/16/23 22:31	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/16/23 13:04	05/16/23 22:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*120*		*70 - 130*	*05/16/23 13:04*	*05/16/23 22:31*	*1*
o-Terphenyl	*146*	*S1+*	*70 - 130*	*05/16/23 13:04*	*05/16/23 22:31*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4662-1
SDG: 03C1558214

Client Sample ID: FS28

Lab Sample ID: 890-4662-4
Matrix: Solid
Date Collected: 05/12/23 09:40
Date Received: 05/15/23 09:36
Sample Depth: 3'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	161		4.96		mg/Kg			05/18/23 03:59	1

Client Sample ID: FS29

Lab Sample ID: 890-4662-5
Matrix: Solid
Date Collected: 05/12/23 09:45
Date Received: 05/15/23 09:36
Sample Depth: 3'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *+	0.00200		mg/Kg		05/18/23 11:59	05/24/23 02:59	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/18/23 11:59	05/24/23 02:59	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/18/23 11:59	05/24/23 02:59	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/18/23 11:59	05/24/23 02:59	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/18/23 11:59	05/24/23 02:59	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/18/23 11:59	05/24/23 02:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*05/18/23 11:59*	*05/24/23 02:59*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*05/18/23 11:59*	*05/24/23 02:59*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			05/24/23 11:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			05/17/23 10:58	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/16/23 13:04	05/16/23 22:51	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/16/23 13:04	05/16/23 22:51	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/16/23 13:04	05/16/23 22:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*118*		*70 - 130*	*05/16/23 13:04*	*05/16/23 22:51*	*1*
o-Terphenyl	*139*	*S1+*	*70 - 130*	*05/16/23 13:04*	*05/16/23 22:51*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	82.4		5.03		mg/Kg			05/18/23 04:04	1

Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4662-1
SDG: 03C1558214

Client Sample ID: FS30

Lab Sample ID: 890-4662-6
Matrix: Solid
Date Collected: 05/12/23 09:50
Date Received: 05/15/23 09:36
Sample Depth: 3'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *+	0.00200		mg/Kg		05/18/23 11:59	05/24/23 03:20	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/18/23 11:59	05/24/23 03:20	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/18/23 11:59	05/24/23 03:20	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		05/18/23 11:59	05/24/23 03:20	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/18/23 11:59	05/24/23 03:20	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		05/18/23 11:59	05/24/23 03:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*05/18/23 11:59*	*05/24/23 03:20*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*05/18/23 11:59*	*05/24/23 03:20*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			05/24/23 11:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			05/17/23 10:58	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/16/23 13:04	05/16/23 23:12	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/16/23 13:04	05/16/23 23:12	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/16/23 13:04	05/16/23 23:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*115*		*70 - 130*	*05/16/23 13:04*	*05/16/23 23:12*	*1*
o-Terphenyl	*129*		*70 - 130*	*05/16/23 13:04*	*05/16/23 23:12*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**465**		5.02		mg/Kg			05/18/23 04:09	1

Client Sample ID: FS31

Lab Sample ID: 890-4662-7
Matrix: Solid
Date Collected: 05/12/23 09:55
Date Received: 05/15/23 09:36
Sample Depth: 1'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U *+	0.00201		mg/Kg		05/18/23 11:59	05/24/23 03:40	1
Toluene	<0.00201	U	0.00201		mg/Kg		05/18/23 11:59	05/24/23 03:40	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		05/18/23 11:59	05/24/23 03:40	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		05/18/23 11:59	05/24/23 03:40	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		05/18/23 11:59	05/24/23 03:40	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		05/18/23 11:59	05/24/23 03:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*05/18/23 11:59*	*05/24/23 03:40*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4662-1
SDG: 03C1558214

Client Sample ID: FS31

Lab Sample ID: 890-4662-7
Matrix: Solid

Date Collected: 05/12/23 09:55
Date Received: 05/15/23 09:36
Sample Depth: 1'

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*05/18/23 11:59*	*05/24/23 03:40*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			05/24/23 11:22	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			05/17/23 10:58	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/16/23 13:04	05/16/23 23:33	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/16/23 13:04	05/16/23 23:33	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/16/23 13:04	05/16/23 23:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*05/16/23 13:04*	*05/16/23 23:33*	*1*
o-Terphenyl	*123*		*70 - 130*	*05/16/23 13:04*	*05/16/23 23:33*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**69.5**		4.99	mg/Kg			05/18/23 04:15	1

Client Sample ID: FS32

Lab Sample ID: 890-4662-8
Matrix: Solid

Date Collected: 05/12/23 10:00
Date Received: 05/15/23 09:36
Sample Depth: 1'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U *+	0.00202	mg/Kg		05/18/23 11:59	05/24/23 04:01	1
Toluene	<0.00202	U	0.00202	mg/Kg		05/18/23 11:59	05/24/23 04:01	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		05/18/23 11:59	05/24/23 04:01	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		05/18/23 11:59	05/24/23 04:01	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		05/18/23 11:59	05/24/23 04:01	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		05/18/23 11:59	05/24/23 04:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*05/18/23 11:59*	*05/24/23 04:01*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*05/18/23 11:59*	*05/24/23 04:01*	*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			05/24/23 11:22	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			05/17/23 10:58	1

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Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4662-1
SDG: 03C1558214

Client Sample ID: FS32

Lab Sample ID: 890-4662-8
Matrix: Solid
Date Collected: 05/12/23 10:00
Date Received: 05/15/23 09:36
Sample Depth: 1'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/16/23 13:04	05/16/23 23:53	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/16/23 13:04	05/16/23 23:53	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/16/23 13:04	05/16/23 23:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*05/16/23 13:04*	*05/16/23 23:53*	*1*
o-Terphenyl	*134*	*S1+*	*70 - 130*	*05/16/23 13:04*	*05/16/23 23:53*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**234**		4.98		mg/Kg			05/18/23 04:20	1

Client Sample ID: SW03

Lab Sample ID: 890-4662-9
Matrix: Solid
Date Collected: 05/12/23 08:25
Date Received: 05/15/23 09:36
Sample Depth: 0-2

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *+	0.00199		mg/Kg		05/18/23 11:59	05/24/23 04:21	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/18/23 11:59	05/24/23 04:21	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/18/23 11:59	05/24/23 04:21	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/18/23 11:59	05/24/23 04:21	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/18/23 11:59	05/24/23 04:21	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/18/23 11:59	05/24/23 04:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*05/18/23 11:59*	*05/24/23 04:21*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*05/18/23 11:59*	*05/24/23 04:21*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/24/23 11:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			05/17/23 10:58	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/16/23 13:04	05/17/23 00:13	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/16/23 13:04	05/17/23 00:13	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/16/23 13:04	05/17/23 00:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*120*		*70 - 130*	*05/16/23 13:04*	*05/17/23 00:13*	*1*
o-Terphenyl	*141*	*S1+*	*70 - 130*	*05/16/23 13:04*	*05/17/23 00:13*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4662-1
SDG: 03C1558214

Client Sample ID: SW03

Lab Sample ID: 890-4662-9
Matrix: Solid
Date Collected: 05/12/23 08:25
Date Received: 05/15/23 09:36
Sample Depth: 0-2

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	363		5.00		mg/Kg			05/18/23 04:26	1

Client Sample ID: SW04

Lab Sample ID: 890-4662-10
Matrix: Solid
Date Collected: 05/12/23 08:30
Date Received: 05/15/23 09:36
Sample Depth: 0-3

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U *+	0.00198		mg/Kg		05/18/23 11:59	05/24/23 04:41	1
Toluene	<0.00198	U	0.00198		mg/Kg		05/18/23 11:59	05/24/23 04:41	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		05/18/23 11:59	05/24/23 04:41	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		05/18/23 11:59	05/24/23 04:41	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		05/18/23 11:59	05/24/23 04:41	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		05/18/23 11:59	05/24/23 04:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*05/18/23 11:59*	*05/24/23 04:41*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*05/18/23 11:59*	*05/24/23 04:41*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			05/24/23 11:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			05/17/23 10:58	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/16/23 13:04	05/17/23 00:33	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/16/23 13:04	05/17/23 00:33	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/16/23 13:04	05/17/23 00:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*117*		*70 - 130*	*05/16/23 13:04*	*05/17/23 00:33*	*1*
o-Terphenyl	*140*	*S1+*	*70 - 130*	*05/16/23 13:04*	*05/17/23 00:33*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	628		5.01		mg/Kg			05/18/23 04:31	1

Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4662-1
SDG: 03C1558214

Client Sample ID: SW05

Lab Sample ID: 890-4662-11
Matrix: Solid
Date Collected: 05/12/23 08:35
Date Received: 05/15/23 09:36
Sample Depth: 0-3

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *+	0.00199		mg/Kg		05/18/23 11:59	05/24/23 06:32	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/18/23 11:59	05/24/23 06:32	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/18/23 11:59	05/24/23 06:32	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/18/23 11:59	05/24/23 06:32	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/18/23 11:59	05/24/23 06:32	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/18/23 11:59	05/24/23 06:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*	*05/18/23 11:59*	*05/24/23 06:32*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*05/18/23 11:59*	*05/24/23 06:32*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/24/23 11:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			05/17/23 10:58	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/16/23 13:04	05/17/23 01:14	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/16/23 13:04	05/17/23 01:14	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/16/23 13:04	05/17/23 01:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*05/16/23 13:04*	*05/17/23 01:14*	*1*
o-Terphenyl	*125*		*70 - 130*	*05/16/23 13:04*	*05/17/23 01:14*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**662**		4.95		mg/Kg			05/18/23 10:39	1

Client Sample ID: SW06

Lab Sample ID: 890-4662-12
Matrix: Solid
Date Collected: 05/12/23 08:40
Date Received: 05/15/23 09:36
Sample Depth: 0-3

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U *+	0.00201		mg/Kg		05/18/23 11:59	05/24/23 06:52	1
Toluene	<0.00201	U	0.00201		mg/Kg		05/18/23 11:59	05/24/23 06:52	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		05/18/23 11:59	05/24/23 06:52	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		05/18/23 11:59	05/24/23 06:52	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		05/18/23 11:59	05/24/23 06:52	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		05/18/23 11:59	05/24/23 06:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*05/18/23 11:59*	*05/24/23 06:52*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4662-1
SDG: 03C1558214

Client Sample ID: SW06

Lab Sample ID: 890-4662-12
Matrix: Solid
Date Collected: 05/12/23 08:40
Date Received: 05/15/23 09:36
Sample Depth: 0-3

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*05/18/23 11:59*	*05/24/23 06:52*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			05/24/23 11:22	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			05/17/23 10:58	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/16/23 13:04	05/17/23 01:35	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/16/23 13:04	05/17/23 01:35	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/16/23 13:04	05/17/23 01:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*108*		*70 - 130*	*05/16/23 13:04*	*05/17/23 01:35*	*1*
o-Terphenyl	*119*		*70 - 130*	*05/16/23 13:04*	*05/17/23 01:35*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**921**		4.99	mg/Kg			05/18/23 10:55	1

Client Sample ID: SW07

Lab Sample ID: 890-4662-13
Matrix: Solid
Date Collected: 05/12/23 08:45
Date Received: 05/15/23 09:36
Sample Depth: 0-3

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/23/23 11:11	05/25/23 17:02	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/23/23 11:11	05/25/23 17:02	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/23/23 11:11	05/25/23 17:02	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		05/23/23 11:11	05/25/23 17:02	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/23/23 11:11	05/25/23 17:02	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		05/23/23 11:11	05/25/23 17:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*	*05/23/23 11:11*	*05/25/23 17:02*	*1*
1,4-Difluorobenzene (Surr)	*61*	*S1-*	*70 - 130*	*05/23/23 11:11*	*05/25/23 17:02*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			05/26/23 17:23	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			05/17/23 10:58	1

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Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4662-1
SDG: 03C1558214

Client Sample ID: SW07

Lab Sample ID: 890-4662-13
Matrix: Solid
Date Collected: 05/12/23 08:45
Date Received: 05/15/23 09:36
Sample Depth: 0-3

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		05/16/23 13:04	05/17/23 01:55	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/16/23 13:04	05/17/23 01:55	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/16/23 13:04	05/17/23 01:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*115*		*70 - 130*	*05/16/23 13:04*	*05/17/23 01:55*	*1*
o-Terphenyl	*138*	*S1+*	*70 - 130*	*05/16/23 13:04*	*05/17/23 01:55*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**735**		5.04		mg/Kg			05/18/23 11:01	1

Client Sample ID: SW08

Lab Sample ID: 890-4662-14
Matrix: Solid
Date Collected: 05/12/23 08:50
Date Received: 05/15/23 09:36
Sample Depth: 0-2

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/23/23 11:11	05/25/23 17:22	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/23/23 11:11	05/25/23 17:22	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/23/23 11:11	05/25/23 17:22	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/23/23 11:11	05/25/23 17:22	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/23/23 11:11	05/25/23 17:22	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/23/23 11:11	05/25/23 17:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*05/23/23 11:11*	*05/25/23 17:22*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*05/23/23 11:11*	*05/25/23 17:22*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			05/26/23 17:23	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			05/17/23 10:58	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/16/23 13:04	05/17/23 02:15	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/16/23 13:04	05/17/23 02:15	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/16/23 13:04	05/17/23 02:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*05/16/23 13:04*	*05/17/23 02:15*	*1*
o-Terphenyl	*129*		*70 - 130*	*05/16/23 13:04*	*05/17/23 02:15*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4662-1
SDG: 03C1558214

Client Sample ID: SW08

Lab Sample ID: 890-4662-14
Matrix: Solid
Date Collected: 05/12/23 08:50
Date Received: 05/15/23 09:36
Sample Depth: 0-2

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	738		5.05		mg/Kg			05/18/23 11:06	1

Client Sample ID: SW09

Lab Sample ID: 890-4662-15
Matrix: Solid
Date Collected: 05/12/23 08:55
Date Received: 05/15/23 09:36
Sample Depth: 0-3

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		05/23/23 11:11	05/25/23 17:43	1
Toluene	<0.00201	U	0.00201		mg/Kg		05/23/23 11:11	05/25/23 17:43	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		05/23/23 11:11	05/25/23 17:43	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		05/23/23 11:11	05/25/23 17:43	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		05/23/23 11:11	05/25/23 17:43	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		05/23/23 11:11	05/25/23 17:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*05/23/23 11:11*	*05/25/23 17:43*	*1*
1,4-Difluorobenzene (Surr)	*68*	*S1-*	*70 - 130*	*05/23/23 11:11*	*05/25/23 17:43*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			05/26/23 17:23	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			05/17/23 10:58	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/16/23 13:04	05/17/23 02:35	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/16/23 13:04	05/17/23 02:35	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/16/23 13:04	05/17/23 02:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*119*		*70 - 130*	*05/16/23 13:04*	*05/17/23 02:35*	*1*
o-Terphenyl	*138*	*S1+*	*70 - 130*	*05/16/23 13:04*	*05/17/23 02:35*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	621		4.99		mg/Kg			05/18/23 11:11	1

Client Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4662-1
SDG: 03C1558214

Client Sample ID: SW10

Date Collected: 05/12/23 09:00
Date Received: 05/15/23 09:36
Sample Depth: 0-2

Lab Sample ID: 890-4662-16

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/23/23 11:11	05/25/23 18:03	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/23/23 11:11	05/25/23 18:03	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/23/23 11:11	05/25/23 18:03	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/23/23 11:11	05/25/23 18:03	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/23/23 11:11	05/25/23 18:03	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/23/23 11:11	05/25/23 18:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*05/23/23 11:11*	*05/25/23 18:03*	*1*
1,4-Difluorobenzene (Surr)	*68*	*S1-*	*70 - 130*	*05/23/23 11:11*	*05/25/23 18:03*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/26/23 17:23	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			05/17/23 10:58	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		05/16/23 13:04	05/17/23 02:56	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/16/23 13:04	05/17/23 02:56	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/16/23 13:04	05/17/23 02:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*108*		*70 - 130*	*05/16/23 13:04*	*05/17/23 02:56*	*1*
o-Terphenyl	*123*		*70 - 130*	*05/16/23 13:04*	*05/17/23 02:56*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1870**		25.0		mg/Kg			05/18/23 11:17	5

Surrogate Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4662-1
SDG: 03C1558214

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)
890-4662-1	FS25	90	86
890-4662-1 MS	FS25	90	101
890-4662-1 MSD	FS25	95	123
890-4662-2	FS26	90	88
890-4662-3	FS27	99	100
890-4662-4	FS28	101	92
890-4662-5	FS29	108	103
890-4662-6	FS30	100	93
890-4662-7	FS31	100	96
890-4662-8	FS32	110	95
890-4662-9	SW03	96	103
890-4662-10	SW04	100	94
890-4662-11	SW05	87	90
890-4662-12	SW06	97	93
890-4662-13	SW07	87	61 S1-
890-4662-14	SW08	102	88
890-4662-15	SW09	105	68 S1-
890-4662-16	SW10	104	68 S1-
890-4697-A-1-E MS	Matrix Spike	113	103
890-4697-A-1-F MSD	Matrix Spike Duplicate	115	103
LCS 880-53663/1-A	Lab Control Sample	98	97
LCS 880-53970/1-A	Lab Control Sample	107	91
LCSD 880-53663/2-A	Lab Control Sample Dup	95	101
LCSD 880-53970/2-A	Lab Control Sample Dup	117	99
MB 880-53663/5-A	Method Blank	99	100
MB 880-53960/5-A	Method Blank	85	100
MB 880-53970/5-A	Method Blank	69 S1-	80

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-4662-1	FS25	118	135 S1+
890-4662-1 MS	FS25	117	121
890-4662-1 MSD	FS25	126	129
890-4662-2	FS26	124	151 S1+
890-4662-3	FS27	107	119
890-4662-4	FS28	120	146 S1+
890-4662-5	FS29	118	139 S1+
890-4662-6	FS30	115	129
890-4662-7	FS31	113	123
890-4662-8	FS32	113	134 S1+
890-4662-9	SW03	120	141 S1+
890-4662-10	SW04	117	140 S1+

Surrogate Summary

Client: Ensolum Job ID: 890-4662-1
Project/Site: Remuda N 31 124H SDG: 03C1558214

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

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

		Percent Surrogate Recovery (Acceptance Limits)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
890-4662-11	SW05	111	125										
890-4662-12	SW06	108	119										
890-4662-13	SW07	115	138 S1+										
890-4662-14	SW08	111	129										
890-4662-15	SW09	119	138 S1+										
890-4662-16	SW10	108	123										
LCS 880-53486/2-A	Lab Control Sample	115	131 S1+										
LCSD 880-53486/3-A	Lab Control Sample Dup	106	123										
MB 880-53486/1-A	Method Blank	162 S1+	204 S1+										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4662-1
SDG: 03C1558214

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-53663/5-A
Matrix: Solid
Analysis Batch: 53967

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53663

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/18/23 11:59	05/24/23 01:09	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/18/23 11:59	05/24/23 01:09	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/18/23 11:59	05/24/23 01:09	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/18/23 11:59	05/24/23 01:09	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/18/23 11:59	05/24/23 01:09	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/18/23 11:59	05/24/23 01:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*05/18/23 11:59*	*05/24/23 01:09*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*05/18/23 11:59*	*05/24/23 01:09*	*1*

Lab Sample ID: LCS 880-53663/1-A
Matrix: Solid
Analysis Batch: 53967

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53663

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1410	*+	mg/Kg		141	70 - 130		
Toluene			0.100	0.1174		mg/Kg		117	70 - 130		
Ethylbenzene			0.100	0.1169		mg/Kg		117	70 - 130		
m-Xylene & p-Xylene			0.200	0.2095		mg/Kg		105	70 - 130		
o-Xylene			0.100	0.09383		mg/Kg		94	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: LCSD 880-53663/2-A
Matrix: Solid
Analysis Batch: 53967

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53663

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1276		mg/Kg		128	70 - 130	10	35
Toluene			0.100	0.1035		mg/Kg		103	70 - 130	13	35
Ethylbenzene			0.100	0.1074		mg/Kg		107	70 - 130	8	35
m-Xylene & p-Xylene			0.200	0.1993		mg/Kg		100	70 - 130	5	35
o-Xylene			0.100	0.09032		mg/Kg		90	70 - 130	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 890-4662-1 MS
Matrix: Solid
Analysis Batch: 53967

Client Sample ID: FS25
Prep Type: Total/NA
Prep Batch: 53663

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U F1 *+	0.0996	0.1203		mg/Kg		121	70 - 130		
Toluene	<0.00200	U	0.0996	0.1033		mg/Kg		103	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4662-1
SDG: 03C1558214

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

Lab Sample ID: 890-4662-1 MS — **Client Sample ID: FS25**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 53967 — **Prep Batch: 53663**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.0996	0.09348		mg/Kg		94	70 - 130
m-Xylene & p-Xylene	<0.00401	U	0.199	0.1763		mg/Kg		89	70 - 130
o-Xylene	<0.00200	U	0.0996	0.07970		mg/Kg		80	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 890-4662-1 MSD — **Client Sample ID: FS25**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 53967 — **Prep Batch: 53663**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U F1 *+	0.0990	0.1425	F1	mg/Kg		144	70 - 130	17	35
Toluene	<0.00200	U	0.0990	0.1053		mg/Kg		106	70 - 130	2	35
Ethylbenzene	<0.00200	U	0.0990	0.1122		mg/Kg		113	70 - 130	18	35
m-Xylene & p-Xylene	<0.00401	U	0.198	0.2038		mg/Kg		103	70 - 130	14	35
o-Xylene	<0.00200	U	0.0990	0.09164		mg/Kg		93	70 - 130	14	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
1,4-Difluorobenzene (Surr)	*123*		*70 - 130*

Lab Sample ID: MB 880-53960/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 53967 — **Prep Batch: 53960**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/23/23 09:51	05/23/23 13:32	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/23/23 09:51	05/23/23 13:32	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/23/23 09:51	05/23/23 13:32	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/23/23 09:51	05/23/23 13:32	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/23/23 09:51	05/23/23 13:32	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/23/23 09:51	05/23/23 13:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*	*05/23/23 09:51*	*05/23/23 13:32*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*05/23/23 09:51*	*05/23/23 13:32*	*1*

Lab Sample ID: MB 880-53970/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 54128 — **Prep Batch: 53970**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/23/23 11:11	05/25/23 11:11	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/23/23 11:11	05/25/23 11:11	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/23/23 11:11	05/25/23 11:11	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/23/23 11:11	05/25/23 11:11	1

QC Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4662-1
SDG: 03C1558214

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

Lab Sample ID: MB 880-53970/5-A
Matrix: Solid
Analysis Batch: 54128

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53970

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/23/23 11:11	05/25/23 11:11	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/23/23 11:11	05/25/23 11:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*69*	*S1-*	*70 - 130*	*05/23/23 11:11*	*05/25/23 11:11*	*1*
1,4-Difluorobenzene (Surr)	*80*		*70 - 130*	*05/23/23 11:11*	*05/25/23 11:11*	*1*

Lab Sample ID: LCS 880-53970/1-A
Matrix: Solid
Analysis Batch: 54128

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53970

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1073		mg/Kg		107	70 - 130		
Toluene			0.100	0.09785		mg/Kg		98	70 - 130		
Ethylbenzene			0.100	0.1007		mg/Kg		101	70 - 130		
m-Xylene & p-Xylene			0.200	0.2080		mg/Kg		104	70 - 130		
o-Xylene			0.100	0.1051		mg/Kg		105	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*

Lab Sample ID: LCSD 880-53970/2-A
Matrix: Solid
Analysis Batch: 54128

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53970

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1172		mg/Kg		117	70 - 130	9	35
Toluene			0.100	0.1015		mg/Kg		101	70 - 130	4	35
Ethylbenzene			0.100	0.1084		mg/Kg		108	70 - 130	7	35
m-Xylene & p-Xylene			0.200	0.2291		mg/Kg		115	70 - 130	10	35
o-Xylene			0.100	0.1165		mg/Kg		117	70 - 130	10	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 890-4697-A-1-E MS
Matrix: Solid
Analysis Batch: 54128

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 53970

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U	0.0998	0.1171		mg/Kg		117	70 - 130		
Toluene	<0.00199	U	0.0998	0.1083		mg/Kg		108	70 - 130		
Ethylbenzene	<0.00199	U	0.0998	0.1155		mg/Kg		116	70 - 130		
m-Xylene & p-Xylene	<0.00398	U	0.200	0.2391		mg/Kg		120	70 - 130		
o-Xylene	<0.00199	U	0.0998	0.1196		mg/Kg		120	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4662-1
SDG: 03C1558214

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

Lab Sample ID: 890-4697-A-1-E MS
Matrix: Solid
Analysis Batch: 54128

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 53970

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: 890-4697-A-1-F MSD
Matrix: Solid
Analysis Batch: 54128

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 53970

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.100	0.1131		mg/Kg		113	70 - 130	3	35
Toluene	<0.00199	U	0.100	0.1023		mg/Kg		102	70 - 130	6	35
Ethylbenzene	<0.00199	U	0.100	0.1112		mg/Kg		111	70 - 130	4	35
m-Xylene & p-Xylene	<0.00398	U	0.200	0.2290		mg/Kg		114	70 - 130	4	35
o-Xylene	<0.00199	U	0.100	0.1151		mg/Kg		115	70 - 130	4	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

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

Lab Sample ID: MB 880-53486/1-A
Matrix: Solid
Analysis Batch: 53447

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53486

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/16/23 13:04	05/16/23 19:50	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/16/23 13:04	05/16/23 19:50	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/16/23 13:04	05/16/23 19:50	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*162*	*S1+*	*70 - 130*	*05/16/23 13:04*	*05/16/23 19:50*	*1*
o-Terphenyl	*204*	*S1+*	*70 - 130*	*05/16/23 13:04*	*05/16/23 19:50*	*1*

Lab Sample ID: LCS 880-53486/2-A
Matrix: Solid
Analysis Batch: 53447

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53486

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	985.1		mg/Kg		99	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1069		mg/Kg		107	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	*115*		*70 - 130*
o-Terphenyl	*131*	*S1+*	*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4662-1
SDG: 03C1558214

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

Lab Sample ID: LCSD 880-53486/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 53447 — **Prep Batch: 53486**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	940.8		mg/Kg		94	70 - 130	5	20
Diesel Range Organics (Over C10-C28)			1000	1043		mg/Kg		104	70 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*106*		*70 - 130*
o-Terphenyl	*123*		*70 - 130*

Lab Sample ID: 890-4662-1 MS — **Client Sample ID: FS25**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 53447 — **Prep Batch: 53486**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	997	1114		mg/Kg		109	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	997	1206		mg/Kg		119	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*117*		*70 - 130*
o-Terphenyl	*121*		*70 - 130*

Lab Sample ID: 890-4662-1 MSD — **Client Sample ID: FS25**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 53447 — **Prep Batch: 53486**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	1145		mg/Kg		112	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	1291		mg/Kg		127	70 - 130	7	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*126*		*70 - 130*
o-Terphenyl	*129*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-53473/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 53587

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/18/23 01:50	1

QC Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4662-1
SDG: 03C1558214

Method: 300.0 - Anions, Ion Chromatography (Continued)

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

Client Sample ID: Lab Control Sample
Prep Type: Soluble

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

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

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	264.6		mg/Kg		106	90 - 110	0	20

Lab Sample ID: 890-4662-1 MS
Matrix: Solid
Analysis Batch: 53587

Client Sample ID: FS25
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	270		252	525.1		mg/Kg		101	90 - 110		

Lab Sample ID: 890-4662-1 MSD
Matrix: Solid
Analysis Batch: 53587

Client Sample ID: FS25
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	270		252	527.9		mg/Kg		102	90 - 110	1	20

Lab Sample ID: MB 880-53474/1-A
Matrix: Solid
Analysis Batch: 53670

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/18/23 08:31	1

Lab Sample ID: LCS 880-53474/2-A
Matrix: Solid
Analysis Batch: 53670

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	255.3		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-53474/3-A
Matrix: Solid
Analysis Batch: 53670

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	258.9		mg/Kg		104	90 - 110	1	20

Lab Sample ID: 880-28466-A-1-E MS
Matrix: Solid
Analysis Batch: 53670

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	601		249	831.6		mg/Kg		93	90 - 110		

QC Sample Results

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4662-1
SDG: 03C1558214

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 880-28466-A-1-F MSD
Matrix: Solid
Analysis Batch: 53670

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	601		249	836.5		mg/Kg		95	90 - 110	1	20

Lab Sample ID: 880-28467-A-7-B MS
Matrix: Solid
Analysis Batch: 53670

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	5410		2510	7884		mg/Kg		99	90 - 110

Lab Sample ID: 880-28467-A-7-C MSD
Matrix: Solid
Analysis Batch: 53670

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	5410		2510	7885		mg/Kg		99	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4662-1
SDG: 03C1558214

GC VOA

Prep Batch: 53663

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4662-1	FS25	Total/NA	Solid	5035	
890-4662-2	FS26	Total/NA	Solid	5035	
890-4662-3	FS27	Total/NA	Solid	5035	
890-4662-4	FS28	Total/NA	Solid	5035	
890-4662-5	FS29	Total/NA	Solid	5035	
890-4662-6	FS30	Total/NA	Solid	5035	
890-4662-7	FS31	Total/NA	Solid	5035	
890-4662-8	FS32	Total/NA	Solid	5035	
890-4662-9	SW03	Total/NA	Solid	5035	
890-4662-10	SW04	Total/NA	Solid	5035	
890-4662-11	SW05	Total/NA	Solid	5035	
890-4662-12	SW06	Total/NA	Solid	5035	
MB 880-53663/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-53663/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-53663/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4662-1 MS	FS25	Total/NA	Solid	5035	
890-4662-1 MSD	FS25	Total/NA	Solid	5035	

Prep Batch: 53960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-53960/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 53967

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4662-1	FS25	Total/NA	Solid	8021B	53663
890-4662-2	FS26	Total/NA	Solid	8021B	53663
890-4662-3	FS27	Total/NA	Solid	8021B	53663
890-4662-4	FS28	Total/NA	Solid	8021B	53663
890-4662-5	FS29	Total/NA	Solid	8021B	53663
890-4662-6	FS30	Total/NA	Solid	8021B	53663
890-4662-7	FS31	Total/NA	Solid	8021B	53663
890-4662-8	FS32	Total/NA	Solid	8021B	53663
890-4662-9	SW03	Total/NA	Solid	8021B	53663
890-4662-10	SW04	Total/NA	Solid	8021B	53663
890-4662-11	SW05	Total/NA	Solid	8021B	53663
890-4662-12	SW06	Total/NA	Solid	8021B	53663
MB 880-53663/5-A	Method Blank	Total/NA	Solid	8021B	53663
MB 880-53960/5-A	Method Blank	Total/NA	Solid	8021B	53960
LCS 880-53663/1-A	Lab Control Sample	Total/NA	Solid	8021B	53663
LCSD 880-53663/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	53663
890-4662-1 MS	FS25	Total/NA	Solid	8021B	53663
890-4662-1 MSD	FS25	Total/NA	Solid	8021B	53663

Prep Batch: 53970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4662-13	SW07	Total/NA	Solid	5035	
890-4662-14	SW08	Total/NA	Solid	5035	
890-4662-15	SW09	Total/NA	Solid	5035	
890-4662-16	SW10	Total/NA	Solid	5035	
MB 880-53970/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-53970/1-A	Lab Control Sample	Total/NA	Solid	5035	

QC Association Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4662-1
SDG: 03C1558214

GC VOA (Continued)

Prep Batch: 53970 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-53970/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4697-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
890-4697-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 54071

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4662-1	FS25	Total/NA	Solid	Total BTEX	
890-4662-2	FS26	Total/NA	Solid	Total BTEX	
890-4662-3	FS27	Total/NA	Solid	Total BTEX	
890-4662-4	FS28	Total/NA	Solid	Total BTEX	
890-4662-5	FS29	Total/NA	Solid	Total BTEX	
890-4662-6	FS30	Total/NA	Solid	Total BTEX	
890-4662-7	FS31	Total/NA	Solid	Total BTEX	
890-4662-8	FS32	Total/NA	Solid	Total BTEX	
890-4662-9	SW03	Total/NA	Solid	Total BTEX	
890-4662-10	SW04	Total/NA	Solid	Total BTEX	
890-4662-11	SW05	Total/NA	Solid	Total BTEX	
890-4662-12	SW06	Total/NA	Solid	Total BTEX	
890-4662-13	SW07	Total/NA	Solid	Total BTEX	
890-4662-14	SW08	Total/NA	Solid	Total BTEX	
890-4662-15	SW09	Total/NA	Solid	Total BTEX	
890-4662-16	SW10	Total/NA	Solid	Total BTEX	

Analysis Batch: 54128

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4662-13	SW07	Total/NA	Solid	8021B	53970
890-4662-14	SW08	Total/NA	Solid	8021B	53970
890-4662-15	SW09	Total/NA	Solid	8021B	53970
890-4662-16	SW10	Total/NA	Solid	8021B	53970
MB 880-53970/5-A	Method Blank	Total/NA	Solid	8021B	53970
LCS 880-53970/1-A	Lab Control Sample	Total/NA	Solid	8021B	53970
LCSD 880-53970/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	53970
890-4697-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	53970
890-4697-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	53970

GC Semi VOA

Analysis Batch: 53447

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4662-1	FS25	Total/NA	Solid	8015B NM	53486
890-4662-2	FS26	Total/NA	Solid	8015B NM	53486
890-4662-3	FS27	Total/NA	Solid	8015B NM	53486
890-4662-4	FS28	Total/NA	Solid	8015B NM	53486
890-4662-5	FS29	Total/NA	Solid	8015B NM	53486
890-4662-6	FS30	Total/NA	Solid	8015B NM	53486
890-4662-7	FS31	Total/NA	Solid	8015B NM	53486
890-4662-8	FS32	Total/NA	Solid	8015B NM	53486
890-4662-9	SW03	Total/NA	Solid	8015B NM	53486
890-4662-10	SW04	Total/NA	Solid	8015B NM	53486
890-4662-11	SW05	Total/NA	Solid	8015B NM	53486
890-4662-12	SW06	Total/NA	Solid	8015B NM	53486

QC Association Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4662-1
SDG: 03C1558214

GC Semi VOA (Continued)

Analysis Batch: 53447 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4662-13	SW07	Total/NA	Solid	8015B NM	53486
890-4662-14	SW08	Total/NA	Solid	8015B NM	53486
890-4662-15	SW09	Total/NA	Solid	8015B NM	53486
890-4662-16	SW10	Total/NA	Solid	8015B NM	53486
MB 880-53486/1-A	Method Blank	Total/NA	Solid	8015B NM	53486
LCS 880-53486/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	53486
LCSD 880-53486/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	53486
890-4662-1 MS	FS25	Total/NA	Solid	8015B NM	53486
890-4662-1 MSD	FS25	Total/NA	Solid	8015B NM	53486

Prep Batch: 53486

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4662-1	FS25	Total/NA	Solid	8015NM Prep	
890-4662-2	FS26	Total/NA	Solid	8015NM Prep	
890-4662-3	FS27	Total/NA	Solid	8015NM Prep	
890-4662-4	FS28	Total/NA	Solid	8015NM Prep	
890-4662-5	FS29	Total/NA	Solid	8015NM Prep	
890-4662-6	FS30	Total/NA	Solid	8015NM Prep	
890-4662-7	FS31	Total/NA	Solid	8015NM Prep	
890-4662-8	FS32	Total/NA	Solid	8015NM Prep	
890-4662-9	SW03	Total/NA	Solid	8015NM Prep	
890-4662-10	SW04	Total/NA	Solid	8015NM Prep	
890-4662-11	SW05	Total/NA	Solid	8015NM Prep	
890-4662-12	SW06	Total/NA	Solid	8015NM Prep	
890-4662-13	SW07	Total/NA	Solid	8015NM Prep	
890-4662-14	SW08	Total/NA	Solid	8015NM Prep	
890-4662-15	SW09	Total/NA	Solid	8015NM Prep	
890-4662-16	SW10	Total/NA	Solid	8015NM Prep	
MB 880-53486/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-53486/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-53486/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4662-1 MS	FS25	Total/NA	Solid	8015NM Prep	
890-4662-1 MSD	FS25	Total/NA	Solid	8015NM Prep	

Analysis Batch: 53581

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4662-1	FS25	Total/NA	Solid	8015 NM	
890-4662-2	FS26	Total/NA	Solid	8015 NM	
890-4662-3	FS27	Total/NA	Solid	8015 NM	
890-4662-4	FS28	Total/NA	Solid	8015 NM	
890-4662-5	FS29	Total/NA	Solid	8015 NM	
890-4662-6	FS30	Total/NA	Solid	8015 NM	
890-4662-7	FS31	Total/NA	Solid	8015 NM	
890-4662-8	FS32	Total/NA	Solid	8015 NM	
890-4662-9	SW03	Total/NA	Solid	8015 NM	
890-4662-10	SW04	Total/NA	Solid	8015 NM	
890-4662-11	SW05	Total/NA	Solid	8015 NM	
890-4662-12	SW06	Total/NA	Solid	8015 NM	
890-4662-13	SW07	Total/NA	Solid	8015 NM	
890-4662-14	SW08	Total/NA	Solid	8015 NM	
890-4662-15	SW09	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4662-1
SDG: 03C1558214

GC Semi VOA (Continued)

Analysis Batch: 53581 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4662-16	SW10	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 53473

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4662-1	FS25	Soluble	Solid	DI Leach	
890-4662-2	FS26	Soluble	Solid	DI Leach	
890-4662-3	FS27	Soluble	Solid	DI Leach	
890-4662-4	FS28	Soluble	Solid	DI Leach	
890-4662-5	FS29	Soluble	Solid	DI Leach	
890-4662-6	FS30	Soluble	Solid	DI Leach	
890-4662-7	FS31	Soluble	Solid	DI Leach	
890-4662-8	FS32	Soluble	Solid	DI Leach	
890-4662-9	SW03	Soluble	Solid	DI Leach	
890-4662-10	SW04	Soluble	Solid	DI Leach	
MB 880-53473/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-53473/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-53473/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4662-1 MS	FS25	Soluble	Solid	DI Leach	
890-4662-1 MSD	FS25	Soluble	Solid	DI Leach	

Leach Batch: 53474

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4662-11	SW05	Soluble	Solid	DI Leach	
890-4662-12	SW06	Soluble	Solid	DI Leach	
890-4662-13	SW07	Soluble	Solid	DI Leach	
890-4662-14	SW08	Soluble	Solid	DI Leach	
890-4662-15	SW09	Soluble	Solid	DI Leach	
890-4662-16	SW10	Soluble	Solid	DI Leach	
MB 880-53474/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-53474/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-53474/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-28466-A-1-E MS	Matrix Spike	Soluble	Solid	DI Leach	
880-28466-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
880-28467-A-7-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-28467-A-7-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 53587

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4662-1	FS25	Soluble	Solid	300.0	53473
890-4662-2	FS26	Soluble	Solid	300.0	53473
890-4662-3	FS27	Soluble	Solid	300.0	53473
890-4662-4	FS28	Soluble	Solid	300.0	53473
890-4662-5	FS29	Soluble	Solid	300.0	53473
890-4662-6	FS30	Soluble	Solid	300.0	53473
890-4662-7	FS31	Soluble	Solid	300.0	53473
890-4662-8	FS32	Soluble	Solid	300.0	53473
890-4662-9	SW03	Soluble	Solid	300.0	53473
890-4662-10	SW04	Soluble	Solid	300.0	53473
MB 880-53473/1-A	Method Blank	Soluble	Solid	300.0	53473

QC Association Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4662-1
SDG: 03C1558214

HPLC/IC (Continued)

Analysis Batch: 53587 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-53473/2-A	Lab Control Sample	Soluble	Solid	300.0	53473
LCSD 880-53473/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	53473
890-4662-1 MS	FS25	Soluble	Solid	300.0	53473
890-4662-1 MSD	FS25	Soluble	Solid	300.0	53473

Analysis Batch: 53670

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4662-11	SW05	Soluble	Solid	300.0	53474
890-4662-12	SW06	Soluble	Solid	300.0	53474
890-4662-13	SW07	Soluble	Solid	300.0	53474
890-4662-14	SW08	Soluble	Solid	300.0	53474
890-4662-15	SW09	Soluble	Solid	300.0	53474
890-4662-16	SW10	Soluble	Solid	300.0	53474
MB 880-53474/1-A	Method Blank	Soluble	Solid	300.0	53474
LCS 880-53474/2-A	Lab Control Sample	Soluble	Solid	300.0	53474
LCSD 880-53474/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	53474
880-28466-A-1-E MS	Matrix Spike	Soluble	Solid	300.0	53474
880-28466-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	53474
880-28467-A-7-B MS	Matrix Spike	Soluble	Solid	300.0	53474
880-28467-A-7-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	53474

Lab Chronicle

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4662-1
SDG: 03C1558214

Client Sample ID: FS25

Lab Sample ID: 890-4662-1
Matrix: Solid
Date Collected: 05/12/23 09:30
Date Received: 05/15/23 09:36

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	53663	05/18/23 11:59	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53967	05/24/23 01:37	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54071	05/24/23 11:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			53581	05/17/23 10:58	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	53486	05/16/23 13:04	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53447	05/16/23 20:51	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	53473	05/16/23 11:58	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53587	05/18/23 03:21	CH	EET MID

Client Sample ID: FS26

Lab Sample ID: 890-4662-2
Matrix: Solid
Date Collected: 05/12/23 09:35
Date Received: 05/15/23 09:36

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	53663	05/18/23 11:59	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53967	05/24/23 01:58	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54071	05/24/23 11:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			53581	05/17/23 10:58	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	53486	05/16/23 13:04	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53447	05/16/23 21:51	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	53473	05/16/23 11:58	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53587	05/18/23 03:37	CH	EET MID

Client Sample ID: FS27

Lab Sample ID: 890-4662-3
Matrix: Solid
Date Collected: 05/12/23 10:05
Date Received: 05/15/23 09:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	53663	05/18/23 11:59	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53967	05/24/23 02:18	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54071	05/24/23 11:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			53581	05/17/23 10:58	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	53486	05/16/23 13:04	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53447	05/16/23 22:11	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	53473	05/16/23 11:58	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	53587	05/18/23 03:43	CH	EET MID

Client Sample ID: FS28

Lab Sample ID: 890-4662-4
Matrix: Solid
Date Collected: 05/12/23 09:40
Date Received: 05/15/23 09:36

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	53663	05/18/23 11:59	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53967	05/24/23 02:39	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54071	05/24/23 11:22	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4662-1
SDG: 03C1558214

Client Sample ID: FS28

Lab Sample ID: 890-4662-4
Matrix: Solid
Date Collected: 05/12/23 09:40
Date Received: 05/15/23 09:36

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			53581	05/17/23 10:58	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	53486	05/16/23 13:04	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53447	05/16/23 22:31	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	53473	05/16/23 11:58	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53587	05/18/23 03:59	CH	EET MID

Client Sample ID: FS29

Lab Sample ID: 890-4662-5
Matrix: Solid
Date Collected: 05/12/23 09:45
Date Received: 05/15/23 09:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	53663	05/18/23 11:59	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53967	05/24/23 02:59	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54071	05/24/23 11:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			53581	05/17/23 10:58	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	53486	05/16/23 13:04	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53447	05/16/23 22:51	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	53473	05/16/23 11:58	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53587	05/18/23 04:04	CH	EET MID

Client Sample ID: FS30

Lab Sample ID: 890-4662-6
Matrix: Solid
Date Collected: 05/12/23 09:50
Date Received: 05/15/23 09:36

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	53663	05/18/23 11:59	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53967	05/24/23 03:20	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54071	05/24/23 11:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			53581	05/17/23 10:58	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	53486	05/16/23 13:04	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53447	05/16/23 23:12	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	53473	05/16/23 11:58	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53587	05/18/23 04:09	CH	EET MID

Client Sample ID: FS31

Lab Sample ID: 890-4662-7
Matrix: Solid
Date Collected: 05/12/23 09:55
Date Received: 05/15/23 09:36

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	53663	05/18/23 11:59	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53967	05/24/23 03:40	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54071	05/24/23 11:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			53581	05/17/23 10:58	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	53486	05/16/23 13:04	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53447	05/16/23 23:33	SM	EET MID

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Lab Chronicle

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4662-1
SDG: 03C1558214

Client Sample ID: FS31

Lab Sample ID: 890-4662-7
Matrix: Solid
Date Collected: 05/12/23 09:55
Date Received: 05/15/23 09:36

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	53473	05/16/23 11:58	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53587	05/18/23 04:15	CH	EET MID

Client Sample ID: FS32

Lab Sample ID: 890-4662-8
Matrix: Solid
Date Collected: 05/12/23 10:00
Date Received: 05/15/23 09:36

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	53663	05/18/23 11:59	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53967	05/24/23 04:01	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54071	05/24/23 11:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			53581	05/17/23 10:58	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	53486	05/16/23 13:04	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53447	05/16/23 23:53	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	53473	05/16/23 11:58	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53587	05/18/23 04:20	CH	EET MID

Client Sample ID: SW03

Lab Sample ID: 890-4662-9
Matrix: Solid
Date Collected: 05/12/23 08:25
Date Received: 05/15/23 09:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	53663	05/18/23 11:59	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53967	05/24/23 04:21	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54071	05/24/23 11:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			53581	05/17/23 10:58	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	53486	05/16/23 13:04	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53447	05/17/23 00:13	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	53473	05/16/23 11:58	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53587	05/18/23 04:26	CH	EET MID

Client Sample ID: SW04

Lab Sample ID: 890-4662-10
Matrix: Solid
Date Collected: 05/12/23 08:30
Date Received: 05/15/23 09:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	53663	05/18/23 11:59	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53967	05/24/23 04:41	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54071	05/24/23 11:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			53581	05/17/23 10:58	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	53486	05/16/23 13:04	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53447	05/17/23 00:33	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	53473	05/16/23 11:58	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53587	05/18/23 04:31	CH	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4662-1
SDG: 03C1558214

Client Sample ID: SW05

Lab Sample ID: 890-4662-11
Matrix: Solid
Date Collected: 05/12/23 08:35
Date Received: 05/15/23 09:36

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	53663	05/18/23 11:59	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53967	05/24/23 06:32	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54071	05/24/23 11:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			53581	05/17/23 10:58	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	53486	05/16/23 13:04	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53447	05/17/23 01:14	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	53474	05/16/23 11:59	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53670	05/18/23 10:39	CH	EET MID

Client Sample ID: SW06

Lab Sample ID: 890-4662-12
Matrix: Solid
Date Collected: 05/12/23 08:40
Date Received: 05/15/23 09:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	53663	05/18/23 11:59	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53967	05/24/23 06:52	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54071	05/24/23 11:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			53581	05/17/23 10:58	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	53486	05/16/23 13:04	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53447	05/17/23 01:35	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	53474	05/16/23 11:59	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53670	05/18/23 10:55	CH	EET MID

Client Sample ID: SW07

Lab Sample ID: 890-4662-13
Matrix: Solid
Date Collected: 05/12/23 08:45
Date Received: 05/15/23 09:36

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	53970	05/23/23 11:11	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54128	05/25/23 17:02	SM	EET MID
Total/NA	Analysis	Total BTEX		1			54071	05/26/23 17:23	SM	EET MID
Total/NA	Analysis	8015 NM		1			53581	05/17/23 10:58	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	53486	05/16/23 13:04	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53447	05/17/23 01:55	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	53474	05/16/23 11:59	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53670	05/18/23 11:01	CH	EET MID

Client Sample ID: SW08

Lab Sample ID: 890-4662-14
Matrix: Solid
Date Collected: 05/12/23 08:50
Date Received: 05/15/23 09:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	53970	05/23/23 11:11	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54128	05/25/23 17:22	SM	EET MID
Total/NA	Analysis	Total BTEX		1			54071	05/26/23 17:23	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4662-1
SDG: 03C1558214

Client Sample ID: SW08

Lab Sample ID: 890-4662-14
Matrix: Solid
Date Collected: 05/12/23 08:50
Date Received: 05/15/23 09:36

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			53581	05/17/23 10:58	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	53486	05/16/23 13:04	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53447	05/17/23 02:15	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	53474	05/16/23 11:59	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53670	05/18/23 11:06	CH	EET MID

Client Sample ID: SW09

Lab Sample ID: 890-4662-15
Matrix: Solid
Date Collected: 05/12/23 08:55
Date Received: 05/15/23 09:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	53970	05/23/23 11:11	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54128	05/25/23 17:43	SM	EET MID
Total/NA	Analysis	Total BTEX		1			54071	05/26/23 17:23	SM	EET MID
Total/NA	Analysis	8015 NM		1			53581	05/17/23 10:58	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	53486	05/16/23 13:04	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53447	05/17/23 02:35	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	53474	05/16/23 11:59	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53670	05/18/23 11:11	CH	EET MID

Client Sample ID: SW10

Lab Sample ID: 890-4662-16
Matrix: Solid
Date Collected: 05/12/23 09:00
Date Received: 05/15/23 09:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	53970	05/23/23 11:11	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54128	05/25/23 18:03	SM	EET MID
Total/NA	Analysis	Total BTEX		1			54071	05/26/23 17:23	SM	EET MID
Total/NA	Analysis	8015 NM		1			53581	05/17/23 10:58	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	53486	05/16/23 13:04	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53447	05/17/23 02:56	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	53474	05/16/23 11:59	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	53670	05/18/23 11:17	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 N 31 124H

Job ID: 890-4662-1
SDG: 03C1558214

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-25	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: Remuda N 31 124H

Job ID: 890-4662-1
SDG: 03C1558214

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 N 31 124H

Job ID: 890-4662-1
SDG: 03C1558214

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4662-1	FS25	Solid	05/12/23 09:30	05/15/23 09:36	3'
890-4662-2	FS26	Solid	05/12/23 09:35	05/15/23 09:36	3'
890-4662-3	FS27	Solid	05/12/23 10:05	05/15/23 09:36	3'
890-4662-4	FS28	Solid	05/12/23 09:40	05/15/23 09:36	3'
890-4662-5	FS29	Solid	05/12/23 09:45	05/15/23 09:36	3'
890-4662-6	FS30	Solid	05/12/23 09:50	05/15/23 09:36	3'
890-4662-7	FS31	Solid	05/12/23 09:55	05/15/23 09:36	1'
890-4662-8	FS32	Solid	05/12/23 10:00	05/15/23 09:36	1'
890-4662-9	SW03	Solid	05/12/23 08:25	05/15/23 09:36	0-2
890-4662-10	SW04	Solid	05/12/23 08:30	05/15/23 09:36	0-3
890-4662-11	SW05	Solid	05/12/23 08:35	05/15/23 09:36	0-3
890-4662-12	SW06	Solid	05/12/23 08:40	05/15/23 09:36	0-3
890-4662-13	SW07	Solid	05/12/23 08:45	05/15/23 09:36	0-3
890-4662-14	SW08	Solid	05/12/23 08:50	05/15/23 09:36	0-2
890-4662-15	SW09	Solid	05/12/23 08:55	05/15/23 09:36	0-3
890-4662-16	SW10	Solid	05/12/23 09:00	05/15/23 09:36	0-2

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 2

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

Work Order Comments

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

Project Name:	Remuda N 31 124H	Turn Around	
Project Number:	03C1558214	☑ Routine ☐ Rush	
Project Location:		Due Date:	
Sampler's Name:	Connor Whitman	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	TRM-007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	3.2
Total Containers:		Corrected Temperature:	3.0

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	CHLORIDES (EPA: 3000.0)	TPH (8015)	BTEX (8021)
FS25	S	5/12/23	9:30	3'	C	1	X		
FS26			9:35	3'	C	1			
FS27			10:05	3'	C	1			
FS28			9:40	3'	C	1			
FS29			9:45	3'	C	1			
FS30			9:50	3'	C	1			
FS31			9:55	1'	C	1			
FS32			10:00	1'	C	1			
					CW				

890-4662 Chain of Custody

Sample Comments

Incident ID: nAPP2233950022
Cost Center: 1674811001
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	Amanda Stutz	5/15/23 0936	4		
3			6		
5					

Revised Date: 08/25/2020 Rev. 2020.2

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 2 of 2

Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum	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 N 31 124H	Turn Around	☑ Routine ☐ Rush
Project Number:	03C1558214	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:		

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: CHLORIDES (EPA: 3000.0)	TPH (8015)	BTEX (8021)
SW03	S	5/12/23	8:25	0-2	C	1				
SW04			8:30	0-3		1				
SW05			8:35	0-3		1				
SW06			8:40	0-3		1				
SW07			8:45	0-3		1				
SW08			8:50	0-2		1				
SW09			8:55	0-3		1				
SW10			9:00	0-2		1				
									CV	

Sample Comments

Incident ID: nAPP2233950022
Cost Center: 1674811001
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		5/15/23 0436	4		
3			6		
5					

Revised Date: 08/25/2020 Rev 2020.2

5/26/2023

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4662-1
SDG Number: 03C1558214

Login Number: 4662
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4662-1
SDG Number: 03C1558214

Login Number: 4662
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 05/16/23 10:43 AM

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

ENSOLUM

APPENDIX E

NMOCD Notifications

Tacoma Morrissey

From: Green, Garrett J <garrett.green@exxonmobil.com>
Sent: Monday, April 24, 2023 2:55 PM
To: Enviro, OCD, EMNRD; Bratcher, Michael, EMNRD
Cc: Tacoma Morrissey; DelawareSpills /SM
Subject: XTO- Extension Request- Remuda N 31 124H- Incident Number nAPP2233950022

[**EXTERNAL EMAIL**]

All,

XTO is requesting an extension for the current 90- day deadline, for submitting a remediation work plan or closure report required in 19.15.29.12.B.(1) NMAC for Remuda N 31 124H (Incident Number nAPP2233950022). The release was discovered on November 22, 2022. Initial site assessment activities and remediation activities will begin next week. In order to complete remediation activities and submit a remediation work plan or closure report, XTO requests an extension until June 23, 2023.

Thank you,

Garrett Green
Environmental Coordinator
Delaware Business Unit
(575) 200-0729
Garrett.Green@ExxonMobil.com

XTO Energy, Inc.
3104 E. Greene Street | Carlsbad, NM 88220 | M: (575)200-0729

From:	Hamlet, Robert, EMNRD
To:	Green, Garrett J
Cc:	Tacoma Morrissey; DelawareSpills /SM; Bratcher, Michael, EMNRD; Nobui, Jennifer, EMNRD; Harimon, Jocelyn, EMNRD
Subject:	(Extension Denied) - XTO - Remuda N 31 124H- Incident Number nAPP2233950022
Date:	Tuesday, April 25, 2023 11:40:07 AM

[**EXTERNAL EMAIL**]

RE: Incident #**NAPP2233950022**

Garrett,

A remediation plan was due on 2/20/2023. Your request for extension is **denied**. An extension needs to be requested before the 90 day Remediation Deadline has expired. Include this e-mail correspondence in the remediation and/or closure report.

Robert Hamlet ● Environmental Specialist - Advanced
Environmental Bureau
EMNRD - Oil Conservation Division
506 W. Texas Ave.| Artesia, NM 88210
575.909.0302 | robert.hamlet@state.nm.us
http://www.emnrd.state.nm.us/OCD/

From: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Sent: Tuesday, April 25, 2023 9:28 AM
To: Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>
Subject: FW: [EXTERNAL] XTO- Extension Request- Remuda N 31 124H- Incident Number nAPP2233950022

Jocelyn Harimon ● Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
1220 South St. Francis Drive | Santa Fe, NM 87505
(505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov
http:// **www.emnrd.nm.gov**

From: Green, Garrett J <garrett.green@exxonmobil.com>
Sent: Monday, April 24, 2023 1:55 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>
Cc: Tacoma Morrissey <tmorrissey@ensolum.com>; DelawareSpills /SM <DelawareSpills@exxonmobil.com>
Subject: [EXTERNAL] XTO- Extension Request- Remuda N 31 124H- Incident Number nAPP2233950022

All,

XTO is requesting an extension for the current 90- day deadline, for submitting a remediation work plan or closure report required in 19.15.29.12.B.(1) NMAC for Remuda N 31 124H (Incident Number nAPP2233950022). The release was discovered on November 22, 2022. Initial site assessment activities and remediation activities will begin next week. In order to complete remediation activities and submit a remediation work plan or closure report, XTO requests an extension until June 23, 2023.

Thank you,

Garrett Green
Environmental Coordinator
Delaware Business Unit
(575) 200-0729
Garrett.Green@ExxonMobil.com

XTO Energy, Inc.
3104 E. Greene Street | Carlsbad, NM 88220 | M: (575)200-0729

Tacoma Morrissey

From: Green, Garrett J <garrett.green@exxonmobil.com>
Sent: Thursday, April 27, 2023 4:33 PM
To: Enviro, OCD, EMNRD; Bratcher, Michael, EMNRD; Hamlet, Robert, EMNRD; Harimon, Jocelyn, EMNRD
Cc: Tacoma Morrissey; DelawareSpills /SM
Subject: XTO - Sampling Notification (Week of 5/1/23 - 5/5/23)

[**EXTERNAL EMAIL**]

All,

XTO plans to complete final sampling activities at the sites listed below for the week of May 1, 2023.

Tuesday
- Remuda N 31 124H / nAPP2233950022

Wednesday
- Remuda N 31 124H / nAPP2233950022
- PLU PC 17 BATTERY/ nAPP2233951574

Thursday
- PLU PC 17 BATTERY/ nAPP2233951574
- BEU 169 / NAB1530834217

Friday
- PLU PC 17 BATTERY/ nAPP2233951574
- BEU 169 / NAB1530834217

Thank you,

Garrett Green
Environmental Coordinator
Delaware Business Unit
(575) 200-0729
Garrett.Green@ExxonMobil.com

XTO Energy, Inc.
3104 E. Greene Street | Carlsbad, NM 88220 | M: (575)200-0729

From: Green, Garrett J
To: Enviro, OCD, EMNRD; Bratcher, Michael, EMNRD; Harimon, Jocelyn, EMNRD; Hamlet, Robert, EMNRD
Cc: DelawareSpills /SM; Tacoma Morrissey
Subject: XTO - Sampling Notification (Week of 5/8/23 - 5/12/23)
Date: Friday, May 5, 2023 8:18:20 AM

[**EXTERNAL EMAIL**]

All,

XTO plans to complete final sampling activities at the sites listed below for the week of May 8, 2023.

Monday
- Remuda N 31 124H / nAPP2233950022

Tuesday
- Remuda N 31 124H / nAPP2233950022
- Ross Draw 3031/ nAPP2227244441 and NAPP2300442748

Wednesday
- Ross Draw 3031/ nAPP2227244441 and NAPP2300442748

Thursday
- Ross Draw 3031/ nAPP2227244441 and NAPP2300442748
- PLU PC 17 BATTERY/ nAPP2233951574

Friday
- Ross Draw 3031/ nAPP2227244441 and NAPP2300442748
- PLU PC 17 BATTERY/ nAPP2233951574
- Big Sinks 2-24-30 / NAB1913729531

Thank you,

Garrett Green
Environmental Coordinator
Delaware Business Unit
(575) 200-0729
Garrett.Green@ExxonMobil.com

XTO Energy, Inc.
3104 E. Greene Street | Carlsbad, NM 88220 | M: (575)200-0729

ENSOLUM

APPENDIX F

SLO Reclamation Plan

Reclamation Plan

The western portion of release went off pad into an adjacent ROW and as such, reclamation requirements set forth in 19.15.29.13.D (1) NMAC for the top 4 feet of areas that will be reclaimed following remediation will be applied. The following Reclamation Plan addresses reclamation of the off-pad excavation area and has been developed through review and application of the *Revegetation Guidelines Handbook for Southeastern New Mexico* – Version 1-1, authored by NMSLO and dated 2018, and 19.2.100.67 NMAC – *Surface Reclamation on State Oil and Gas Leases*:

- The excavation will be backfilled with locally sourced caliche and topsoil to match surrounding grade. A minimum of 1-foot of topsoil will be placed on top of the caliche to support vegetative growth within the disturbed area;
- Soil in the vicinity of the release in the pasture will be assessed for the proper application of *Table 3 - Revegetation Plans, Codes, and Soil Types for Southeastern New Mexico*;
- The backfilled areas will be seeded utilizing a weed-free seed mix designed listed in the table below;

Common Name and Preferred Variety	Scientific Name	PLS Per Acre
Annual Quick-cover Grass		
Oats	*Avena sativa*	1.00
Cool Season Grass		
Western Wheatgrass	*Agropyron smithii*	2.50
Warm-Season Grass		
Black or Blue Grama	*Boutela gracilis var. Alma*	1.50
Little Bluestem	*Schizachyrium scoparium*	0.50
Sand Dropseed	*Sporobolus cryptandrus*	0.50
Sand Bluestem	*Andropogon hallii*	1.00
Indiangrass	*Sorghastrum nutans*	0.50
Sideoats Grama	*Bouteloua curtipendula var. Vaughn*	2.00
Wildflowers/ Forbs		
White prairie clover	*Dalea candida*	0.10
Scarlet globemallow	*Sphaeralcea coccinea*	0.10
Chia Sage	*Salvia columbariae*	0.10
Annual sunflower	*Helianthus annuus*	0.10
Annual buckwheat	*Eriogonum annuum*	0.10

- The seed mixture will be distributed with one or more of the following methods: push broadcaster seed spreader, tractor operated broadcast seed spreader, and/or drill seeding based on Site conditions and contractor availability;
- Application of the seed mixture will be at a coverage of 10 pounds of seeds per acre of reclaimed pasture with distribution by a drilling method or 20 pounds of seeds per acre of reclaimed pasture with distribution by a broadcast method;
- Erosion control management is not anticipated since the proposed excavation area is relatively flat; however, in the event erosion control management is necessary to support

vegetation growth and minimize erosion until the root structures take hold, the application of the following best management practices (BMPs) could potentially include:

  - Prompt revegetation with mulching and contouring the ground surface to limit surface water flow;
  - The placement of waddles in areas with a propensity for high run off rates;
  - Straw cover if high winds are anticipated to support moisture retention and limit wind from blowing seeds away before they have had time to germinate; and/or
  - Other erosional control best management practices (BMP) as necessary to support timely and healthy regrowth of vegetation in disturbed areas;

- Backfilling of the excavation will be scheduled and communicated with NMSLO prior to initiation;
- Seeding is anticipated to be completed in the Fall when temperatures and precipitation are most conducive for vegetation growth. In general, seeding should occur approximately one month after the last frost in the Spring up until approximately one month prior to the first fall frost. NMSLO has recognized the optimal time to seed is between July and early September, which will be the preferred timeframe for this Site;
- If seeding occurs outside of the 180 days approved in the current fully executed ROE Permit, a new ROE Permit will be executed prior to entering the pasture for reclamation activities;
- Annual inspections (at a minimum) will take place on the location until revegetation is consistent with local natural vegetation density. The Site will be inspected the following Fall to assess the success of regrowth. If necessary, an additional application of the NMSLO-approved pure live seed mixture will be applied as well as any needed BMPs will be installed to support growth and limit erosion; and
- Upon completion of revegetation, a copy of the C-103 submitted to NMOCD will also be submitted to NMSLO for final inspection and release.

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 231877

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 231877
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	The Remediation Plan is Conditionally Approved. If a water well does not exist within ½ mile of the release, the responsible party may elect to drill a boring to 105' bgs to determine the presence or absence of groundwater at that interval. Please include the results in the Closure Report. All samples must be analyzed for all constituents listed in Table I of 19.15.29.12 NMAC. Please collect confirmation samples, representing no more than 200 ft2. Sidewall/Edge samples should be delineated/excavated to 600 mg/kg for chlorides and 100 mg/kg for TPH to define the edge of the release. All sidewall samples should be taken from the sidewall of the excavation. Any off-pad area must meet reclamation standards set forth in the OCD Spill Rule. The work will need to occur in 90 days after the report has been reviewed.	11/29/2023