



January 22, 2026

New Mexico Oil Conservation Division

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

**Re: Closure Request
Remuda N 31 124H
Incident Number nAPP2233950022
API Number 30-015-44415
Eddy County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared this *Closure Request* to document excavation and soil sampling activities performed at the Remuda N 31 124H (Site). The purpose of excavation and soil sampling activities, conducted in accordance with an approved *Remediation Work Plan (Work Plan)*, was to address impacts to soil resulting from a release of produced water and crude oil at the Site. XTO is submitting this *Closure Request*, describing excavation activities that have occurred and requesting no further remediation for Incident Number nAPP2233950022.

SITE DESCRIPTION AND RELEASE BACKGROUND

The Site is located in Unit K, Section 31, Township 23 South, Range 30 East, in Eddy County, New Mexico (32.25947°, -103.92244°) and is associated with oil and gas exploration and production operations on State Trust Land managed by the New Mexico State Land Office (NMSLO) under Lease number E052290011.

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 pipeline right-of-way (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) on a Release Notification Form C-141 (C-141) on December 5, 2022. The release was assigned Incident Number nAPP2233950022.

Ensolum conducted Site assessment, delineation, and excavation activities and presented the results in a *Work Plan*. The *Work Plan* was submitted on June 22, 2023, and proposed installation of a soil boring to confirm depth to groundwater data, execution of a Right of Entry (ROE) permit from NMSLO, and excavation of impacted soil in the pipeline ROW. The *Work Plan* was conditionally approved by the NMOCD on November 29, 2023. The conditions of approval were as follows:

- *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.*
 - The Work Plan included the installation of a soil boring to determine depth to groundwater.
- *All samples must be analyzed for all constituents listed in Table I of 19.15.29.12 NMAC.*
 - All confirmation soil samples were analyzed for all contaminants of concern (COCs).

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- Please collect confirmation samples, representing no more than 200 ft².
 - All confirmation soil samples were collected at the approved sampling frequency.
- 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.
 - Sidewalls would be collected from the excavation and would meet the Closure Criteria or reclamation requirement in off pad areas. Waste-containing soil identified on pad would be defined with delineation soil sampling.
- Any off-pad area must meet reclamation standards set forth in the OCD Spill Rule.
 - The reclamation requirement was applied in the adjacent pipeline ROW in accordance with the 19.15.29.13.D (1) NMAC.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

In January 2025, as proposed in the approved *Work Plan* and stated in the conditions of approval, a soil boring permitted with the New Mexico Office of the State Engineer (NMOSE) as C-04905 was advanced to a depth of 101 feet below ground surface (bgs) via hollow stem auger drilling method. The soil boring was located approximately 0.09 miles northeast of the Site and is depicted on Figure 1. A field geologist logged and described soils continuously. The soil boring was left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period without observing groundwater, it was confirmed groundwater beneath the Site is greater than 100 feet bgs. The soil boring was properly abandoned using drill cuttings and hydrated bentonite chips. The referenced Well Record and Log is included in Appendix A and all wells used for depth to groundwater determination are depicted on Figure 1.

The closest continuously flowing or significant watercourse is greater than 300 feet from 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 located in a medium potential karst designation area; however, the release, majority of the remediation activities, and approval of the *Work Plan* occurred prior to December 1, 2024, the effective date of the NMOCD published *Karst Potential Occurrence Zone Public Notice*. All potential Site receptors are identified on Figure 1.

As documented in the approved *Work Plan* with the confirmed regional depth to groundwater, 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, the adjacent pipeline ROW, 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.

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NMSLO CULTURAL RESOURCES AND BIOLOGICAL REVIEW

Cultural Properties Protection

The western portion of release went off pad into the adjacent pipeline ROW. As a result, the release location was assessed to comply with the Cultural Properties Protection Rule (CPP) prior to disturbing the surface with mechanical equipment. An Archaeological Records Management System (ARMS) review was performed by Beaver Creek Archeology (BCA) for the pipeline ROW prior to disturbance. The entire area of potential effect (APE) had been previously surveyed to current standards and cultural properties were found near the survey area.

- Site LA147326 is on file with New Mexico Cultural Resource Information System (NMCRIS) as being in the workspace; however, the Bureau of Land Management (BLM) records indicate the site had been updated under NMCRIS Activity No. 138735 to be outside of the workspace. Due to the presence of a site outside of the workspace, but in close proximity, BCA recommended an archaeological monitor be present when work activities occur within 100 feet of the site boundary.

An approved NMSLO Cultural Resources Cover Sheet Exhibit is included in Appendix B.

Biological Review

Ensolum personnel conducted a desktop review to establish if the Site is within an area of possible threatened, endangered, and sensitive wildlife and plant species, environmentally sensitive areas, surface waters, and sensitive soils.

- A review of the U.S. Fish and Wildlife Services Information for Planning and Consultation (IPaC) resources indicated there are no critical wildlife habitats at the Site but potential affected habitats for the Piping Plover and Texas Hornshell Clam were noted. A review of the BLM New Mexico Plant Wildlife Habitat maps indicated potential habitats for Scheer's beehive cactus and Tharp's blue-star near the Site. Threatened and endangered plant species are potentially present in the area surrounding the Site; however, no protected species were identified during remediation activities.
- The Site is located within an area of possible range of the Lesser Prairie Chicken habitat based on a review of NMSLO Candidate Conservation Agreement with Assurances (CCAA) map.
 - From March 1st through June 15th, no remediation activities occurred between the hours of 3:00 am to 9:00 am to protect any Lesser Prairie Chickens within the area.
- The Site is underlain by medium potential karst designation area, however the release and approval of the *Work Plan* occurred prior to the effective date of the NMOCD published *Karst Potential Occurrence Zone Public Notice* and depth to groundwater is estimated to be greater than 101 feet bgs, as determined by the soil boring installed to determine depth to groundwater.
- The Natural Resources Conservation Service (NRCS) Web Soil Survey classifies the soil type at the Site as Kermit-Berino fine sands. The Kermit-Berino fine sands are not considered a sensitive soil per the NMSLO guidelines.

PREVIOUSLY COMPLETED REMEDIATION ACTIVITIES

As documented in the approved *Work Plan*, Ensolum personnel were onsite between April 26, 2023 and May 3, 2023, to conduct Site assessment activities and delineate the release extent based on information provided on the C-141 and visual observations. The pad boundary, release extent, point of

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release, pipeline ROW, and associated infrastructure and pipelines are depicted on Figure 2. Delineation soil samples SS01 through SS09 were collected within and around the release extent at a depth of 0.5 feet bgs to assess the extent of the release. Delineation potholes PH01 through PH05 were advanced via hand auger and track hoe within the release extent, at the locations of delineation soil samples SS01 through SS05, respectively. 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 to 16 feet bgs. Soil from the delineation soil 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 C. The release extent and soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 3. Photographic documentation was completed during the Site visits, and a photographic log is included in Appendix D.

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 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 TPH-GRO/TPH-DRO and TPH concentrations exceeded the Site Closure Criteria. Laboratory analytical results for delineation soil samples SS06 through SS09, collected at a depth of 0.5 feet bgs around the release extent, indicated all COC concentrations were compliant with the Closure Criteria and reclamation requirement, successfully defining the lateral extent of the release. Laboratory analytical results for the delineation sample collected at 1-foot bgs from pothole PH05 indicated TPH-GRO/TPH-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 all COC concentrations were compliant with the Site Closure Criteria and successfully defined the vertical extent of the release. Based on visible staining in the release extent, elevated field screenings, and laboratory analytical results indicating the presence of impacted soil, excavation appeared warranted.

Ensolum personnel were onsite between May 5 and May 12, 2023, to oversee excavation activities for the on-pad portion of the release extent. Excavation activities were performed using track-mounted backhoe and transport vehicles. To direct excavation activities, soil was field screened for VOCs and chloride as described above. Once field screening indicated impacted soil was adequately removed, 5-point composite soil samples were collected every 200 square feet from the floor and sidewall of the excavation extent. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a resealable plastic bag and homogenized the samples by thoroughly mixing. Composite soil samples FS01 through FS32 were collected from the floor of the excavation at 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. Confirmation sidewall sample SW03 contained aliquots collected from the excavation sidewall located along the edge of the infrastructure. The soil samples were collected, handled, and analyzed at Eurofins following the same procedures as described above. The excavation extent and excavation soil sample locations are presented on Figure 4. Photographic documentation of the excavation activities is included in Appendix D.

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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 Landfill Disposal Facility in Hobbs, New Mexico. Disposal manifests are available upon request.

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. Laboratory analytical results for sidewall SW03 collected along the edge of infrastructure indicated all COCs were compliant with the Closure Criteria and reclamation requirement, confirming the release did not go underneath the equipment. The on-pad excavation floor samples FS13 through FS16, FS21, FS22, FS26, and FS27 as well as excavation sidewall samples SW04 through SW10 indicated chloride concentrations exceeded reclamation requirements. The waste-containing soil is fully delineated and will be addressed at the time of pad abandonment and reclamation activities. The laboratory analytical results are summarized in Table 1, and the complete laboratory analytical reports are included in Appendix E.

Excavation of the impacted soil located in the off-pad area, in the adjacent pipeline ROW, was still required; however, remediation efforts were on hold pending an ARMS review, NMSLO land access approval, scheduling of an archeological monitor as an archeological site was identified near the ROW area, and confirmation of depth to groundwater data. As such, XTO submitted the *Work Plan* detailing the above-mentioned remediation activities completed to date, on June 22, 2023.

ADDITIONAL DELINEATION AND EXCAVATION ACTIVITIES IN THE PIPELINE ROW

Following confirmation of depth to groundwater and land access approval from the NMSLO, XTO proceeded with excavation of impacted and/or waste-containing soil in the pipeline ROW. After further review into remediating the soil in the ROW, an ROE was not needed to complete remediation activities since all assets on the ROW are owned by XTO. The delineation soil sample results indicated soil containing elevated TPH concentrations existed across an approximately 950-square-foot area and extended to a maximum depth of 4 feet bgs.

Between April 10 and April 28, 2025, Ensolum personnel were onsite to oversee excavation activities in the pipeline ROW. Excavation activities were performed using a rubber tire backhoe, hydro-vacuum truck, and transport vehicles. To direct excavation activities, soil was field screened for VOCs and chloride. An additional 150 cubic yards of soil was excavated from a 950-square-foot area in the pipeline ROW. Once field screening indicated impacted and/or waste-containing soil was adequately removed, 5-point composite soil samples were collected every 200 square feet from the floor and sidewall of the excavation extent. The 5-point composite samples were collected by the methods mentioned above. The excavation was completed to a maximum depth of 4 feet bgs. Composite soil samples FS33 through FS38 were collected from the floor of the excavation at depths ranging from 2 feet to 4 feet bgs. Composite sidewall samples SW11 through SW14 were collected from the sidewalls of the excavation at depths ranging from the ground surface to 4 feet bgs. The soil samples were collected, handled, and analyzed following the same procedures as described above with the exception of chloride, which followed Standard Method SM4500 at Cardinal Laboratories (Cardinal) in Hobbs, New Mexico. A BCA archeological monitor was onsite during all remediation activities completed in April 2025.

On June 17, 2025, Ensolum personnel were onsite and collected additional lateral delineation soil samples, SS10 through SS16, at a depth of 0.5 feet bgs, to further define the lateral extent of the previous excavation and waste-containing soil identified on pad from previous analytical results.

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The excavation extent and confirmation and additional delineation soil sample locations are presented on Figure 4. Photographic documentation of the excavation activities is included in Appendix D. The final excavation extent, encompassing both the on-pad and pipeline ROW excavations, measured approximately 7,315 square feet. A total of approximately 860 cubic yards of impacted and/or waste containing soil was removed during the excavation activities. The impacted and waste-containing soil was transported and disposed of at the R360 Landfill Disposal Facility in Hobbs, New Mexico. The final excavation was backfilled, and a representative 5-point composite backfill sample, BF01, was collected.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for delineation soil samples SS10 through SS16 indicated all COC concentrations were compliant with the reclamation requirement, successfully defining the waste containing soil remaining on-pad. Laboratory analytical results for all excavation floor and sidewall samples collected in the pipeline ROW indicated all COC concentrations were compliant with the Closure Criteria and reclamation requirement. Laboratory analytical results for backfill soil sample BF01 confirmed compliance with reclamation requirements. The laboratory analytical results are summarized in Table 1, and the complete laboratory analytical reports are included in Appendix E.

CLOSURE REQUEST

Site assessment, delineation, excavation, and confirmation soil sampling activities were conducted at the Site to address the extent of impacted soil from the November 2022 release of produced water and crude oil onto the well pad and into the adjacent pipeline ROW. Approximately 860 cubic yards of impacted and/or waste-containing soil were excavated from the Site. Laboratory analytical results for all final confirmation soil samples collected indicated COC concentrations were compliant with the Closure Criteria and reclamation requirement, where applicable. Based on the soil sample laboratory analytical results, no further remediation is required. Approximately 200 cubic yards of waste containing soil remain on pad to a maximum depth of 4 feet bgs. The soil will be removed during pad abandonment and reclamation activities.

Excavation of soil has mitigated impacts exceeding the Closure Criteria at the Site. XTO believes these remedial actions are protective of human health, the environment, and groundwater. As such, XTO respectfully requests closure for Incident Number nAPP2233950022.

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

Sincerely,
Ensolum, LLC

Bilkis Moir

Bilkis Moir
Senior Geologist

cc: Robert Woodall, XTO
Richard Kotzur, XTO
NMSLO

T Morrissey

Tacoma Morrissey
Associate Principal

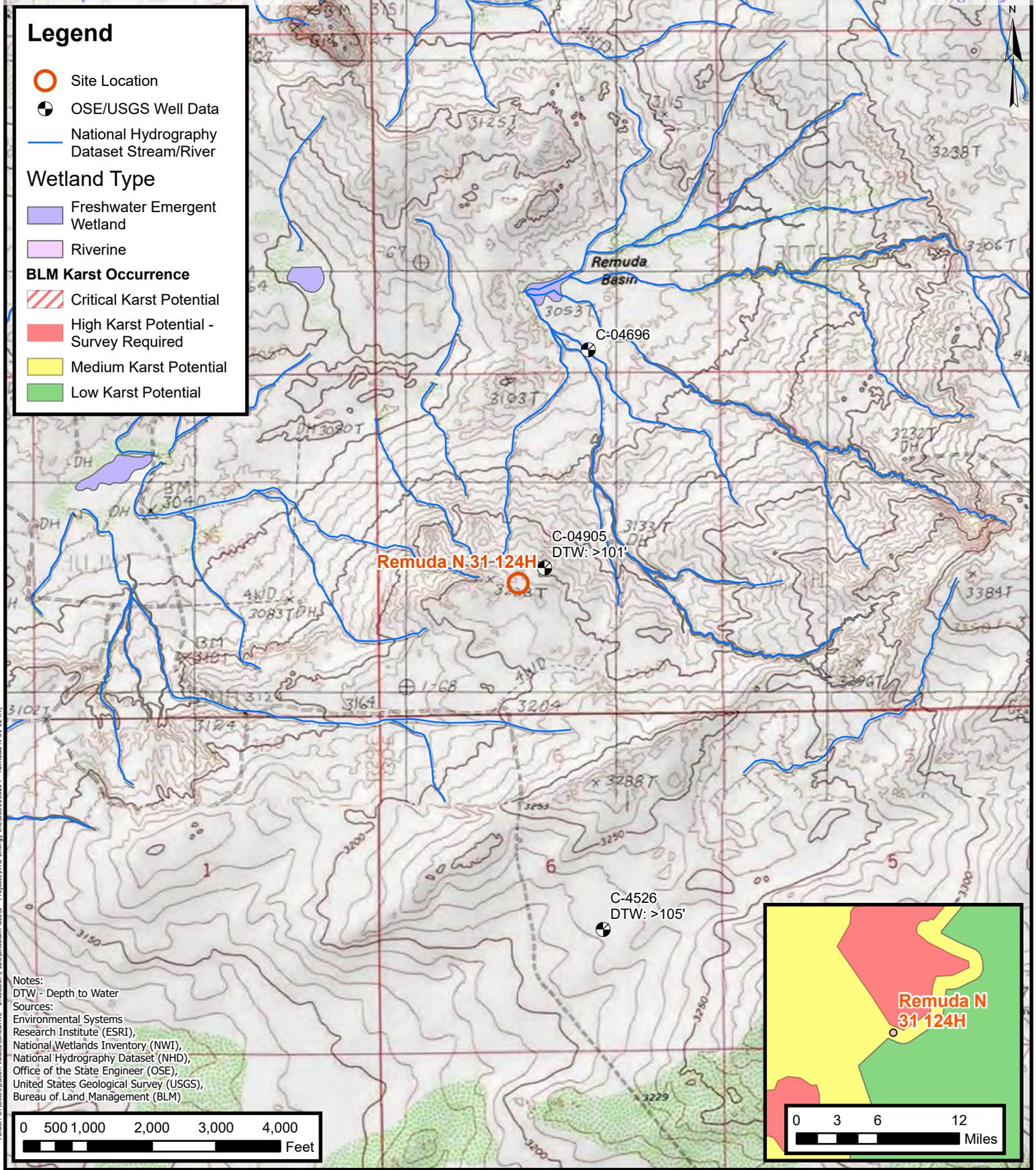
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Appendices:

Figure 1	Site Receptor Map
Figure 2	Site Map
Figure 3	Delineation Soil Sample Locations
Figure 4	Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Referenced Well Records
Appendix B	Land Access References
Appendix C	Lithologic Soil Sampling Logs
Appendix D	Photographic Log
Appendix E	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix F	Spill Volume Calculation



FIGURES



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ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

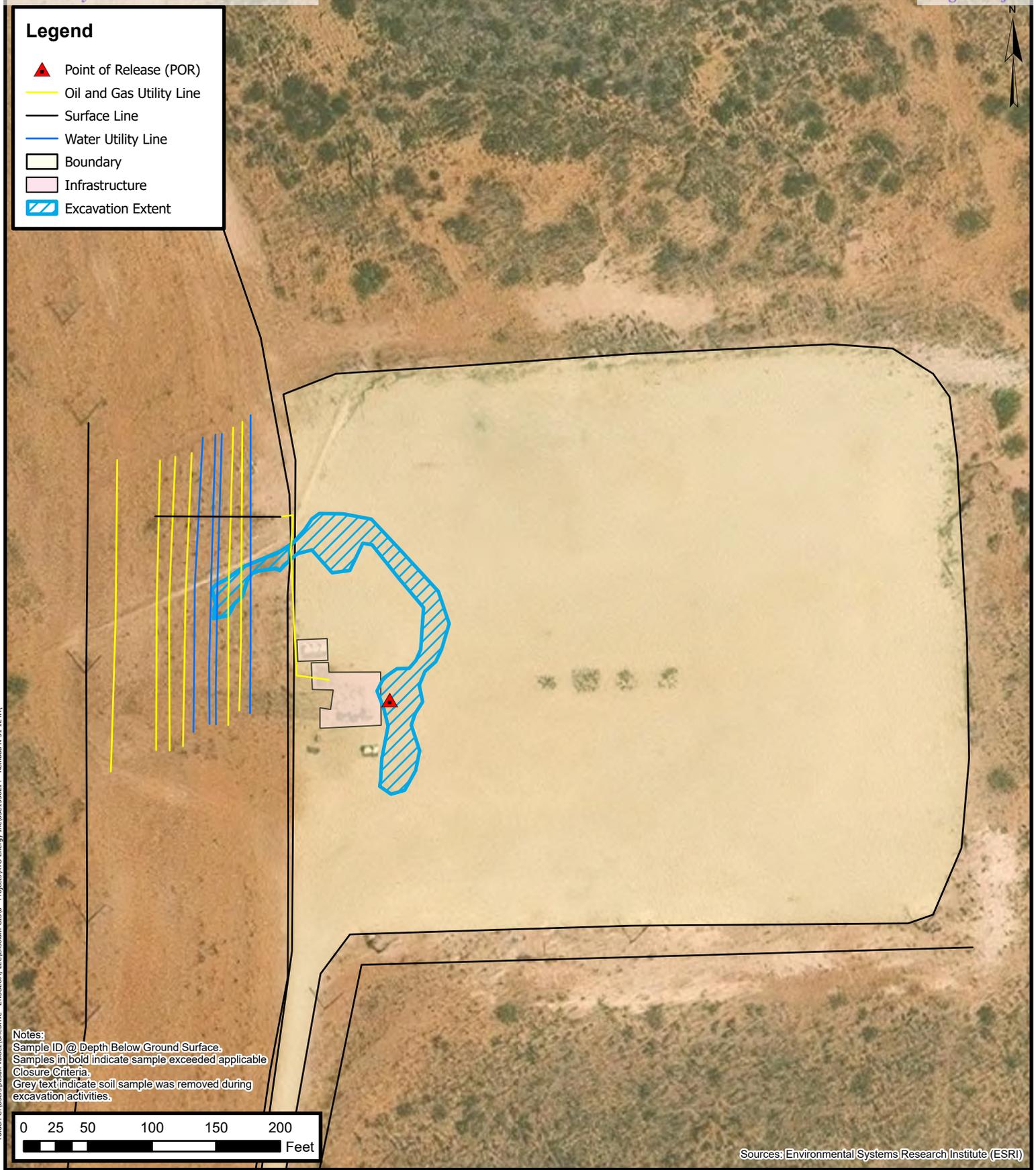
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FIGURE

1

Legend

- ▲ Point of Release (POR)
- Oil and Gas Utility Line
- Surface Line
- Water Utility Line
- Boundary
- Infrastructure
- Excavation Extent



Notes:
 Sample ID @ Depth Below Ground Surface.
 Samples in bold indicate sample exceeded applicable Closure Criteria.
 Grey text indicate soil sample was removed during excavation activities.



Sources: Environmental Systems Research Institute (ESRI)



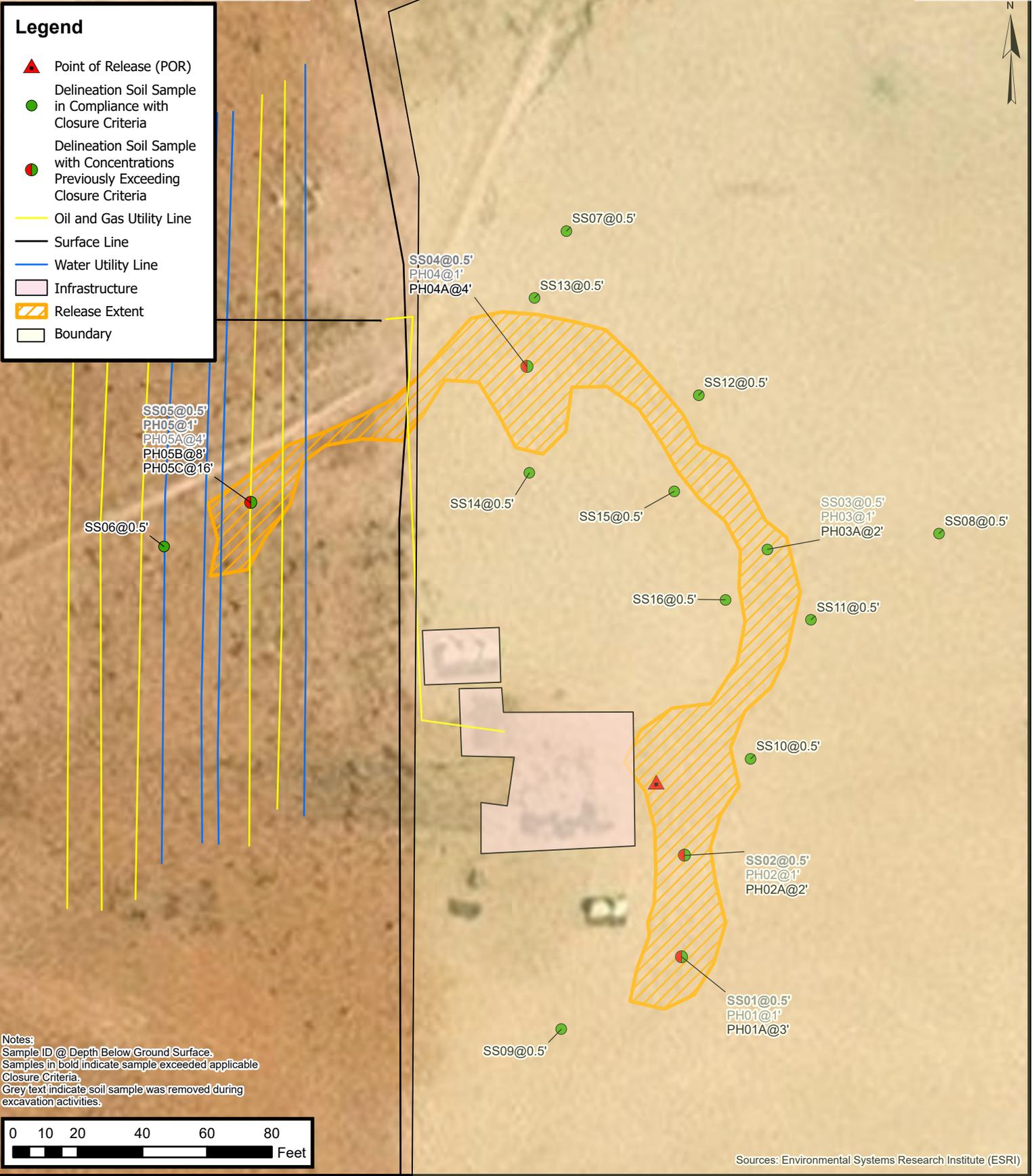
Site Map

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FIGURE
2

Legend

- ▲ Point of Release (POR)
- Delineation Soil Sample in Compliance with Closure Criteria
- Delineation Soil Sample with Concentrations Previously Exceeding Closure Criteria
- Oil and Gas Utility Line
- Surface Line
- Water Utility Line
- Infrastructure
- Release Extent
- Boundary



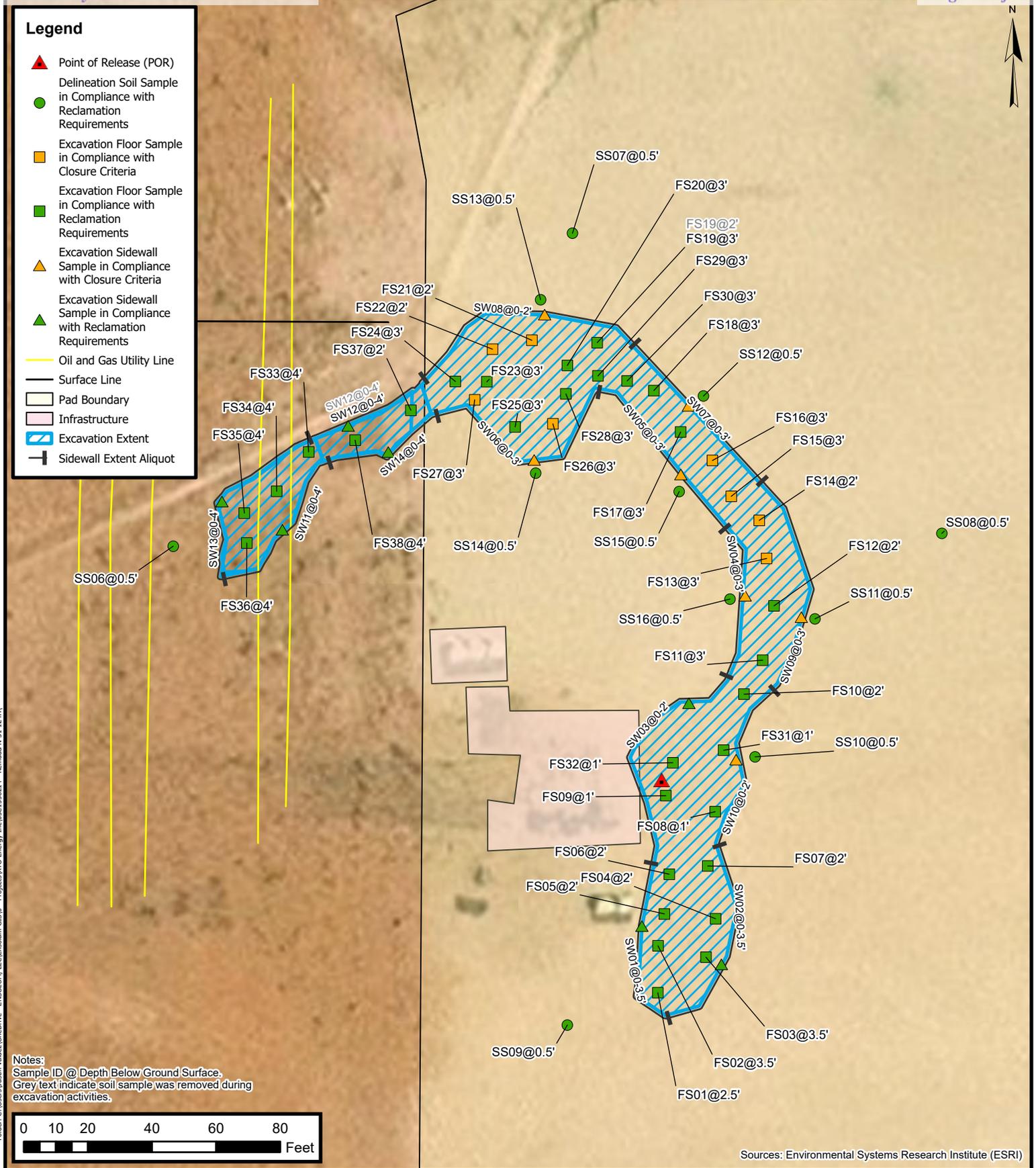
Notes:
 Sample ID @ Depth Below Ground Surface.
 Samples in bold indicate sample exceeded applicable Closure Criteria.
 Grey text indicate soil sample was removed during excavation activities.



Delineation Soil Sample Locations

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FIGURE 3



Soil Sample Locations
 XTO Energy, Inc
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 Eddy County, New Mexico

FIGURE 4



TABLES

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)
NMOCB Table I 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
SS10	06/17/2025	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
SS11	06/17/2025	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
SS12	06/17/2025	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112
SS13	06/17/2025	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
SS14	06/17/2025	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
SS15	06/17/2025	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	128
SS16	06/17/2025	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112

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

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Confirmation 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	05/10/2023	2	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	365
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	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	104
FS21	05/11/2023	2	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	789
FS22	05/11/2023	2	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	<50.0	1,650
FS23	05/11/2023	3	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	307
FS24	05/11/2023	3	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	315
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

**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 I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
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
FS33*	04/11/2025	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
FS34*	04/11/2025	4	<0.050	<0.300	<10.0	10.3	<10.0	10.3	10.3	<16.0
FS35*	04/11/2025	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
FS36*	04/11/2025	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
FS37*	04/28/2025	2	<0.050	<0.300	<10.0	66.4	12.5	66.4	78.9	<16.0
FS38*	04/11/2025	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	256
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
SW11*	04/11/2025	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	176
SW12*	04/11/2025	0-4	<0.050	<0.300	<10.0	376	154	376	530	96.0
SW12*	04/28/2025	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW13*	04/11/2025	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SW14*	04/28/2025	0-4	<0.050	<0.300	<10.0	34.1	<10.0	34.1	34.1	192

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 I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Confirmation Soil Samples										
BF01	05/16/2025	N/A	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0

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; reclamation 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
- N/A: Not Applicable



APPENDIX A

Referenced Well Records



2904 W 2nd St.
Roswell, NM 88201
voice: 575.624.2420
fax: 575.624.2421
www.atkinseng.com

February 10, 2025

DII-NMOSE
1900 W 2nd Street
Roswell, NM 88201

Hand Delivered to the DII Office of the State Engineer

Re: Well Record C-04905 Pod-1

To whom it may concern:

Attached please find a well log & record and a plugging record, in duplicate, for a one (1) soil borings, C-04905 Pod-1.

If you have any questions, please contact me at 575.499.9244 or lucas@atkinseng.com.

Sincerely,

A handwritten signature in black ink that reads "Lucas Middleton". The signature is written in a cursive style.

Lucas Middleton

Enclosures: as noted above

DSE DII ROSWELL
10 FEB 20 10:14 AM



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

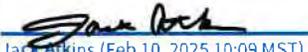
1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO.) POD 1 (TW-1)		WELL TAG ID NO. N/A		OSE FILE NO(S) C-04905			
	WELL OWNER NAME(S) XTO Energy, Inc.				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS 3104 E. Greene St.				CITY Carlsbad	STATE NM	ZIP 88220	
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 15	SECONDS 36.40	N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND		
		LONGITUDE 103	55	16.09	W	* DATUM REQUIRED: WGS 84		
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE NE NE SW Sec. 31, T23S, R30E, NMPM								
2. DRILLING & CASING INFORMATION	LICENSE NO. 1249		NAME OF LICENSED DRILLER Jackie D. Atkins			NAME OF WELL DRILLING COMPANY Atkins Engineering Associates, Inc.		
	DRILLING STARTED 01/13/2025	DRILLING ENDED 01/13/2025	DEPTH OF COMPLETED WELL (FT) Temporary Well Material		BORE HOLE DEPTH (FT) ±101	DEPTH WATER FIRST ENCOUNTERED (FT) N/A		
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN *add Centralizer info below <input checked="" type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)				STATIC WATER LEVEL IN COMPLETED WELL (FT) N/A	DATE STATIC MEASURED 1/13/25, 1/24/25		
	DRILLING FLUID: <input type="checkbox"/> AIR <input type="checkbox"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input checked="" type="checkbox"/> OTHER - SPECIFY: Hollow Stem Auger						CHECK HERE IF PITLESS ADAPTER IS INSTALLED <input type="checkbox"/>	
	DEPTH (feet bgl)		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)
	FROM	TO						
	0	105	±6.25	Soil Boring	--	--	--	--
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE- RANGE BY INTERVAL <i>*(if using Centralizers for Artesian wells- indicate the spacing below)</i>	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	FROM	TO						
				N/A				

FOR OSE INTERNAL USE			WR-20 WELL RECORD & LOG (Version 09/22/2022)		
FILE NO.		POD NO.	TRN NO.		
LOCATION			WELL TAG ID NO.	PAGE 1 OF 2	

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4. HYDROGEOLOGIC LOG OF WELL	DEPTH (feet bgl)		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)
	FROM	TO				
	0	29	29	Sand, fine-grained, poorly-graded, unconsolidated, Reddish Brown	Y ✓ N	
	29	39	10	Sand, fine-grained, poorly-graded, with limestone layers, Reddish Brown	Y ✓ N	
	39	105	66	Sand, fine-grained, poorly-graded, unconsolidated, Reddish Brown	Y ✓ N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
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					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: <input type="checkbox"/> PUMP <input type="checkbox"/> AIR LIFT <input type="checkbox"/> BAILER <input type="checkbox"/> OTHER - SPECIFY:					TOTAL ESTIMATED WELL YIELD (gpm):	

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 material removed and soil boring backfilled using drill cuttings from total depth to ten feet below ground surface(bgs), then hydrated bentonite chips ten feet bgs to surface. Remuda N 31 State
	PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE: Shane Eldridge, 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:	
	 Jackie D. Atkins	02/10/2025
	SIGNATURE OF DRILLER / PRINT SIGNEE NAME	DATE

FOR OSE INTERNAL USE		WR-20 WELL RECORD & LOG (Version 09/22/2022)	
FILE NO.	POD NO.	TRN NO.	
LOCATION	WELL TAG ID NO.		PAGE 2 OF 2

USE OLD RISWELL NH
10 FEB '25 11:44



PLUGGING RECORD



NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: C-04905-POD-1

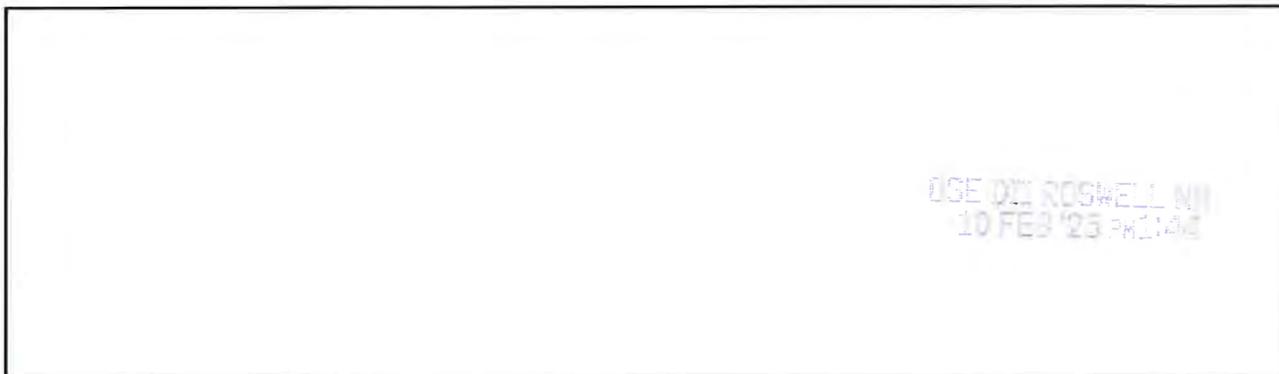
Well owner: XTO Energy, Inc. Phone No.: _____

Mailing address: 3104 E. Greene St.

City: Carlsbad State: New Mexico Zip code: 88220

II. WELL PLUGGING INFORMATION:

- 1) Name of well drilling company that plugged well: Jackie D. Atkins (Atkins Engineering Associates Inc.)
- 2) New Mexico Well Driller License No.: 1249 Expiration Date: 04/30/25
- 3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Lucas Middleton
- 4) Date well plugging began: 01/24/2025 Date well plugging concluded: 01/24/2025
- 5) GPS Well Location: Latitude: 32 deg, 15 min, 36.40 sec
Longitude: 103 deg, 55 min, 16.09 sec, WGS 84
- 6) Depth of well confirmed at initiation of plugging as: 105 ft below ground level (bgl),
by the following manner: water level probe
- 7) Static water level measured at initiation of plugging: n/a ft bgl
- 8) Date well plugging plan of operations was approved by the State Engineer: 11/07/2024
- 9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):



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10 FEB '25 PM 1:46

- 10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

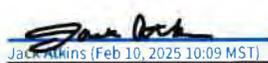
<u>Depth</u> (ft bgl)	<u>Plugging Material Used</u> (include any additives used)	<u>Volume of Material Placed</u> (gallons)	<u>Theoretical Volume of Borehole/ Casing</u> (gallons)	<u>Placement Method</u> (tremie pipe, other)	<u>Comments</u> ("casing perforated first", "open annular space also plugged", etc.)
0-10'	Hydrated Bentonite	Approx. 15 gallons	15 gallons	Boring	
10'-105'	Drill Cuttings	Approx. 152 gallons	152 gallons	Boring	

OBS DR ROSE...
10 FEB '25 PH1164

MULTIPLY		BY		AND OBTAIN
cubic feet	x	7.4805	=	gallons
cubic yards	x	201.97	=	gallons

III. SIGNATURE:

I, Jackie D. Atkins, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.


Jackie D. Atkins (Feb 10, 2025 10:09 MST)

Signature of Well Driller

02/10/2025

Date

C-4905-WR-20 Well Record and Log-packet- forsign-Remuda

Final Audit Report

2025-02-10

Created:	2025-02-10
By:	Lucas Middleton (lucas@atkinseng.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAAw844kgxDWuG6fKEWiGE6yy_sKeUcVh

"C-4905-WR-20 Well Record and Log-packet- forsign-Remuda" History

-  Document created by Lucas Middleton (lucas@atkinseng.com)
2025-02-10 - 4:59:26 PM GMT
-  Document emailed to Jack Atkins (jack@atkinseng.com) for signature
2025-02-10 - 5:01:24 PM GMT
-  Email viewed by Jack Atkins (jack@atkinseng.com)
2025-02-10 - 5:06:09 PM GMT
-  Document e-signed by Jack Atkins (jack@atkinseng.com)
Signature Date: 2025-02-10 - 5:09:27 PM GMT - Time Source: server
-  Agreement completed.
2025-02-10 - 5:09:27 PM GMT

OSE DIST ROSWELL NM
10 FEB '25 PM 1:44



APPENDIX B

Land Access References



Stephanie Garcia Richard
COMMISSIONER

State of New Mexico
Commissioner of Public Lands
310 OLD SANTA FE TRAIL
P.O. BOX 1148
SANTA FE, NEW MEXICO 87504-1148

COMMISSIONER'S OFFICE
Phone (505) 827-5760
Fax (505) 827-5766
www.nmslo.state.nm.us

MEMORANDUM

TO: XTO via Beaver Creek Archaeology

FROM: Adesbah Foguth, *Trust Land Archaeologist*
(505) 827-5792
afoguth@nmslo.gov

SUBJECT: Ensolum, LLC on Behalf of XTO
Remediation for: XTO's Remuda N31 124H Remediation
Section 31, T23S, R30E, N.M.P.M. Eddy County

REFERENCE: NMSLO Cultural Properties Protection Rule (19.2.24 NMAC)

DATE: 10/16/2024

Thank you for your submission relating to the Proponent's proposed remediation activities at XTO's Remuda N31 124H Remediation. An archaeological survey of the entire area of potential effect has been completed (NMCRIS Activity No. 138735) and one cultural properties was identified (LA147326). LA 147326 was last updated in 2017 and remains eligible for the NRHP. However, the site boundary has shrunk and the site is not within the proposed workspace for remediation. NMSLO concurs with the consultant that a monitor is present during remediation work that comes within 100 feet of the site boundary, especially in the western-most radiation area. Pursuant to NMSLO 19.2.24.8 (C) NMAC, remediation may proceed.

If any cultural materials are inadvertently encountered during surface disturbance, work must cease within 50 feet and the NMSLO Cultural Resources Office must be notified immediately by emailing (CROinfo@slo.state.nm.us). Please reach out if you have questions or need additional clarification.



Stephanie Garcia Richard, Commissioner of Public Lands
State of New Mexico

NMSLO Cultural Resources Cover Sheet Exhibit

NMCRIS Activity Number:
(if applicable)

Exhibit Type (select one)

ARMS Inspection/Review - Summarize the results (select one):

- (A) The entire area of potential effect or project area has been previously surveyed to current standards and **no cultural properties** were found within the survey area.
- (B) The entire area of potential effect or project area has been previously surveyed to current standards and **cultural properties were found** within the survey area.
- (C) The entire area of potential effect or project area has **not** been previously surveyed or **has not been surveyed** to current standards. A complete archaeological survey will be conducted and submitted for review.

Archaeological Survey

Findings:

Negative - No further archaeological review is required.

Positive - Have avoidance and protection measures been devised? Select one:

Comments: Site LA147326 is on file with NMCRIS as being in the workspace; however, the BLM records indicate that the site had been updated under NMCRIS Activity No. 138735 to be outside of the workspace. In discussion with Anne Curry at SLO, on 10/7/2024, we are using and showing the

Project Details:

NMSLO Lease Number (if available):

Cultural Resources Consultant: Beaver Creek Archaeology

Project Proponent (Applicant): Ensolum on behalf of XTO

Project Title/Description: XTO's Remuda N31 124H Remediation ARMS

Project Location:

County(ies): Eddy

PLSS/Section/Township/Range): T23S R30E S31

For NMSLO Agency Use Only:

NMSLO Lease Number:

Acknowledgment-Only:

Lease Analyst:

Date Exhibit Routed to Cultural Resources Office:

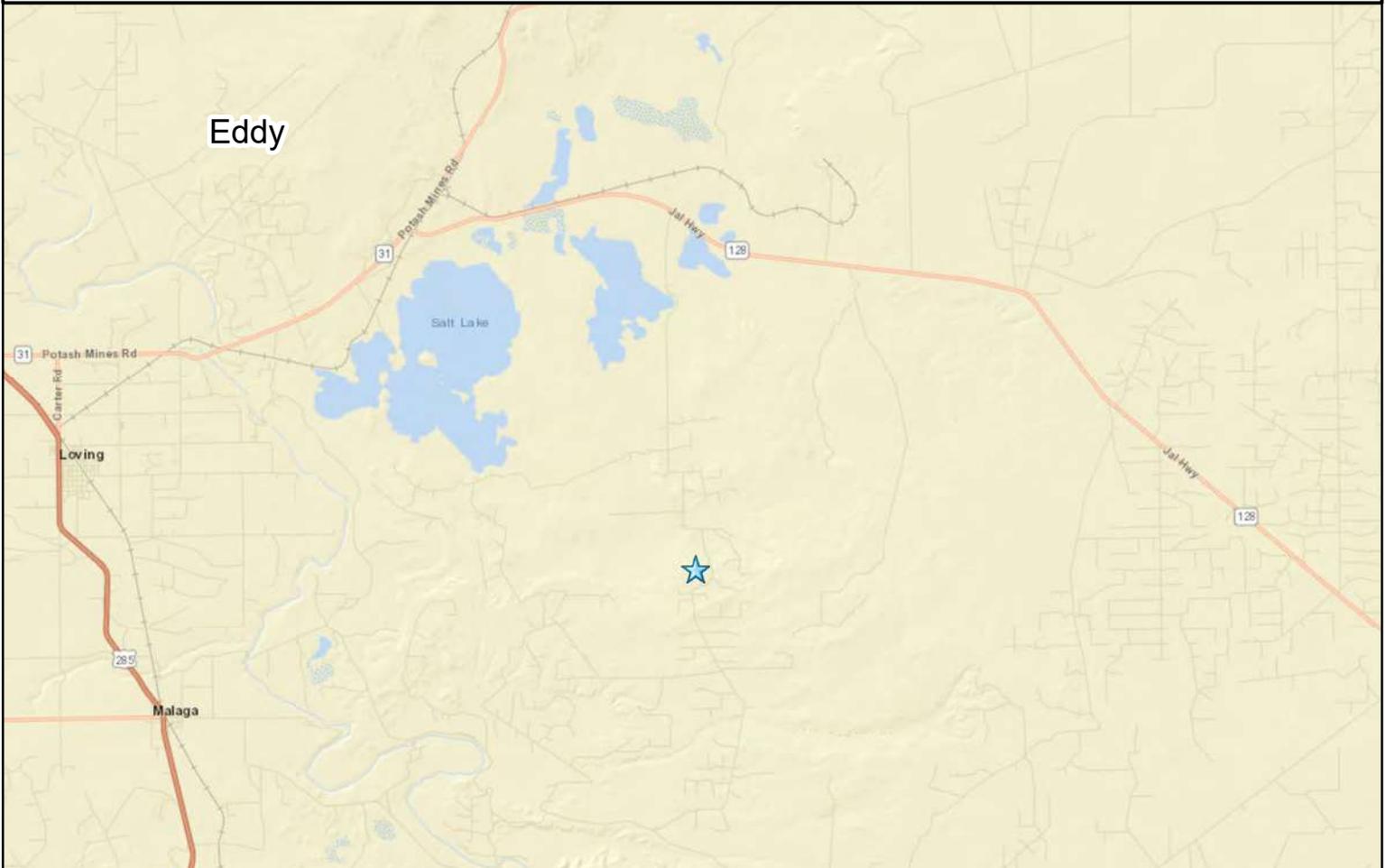
No person may alter the wording of the questions or layout of the cover sheet. The completion of this cover sheet by itself does not authorize anyone to engage in new surface disturbing activity before the review and approvals required by the Cultural Properties Protections Rule.

Form Revised 12 22



Beaver Creek ARCHAEOLOGY

XTO's Remuda N31 124H
Ensolum, LLC
T23S R30E Sec. 31
Remuda Basin(1985) Quad. Map
Upper Pecos-Black Drainage
Eddy County, New Mexico



Legend

 Project Location



Base Map: USGS 7.5'
Scale: 1:180,000
UTM NAD83 Zone 13

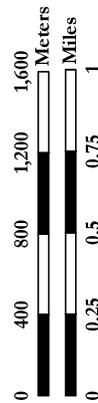
XTO's Remuda N31 124H

Ensolum, LLC

T23S R30E, Sec. 31
Remuda Basin(1985) Quad. Map
Upper Pecos-Black Drainage
Eddy County, New Mexico

Legend

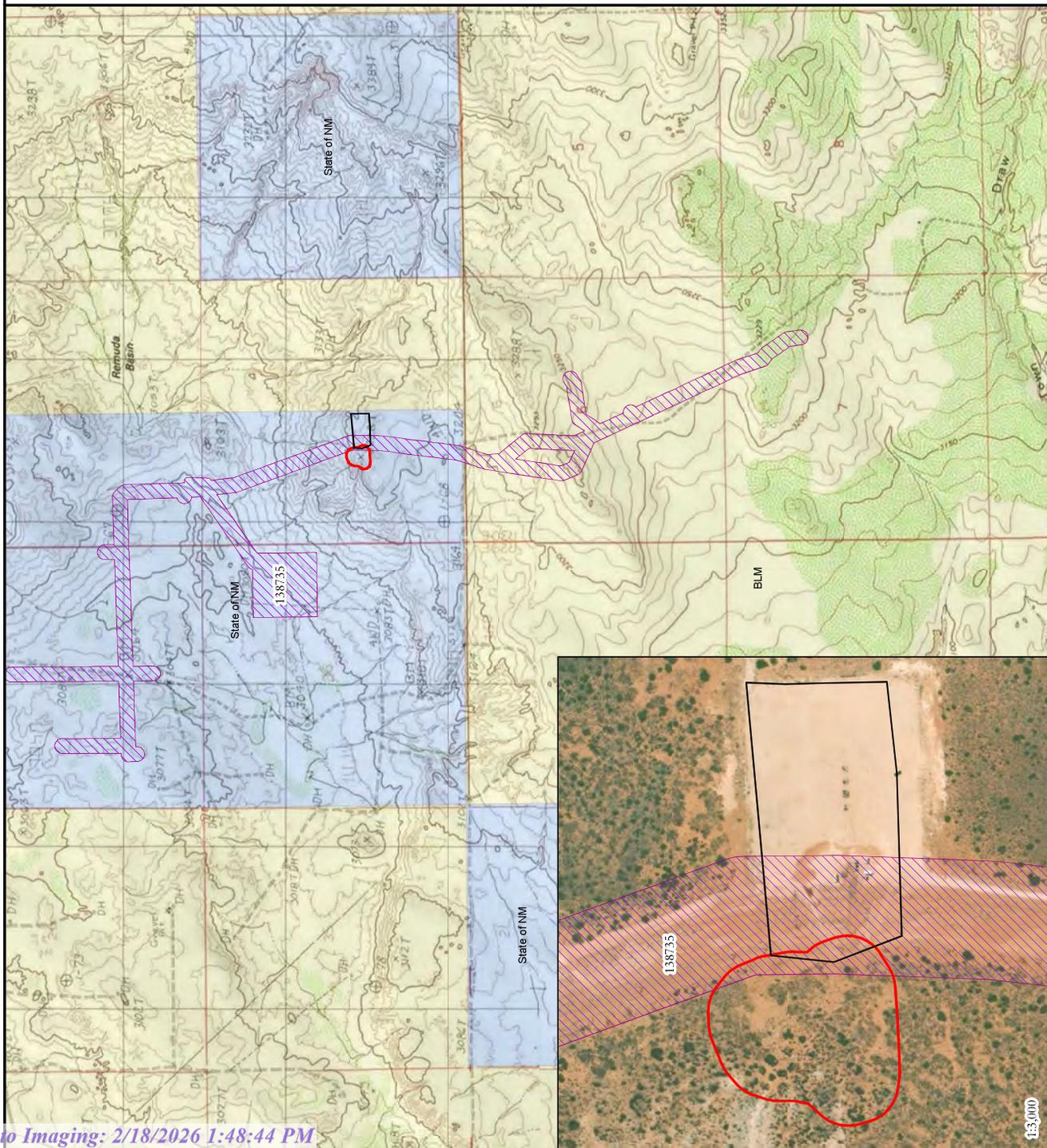
-  Workspace Limits (5.5 Acres)
-  100ft. Avoidance Buffer
-  Previously Surveyed



Base Map: USGS 7.5'
Scale: 1:24,000
UTM NAD83 Zone 13



Beaver Creek ARCHAEOLOGY





APPENDIX C

Lithologic Soil Sampling Logs

								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			
M	700	122.7	Y	SS01	0.5	0	CCHE	0-1' CALICHE, med. Brown, poorly sorted, sub-rounded grains, staining in 1st half foot, odor, moist.			
M	3,125	212.9	N	PH01	1	1	SP-SM	1-2' SAND with trace silt, red, poorly sorted, sub-rounded grains, 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.			

								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			
M	1467	54.2	Y	SS02	0.5	0	CCHE	0-1' CALICHE, med. Brown, poorly sorted, sub-rounded grains, staining in 1st half foot, odor, moist.			
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		Total Depth @ 4' bgs.			
						TD					

								Sample Name: PH03		Date: 05/03/2023					
								Site Name: Remuda N 31 124H				Incident Number: NAPP2233950022			
								Job Number: 03C1558214				Logged By: MR		Method: Trackhoe	
								Coordinates: 32.259672, -103.922336				Hole Diameter: NA		Total Depth: 6'	
LITHOLOGIC / SOIL SAMPLING LOG								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							
M	3612	5.1	Y	SS03	0.5	0	CCHE	0-1' CALICHE, med. Brown, poorly sorted, sub-rounded grains, staining in 1st half foot, odor, moist.							
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.							

								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	
M	1080	257.8	Y	SS04	0.5	0	CCHE	0-1' CALICHE, med. Brown, poorly sorted, sub-rounded grains, staining in 1st half foot, odor, moist.	
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.	

								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	
M	151.2	650.2	Y	SS05	0.5	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	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		6-10' SAND with trace silt, red/ brown, poorly sorted, sub-rounded grains, slight odor, no staining, moist.	
M	8,014	165							
M	8,686	203				6			
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.	



APPENDIX D

Photographic Logs



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



Photograph: 1 Date: 4/26/2023
Description: Release extent, pad and ROW area.
View: Northeast

Photograph: 2 Date: 4/26/2023
Description: Northern release extent, pad surface.
View: North



Photograph: 3 Date: 5/3/2023
Description: Delineation activities; near PH04
View: North

Photograph: 4 Date: 5/4/2023
Description: Excavation activities; near FS32
View: Southeast

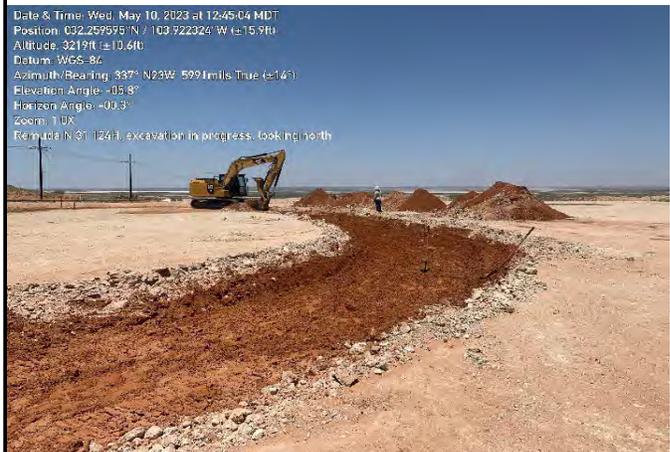


Photographic Log
 XTO Energy, Inc
 Remuda Basin 31 N 124H
 nAPP2233950022



Photograph: 5 Date: 5/5/2023
 Description: Excavation activities; near FS01
 View: East

Photograph: 6 Date: 5/8/2023
 Description: Excavation activities; near FS11
 View: Southeast



Photograph: 7 Date: 5/9/2023
 Description: Excavation activities; near FS31
 View: Northeast

Photograph: 8 Date: 5/10/2023
 Description: Excavation activities; near FS12
 View: Northwest



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

68°E (T) LAT: 32.259618 LON: -103.922986 ±6ft ▲ 3214ft



Ensolum, LLC

Remuda N 31 124H
15 Apr 2025, 14:25:04 MDT

20°N (T) LAT: 32.259637 LON: -103.922913 ±16ft ▲ 3215ft



Ensolum, LLC

Remuda N31 124H
28 Apr 2025, 14:30:19 MDT

Photograph: 13 Date: 4/15/2025
Description: Excavation activities; near FS35
View: East

Photograph: 14 Date: 4/28/2025
Description: Excavation activities; near FS36
View: North

262°W (T) LAT: 32.259794 LON: -103.922535 ±6ft ▲ 3214ft



Ensolum, LLC

Remuda N 31 124H
16 May 2025, 09:46:42 MDT

10°N (T) LAT: 32.259658 LON: -103.922814 ±9ft ▲ 3216ft



Ensolum, LLC

Remuda N.31 124H
16 May 2025, 09:10:21 MDT

Photograph: 15 Date: 5/16/2025
Description: Backfilled excavation.
View: West

Photograph: 16 Date: 5/16/2025
Description: Backfilled excavation
View: North



APPENDIX E

Laboratory Analytical Reports & Chain of Custody Documentation



Environment Testing

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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



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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5/2/2023 3:18:36 PM

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

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

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

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Definitions/Glossary

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

Job ID: 890-4585-1
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.
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.
α	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

Eurofins Carlsbad

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.

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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: SS01

Lab Sample ID: 890-4585-1

Date Collected: 04/26/23 09:50

Matrix: Solid

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
Oil 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

Date Collected: 04/26/23 09:55

Matrix: Solid

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

Date Collected: 04/26/23 09:55

Matrix: Solid

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
Oil 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

Date Collected: 04/26/23 10:00

Matrix: Solid

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

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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: SS03

Lab Sample ID: 890-4585-3

Date Collected: 04/26/23 10:00

Matrix: Solid

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
Oil 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

Date Collected: 04/26/23 10:05

Matrix: Solid

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
Oil 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

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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: SS04

Lab Sample ID: 890-4585-4

Date Collected: 04/26/23 10:05
Date Received: 04/27/23 08:12
Sample Depth: 0.5'

Matrix: Solid

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

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

Matrix: Solid

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
Oll 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

Date Collected: 04/26/23 10:35

Matrix: Solid

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
Oil 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

Date Collected: 04/26/23 10:40

Matrix: Solid

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

Date Collected: 04/26/23 10:40

Matrix: Solid

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
Oil 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

Date Collected: 04/26/23 10:55

Matrix: Solid

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

Date Collected: 04/26/23 10:55

Matrix: Solid

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
Oll 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

Date Collected: 04/26/23 10:50

Matrix: Solid

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
Oll 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

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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: SS09

Lab Sample ID: 890-4585-9

Date Collected: 04/26/23 10:50

Matrix: Solid

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	106		4.96	mg/Kg			05/01/23 16:43	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		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

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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
 Matrix: Solid
 Analysis Batch: 52230

Client Sample ID: Method Blank
 Prep Type: Total/NA
 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
 Matrix: Solid
 Analysis Batch: 52230

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 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
 Matrix: Solid
 Analysis Batch: 52230

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 52197

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	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
 Matrix: Solid
 Analysis Batch: 52230

Client Sample ID: SS01
 Prep Type: Total/NA
 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

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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
Matrix: Solid
Analysis Batch: 52230

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 52197

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier		Result	Qualifier				
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	MS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	125		70 - 130
1,4-Difluorobenzene (Surr)	106		70 - 130

Lab Sample ID: 890-4585-1 MSD
Matrix: Solid
Analysis Batch: 52230

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 52197

Analyte	Sample	Sample	Spike Added	MSD	MSD	Unit	D	%Rec	%Rec Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier						
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	MSD	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	123		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

Lab Sample ID: MB 880-52338/5-A
Matrix: Solid
Analysis Batch: 52363

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 52338

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
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	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
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
Matrix: Solid
Analysis Batch: 52363

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

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
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

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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	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	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

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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 MSD		Limits
	%Recovery	Qualifier	
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 MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
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
Oil 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 MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
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
Diesel Range Organics (Over C10-C28)	1000	986.5		mg/Kg		99	70 - 130

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
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	Limit
Diesel Range Organics (Over C10-C28)	1000	1041		mg/Kg		104	70 - 130	5	20

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

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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	Sample	Spike	MS MS		Unit	D	%Rec	%Rec	
	Result	Qualifier	Added	Result	Qualifier				Limits	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	
	<i>MS MS</i>									
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>							
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	Sample	Spike	MSD MSD		Unit	D	%Rec	%Rec		RPD	
	Result	Qualifier	Added	Result	Qualifier				Limits	Limits	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
	<i>MSD MSD</i>											
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>									
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 MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
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 LCS		Unit	D	%Rec	%Rec	
		Result	Qualifier				Limits	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 LCSD		Unit	D	%Rec	%Rec		RPD	
		Result	Qualifier				Limits	Limits	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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

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	

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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	

Eurofins Carlsbad

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

Lab Sample ID: 890-4585-1

Date Collected: 04/26/23 09:50

Matrix: Solid

Date Received: 04/27/23 08:12

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

Lab Sample ID: 890-4585-2

Date Collected: 04/26/23 09:55

Matrix: Solid

Date Received: 04/27/23 08:12

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

Lab Sample ID: 890-4585-3

Date Collected: 04/26/23 10:00

Matrix: Solid

Date Received: 04/27/23 08:12

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

Lab Sample ID: 890-4585-4

Date Collected: 04/26/23 10:05

Matrix: Solid

Date Received: 04/27/23 08:12

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

Eurofins Carlsbad

Lab Chronicle

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

Date Collected: 04/26/23 10:05

Matrix: Solid

Date Received: 04/27/23 08:12

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

Lab Sample ID: 890-4585-5

Date Collected: 04/26/23 10:10

Matrix: Solid

Date Received: 04/27/23 08:12

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

Lab Sample ID: 890-4585-6

Date Collected: 04/26/23 10:35

Matrix: Solid

Date Received: 04/27/23 08:12

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

Lab Sample ID: 890-4585-7

Date Collected: 04/26/23 10:40

Matrix: Solid

Date Received: 04/27/23 08:12

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

Eurofins Carlsbad

Lab Chronicle

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

Date Collected: 04/26/23 10:40

Matrix: Solid

Date Received: 04/27/23 08:12

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

Lab Sample ID: 890-4585-8

Date Collected: 04/26/23 10:55

Matrix: Solid

Date Received: 04/27/23 08:12

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

Lab Sample ID: 890-4585-9

Date Collected: 04/26/23 10:50

Matrix: Solid

Date Received: 04/27/23 08:12

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

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'

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14



Environment Testing

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 590-3334
El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Chain of Custody

Work Order No: _____

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Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum LLC	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. 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	<input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRC <input type="checkbox"/> Superfund <input type="checkbox"/>
State of Project:	
Reporting: Level II	<input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> TRRP <input type="checkbox"/> Level IV <input type="checkbox"/>
Deliverables: EDD	<input type="checkbox"/> ADAPT <input type="checkbox"/> Other:

Project Name:	Remuda N 31 124H	Turn Around	<input type="checkbox"/> Routine <input checked="" type="checkbox"/> Rush	Prd. Code	
Project Number:	03C1558214	Due Date:	3 Day		
Project Location:	32 25947, -103.92244	TAT starts the day received by the lab. If received by 4:30pm			
Sampler's Name:	Ronni Hayes	Temp Blank:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Wet Ice:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Cost Center #:	1674811001	Samples Received Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Thermometer ID:	11A-007
SAMPLE RECEIPT		Cooler Custody Seals:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Correction Factor:	1.00
Total Containers:		Sample Custody Seals:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Temperature Reading:	3.6
				Corrected Temperature:	3.4



Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	ANALYSIS REQUEST	Preservative Codes	Sample Comments
SS01	S	4/26/2023	950	0.5'	Grab	1	CHLORIDES (EPA: 300.0)	None: NO	DI Water: H ₂ O
SS02	S	4/26/2023	955	0.5'	Grab	1	BTEX	Cool: Cool	MeOH: Me
SS03	S	4/26/2023	1000	0.5'	Grab	1	TPH	HCL: HC	HNO ₃ : HN
SS04	S	4/26/2023	1005	0.5'	Grab	1		H ₂ SO ₄ : H ₂	NaOH: Na
SS05	S	4/26/2023	1010	0.5'	Grab	1		H ₃ PO ₄ : HP	
SS06	S	4/26/2023	1035	0.5'	Grab	1		NaHSO ₄ : NABIS	
SS07	S	4/26/2023	1040	0.5'	Grab	1		Na ₂ S ₂ O ₅ : NASO ₅	
SS08	S	4/26/2023	1055	0.5'	Grab	1		Zn Acetate+NaOH: Zn	
SS09	S	4/26/2023	1050	0.5'	Grab	1		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 Ni K Se Ag SiO₂ Na Sr Ti 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 Ti 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
<i>[Signature]</i>	<i>[Signature]</i>	4/27/23 0818			

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	

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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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Environment Testing

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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



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
5/11/2023 8:33:05 AM

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

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

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

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Definitions/Glossary

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

Job ID: 890-4620-1
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.
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

Eurofins Carlsbad

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

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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.

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Client Sample Results

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

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

Client Sample ID: PH05

Lab Sample ID: 890-4620-1

Date Collected: 05/03/23 09:25

Matrix: Solid

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	0.00606	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

Lab Sample ID: 890-4620-2

Date Collected: 05/03/23 09:40

Matrix: Solid

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		05/05/23 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

Eurofins Carlsbad

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

Date Collected: 05/03/23 09:40

Matrix: Solid

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

Date Collected: 05/03/23 12:25

Matrix: Solid

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

Eurofins Carlsbad

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

Date Collected: 05/03/23 12:25

Matrix: Solid

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
Oil 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

Date Collected: 05/03/23 14:40

Matrix: Solid

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
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/10/23 10:07	05/10/23 18:48	1

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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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		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

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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	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

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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
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
m-Xylene & p-Xylene	0.0219	F1 F2	0.200	0.2767		mg/Kg		128	70 - 130
MS MS									
Surrogate	%Recovery	Qualifier	Limits						
4-Bromofluorobenzene (Surr)	430	S1+	70 - 130						
1,4-Difluorobenzene (Surr)	26	S1-	70 - 130						

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

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	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
MSD MSD											
Surrogate	%Recovery	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
Matrix: Solid
Analysis Batch: 52798

Client Sample ID: Method Blank
Prep Type: Total/NA
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
MB MB								
Surrogate	%Recovery	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
Matrix: Solid
Analysis Batch: 52909

Client Sample ID: Method Blank
Prep Type: Total/NA
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 MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
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 LCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
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 LCS		Limits
	%Recovery	Qualifier	
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 LCSD		Unit	D	%Rec	%Rec Limits	RPD	Limit
		Result	Qualifier						
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 LCSD		Limits
	%Recovery	Qualifier	
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 MS		Unit	D	%Rec	%Rec Limits
				Result	Qualifier				
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 MS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

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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
Matrix: Solid
Analysis Batch: 52909

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

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
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	%Recovery	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
Matrix: Solid
Analysis Batch: 52999

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53014

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
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
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/10/23 08:07	05/10/23 09:04	1
Surrogate	%Recovery	Qualifier	Limits					
1-Chlorooctane	117		70 - 130					
o-Terphenyl	150	S1+	70 - 130					

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

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

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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

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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	

Eurofins Carlsbad

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

Eurofins Carlsbad

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

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Lab Chronicle

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

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

Client Sample ID: PH05

Lab Sample ID: 890-4620-1

Date Collected: 05/03/23 09:25

Matrix: Solid

Date Received: 05/03/23 16:40

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

Lab Sample ID: 890-4620-2

Date Collected: 05/03/23 09:40

Matrix: Solid

Date Received: 05/03/23 16:40

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

Lab Sample ID: 890-4620-3

Date Collected: 05/03/23 12:25

Matrix: Solid

Date Received: 05/03/23 16:40

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

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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

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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

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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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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

Chain of Custody

Work Order No: _____

www.xenco.com Page 1 of 7

Project Manager: Tavona Morrissey Bill to: (if different) _____
 Company Name: Ensolium, 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: 337-257-9307 Email: tmorrissey@ensolum.com

Program: UST/PST PRP Brownfields RRC Superfund
 State of Project: _____
 Reporting: Level II Level III PST/UST TRRP Level IV
 Deliverables: ED0 ADAPT Other: _____

Project Name: Bonuda N 31 1241 Turn Around Routine Rush
 Project Number: 05 C1558214 Due Date: _____
 Project Location: 32.25947, -103.92244 TAT starts the day received by the lab, if received by 4:30pm
 Sampler's Name: Meredith Bohms Wet Ice: Yes No
 P.O. #: _____ Parameters

SAMPLE RECEIPT
 Samples Received Intact: Yes No Thermometer ID: MM5007
 Cooler Custody Seals: Yes No Correction Factor: -0.2
 Sample Custody Seals: Yes No Temperature Reading: 3.2
 Total Containers: _____ Corrected Temperature: 3.0



Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Preservative Codes	Sample Comments
PHD5	S	5/3/23	0925	1'	G	1	None: NO Cool: Cool HCL: HC H ₂ SO ₄ : H ₂ H ₂ PO ₄ : HP NaHSO ₄ : NABIS Na ₂ S ₂ O ₃ : NASO ₃ Zn Acetate+NaOH: Zn NaOH+Ascorbic Acid: SPPC	Incident #: APP2233950022
PHD5A	S	5/3/23	0940	4'	G	1		
PHD5B	S	5/3/23	1235	8'	G	1		
PHD5C	S	5/3/23	1440	16'	G	1		Cost Center: 167481001

Total 200.7 / 6010 2008 / 6020: BRCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO₂ Na Sr Ti 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 Ti 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 \$15 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature) Males Received by: (Signature) Joe Giff Date/Time: 5.3.23 16:13
 Relinquished by: (Signature) _____ Received by: (Signature) _____ Date/Time: _____

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	

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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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Environment Testing

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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

890-4621-1

Eurofins Carlsbad
 1089 N Canal St.
 Carlsbad NM 88220



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

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

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

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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.
α	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

Lab Sample ID: 890-4621-1

Date Collected: 05/03/23 12:30

Matrix: Solid

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 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
Oil 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

Lab Sample ID: 890-4621-2

Date Collected: 05/03/23 12:40

Matrix: Solid

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	<0.00200	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

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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: PH01A

Lab Sample ID: 890-4621-2

Date Collected: 05/03/23 12:40

Matrix: Solid

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
Oil 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

Date Collected: 05/03/23 13:15

Matrix: Solid

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

Date Collected: 05/03/23 13:15

Matrix: Solid

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
Oll 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

Date Collected: 05/03/23 13:20

Matrix: Solid

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
Oll 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

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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: PH02A

Lab Sample ID: 890-4621-6

Date Collected: 05/03/23 13:20

Matrix: Solid

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

Date Collected: 05/03/23 10:35

Matrix: Solid

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
Oll 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

Date Collected: 05/03/23 10:45

Matrix: Solid

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
Oil 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

Date Collected: 05/03/23 09:50

Matrix: Solid

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

Date Collected: 05/03/23 09:50

Matrix: Solid

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
Oil 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

Date Collected: 05/03/23 10:05

Matrix: Solid

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

Lab Sample ID: 890-4621-12

Date Collected: 05/03/23 10:05

Matrix: Solid

Date Received: 05/03/23 16:40

Sample Depth: 4

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
Oll 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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		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

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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

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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
Matrix: Solid
Analysis Batch: 52672

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 52630

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	
	Result	Qualifier		Result	Qualifier					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	
		MS	MS							
Surrogate	%Recovery	Qualifier	Limits							
4-Bromofluorobenzene (Surr)	113		70 - 130							
1,4-Difluorobenzene (Surr)	104		70 - 130							

Lab Sample ID: 880-27940-A-81-B MSD
Matrix: Solid
Analysis Batch: 52672

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 52630

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier		Result	Qualifier						
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
		MSD	MSD								
Surrogate	%Recovery	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
Matrix: Solid
Analysis Batch: 52761

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 52679

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
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
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/05/23 09:19	05/06/23 08:27	1
		MB	MB					
Surrogate	%Recovery	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
Matrix: Solid
Analysis Batch: 52761

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 52679

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec
		Result	Qualifier				
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		Limits
	%Recovery	Qualifier	
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		Unit	D	%Rec	%Rec		RPD	Limit
		Result	Qualifier				Limits	RPD		
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		Limits
	%Recovery	Qualifier	
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		Unit	D	%Rec	%Rec	
				Result	Qualifier				Limits	RPD
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		Limits
	%Recovery	Qualifier	
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		Unit	D	%Rec	%Rec		RPD	Limit
				Result	Qualifier				Limits	RPD		
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		Limits
	%Recovery	Qualifier	
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	

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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	

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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

Lab Sample ID: 890-4621-1

Date Collected: 05/03/23 12:30

Matrix: Solid

Date Received: 05/03/23 16:40

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

Lab Sample ID: 890-4621-2

Date Collected: 05/03/23 12:40

Matrix: Solid

Date Received: 05/03/23 16:40

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

Lab Sample ID: 890-4621-5

Date Collected: 05/03/23 13:15

Matrix: Solid

Date Received: 05/03/23 16:40

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

Lab Sample ID: 890-4621-6

Date Collected: 05/03/23 13:20

Matrix: Solid

Date Received: 05/03/23 16:40

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

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Lab Chronicle

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

Date Collected: 05/03/23 13:20

Matrix: Solid

Date Received: 05/03/23 16:40

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

Lab Sample ID: 890-4621-8

Date Collected: 05/03/23 10:35

Matrix: Solid

Date Received: 05/03/23 16:40

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

Lab Sample ID: 890-4621-9

Date Collected: 05/03/23 10:45

Matrix: Solid

Date Received: 05/03/23 16:40

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

Lab Sample ID: 890-4621-11

Date Collected: 05/03/23 09:50

Matrix: Solid

Date Received: 05/03/23 16:40

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

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Lab Chronicle

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

Date Collected: 05/03/23 09:50

Matrix: Solid

Date Received: 05/03/23 16:40

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

Lab Sample ID: 890-4621-12

Date Collected: 05/03/23 10:05

Matrix: Solid

Date Received: 05/03/23 16:40

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14



Environment Testing
Xenco

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

Chain of Custody

Work Order No: _____

www.xenco.com Page 1 of 2

Project Manager:	Tacoma Membership	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 88230	City, State ZIP:	Carlsbad, NM 88220
Phone:	337.257.8307	Email:	tmembers@ensolum.com

Program:	<input type="checkbox"/> UST/PST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRC <input type="checkbox"/> Superfund
State of Project:	
Reporting:	Level II <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> TRRP <input type="checkbox"/> Level IV <input type="checkbox"/>
Deliverables:	<input type="checkbox"/> EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other:

Project Name:	Remuda N 31 124H	Temp Blank:	<input checked="" type="radio"/> Yes <input type="radio"/> No
Project Number:	03C1558214	Thermometer ID:	NW0007
Project Location:	32.25947 -103.9224	Correction Factor:	-0.2
Sampler's Name:	Meredith Roberts	Temperature Reading:	3.2
P.O. #:		Corrected Temperature:	3.0

ANALYSIS REQUEST	Preservative Codes
None: NO Cool: Cool HCL: HC H ₂ SO ₄ : H ₂ H ₃ PO ₄ : HP NaHSO ₄ : NARIS Na ₂ S ₂ O ₅ : NASO Zn Acetate+NaOH: Zn NaOH+Ascorbic Acid: SAAPC	DI Water: H ₂ O MeOH: Me HNO ₃ : HN NaOH: Na



Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Parameters	Sample Comments
PH01	S	5/3/23	12:30	1'	G	1	BTEX Chlorides TPH	Incident #: NAPP2233950022
PH01A			12:40	3'				Cost Center: 1674811001
PH01B			12:45	4'				
PH01C			12:55	6'				
PH02			1:15	1'				
PH02A			1:30	2'				
PH02B			1:30	4'				
PH03			1:35	1'				
PH03A			1:45	3'				
PH03B			1:00	6'				

Total 2007/6010 2008/6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SIO₂ Na Sr TI 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 TI 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 \$35.00 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
<i>[Signature]</i>	<i>[Signature]</i>	5.3.23 16:40			



Environment Testing
Xenco

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

Chain of Custody

Work Order No: _____

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Page 2 of 2

Project Manager:	Taxoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Esolum, 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@esolum.com

Program:	UST/PST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRC <input type="checkbox"/> Superfund <input type="checkbox"/>
State of Project:	
Reporting:	Level II <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> TRRP <input type="checkbox"/> Level IV <input type="checkbox"/>
Deliverables:	EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other: _____

Project Name:	Remuda N 311344	Non Aroung	Pres. Code	
Project Number:	337-03458214	Procedure	Flush	
Project Location:	337.25947-103.92244	Due Date:	24 Hr	
Sampler's Name:	Meredith Roberts	TAT starts the day received by the lab, if received by 4:30pm		
P.O. #:				
SAMPLE RECEIPT				
Samples Received Intact:	Yes No	Thermometer ID:	Yes No	
Cooler Custody Seals:	Yes No N/A	Corrected Temperature:	Yes No	
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	Parameters	ANALYSIS REQUEST	Preservative Codes	Sample Comments
PH04	S	5/3/23	0930	1'	G	1	BTEX		None: NO DI Water: H ₂ O	Incident #: NAPP2233950022
PH04 A			1005	4'			Chlorides		Cool: Cool HCL: HC	Cost Center: 16748110D1
PH04 B			1010	6'			TPH		H ₂ SO ₄ : H ₂ NaOH: Na	
PH05			0925	1'					H ₂ PO ₄ : HP NaHSO ₄ : NABIS	
PH05 A			0940	4'					Na ₂ S ₂ O ₃ : NaSO ₃	
PH05 B			1225	8'					Zn Acetate+NaOH: Zn	
PH05 C			1240	16'					NaOH+Ascorbic Acid: SNPC	

my lab is @ esolum.com / sorry about the messy col.

Total 2007 / 6010 2008 / 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 SiO₂ Na Sr Ti Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed TCP / SPLP 6010 : 8RCRA 5b As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>				

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	

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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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Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 5/12/2023 4:14:15 PM

JOB DESCRIPTION

Remuda N 31 124H
 SDG NUMBER 03C1558214

JOB NUMBER

890-4628-1

Eurofins Carlsbad
 1089 N Canal St.
 Carlsbad NM 88220



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
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(432)704-5440

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

Laboratory Job ID: 890-4628-1
SDG: 03C1558214

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Definitions/Glossary

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

Job ID: 890-4628-1
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.
α	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.

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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: FS01

Lab Sample ID: 890-4628-1

Date Collected: 05/05/23 09:00

Matrix: Solid

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
Oil 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

Date Collected: 05/05/23 10:10

Matrix: Solid

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

Eurofins Carlsbad

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

Date Collected: 05/05/23 10:10

Matrix: Solid

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
Oil 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

Date Collected: 05/05/23 10:15

Matrix: Solid

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

Eurofins Carlsbad

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

Date Collected: 05/05/23 10:15

Matrix: Solid

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

Date Collected: 05/04/23 15:05

Matrix: Solid

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

Eurofins Carlsbad

Client Sample Results

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

Job ID: 890-4628-1
SDG: 03C1558214

Client Sample ID: FS04

Lab Sample ID: 890-4628-4

Date Collected: 05/04/23 15:05
Date Received: 05/08/23 08:09
Sample Depth: 2'

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

Lab Sample ID: 890-4628-5

Date Collected: 05/04/23 15:10
Date Received: 05/08/23 08:09
Sample Depth: 2'

Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	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
Oll 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

Date Collected: 05/04/23 15:15

Matrix: Solid

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
Oil 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

Date Collected: 05/04/23 15:20

Matrix: Solid

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

Date Collected: 05/04/23 15:20

Matrix: Solid

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
Oil 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

Date Collected: 05/04/23 13:35

Matrix: Solid

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

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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: FS08

Lab Sample ID: 890-4628-8

Date Collected: 05/04/23 13:35

Matrix: Solid

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

Date Collected: 05/04/23 13:40

Matrix: Solid

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

Date Collected: 05/04/23 13:40
Date Received: 05/08/23 08:09
Sample Depth: 1'

Matrix: Solid

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

Date Collected: 05/05/23 10:25
Date Received: 05/08/23 08:09
Sample Depth: 0-3.5'

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 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
Oll 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

Lab Sample ID: 890-4628-11

Date Collected: 05/05/23 10:35

Matrix: Solid

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 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
Oil 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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		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

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Surrogate Summary

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

Job ID: 890-4628-1
SDG: 03C1558214

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

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

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	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

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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
Matrix: Solid
Analysis Batch: 52910

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 52913

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec
	Result	Qualifier		Result	Qualifier				
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	MS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	107		70 - 130
1,4-Difluorobenzene (Surr)	103		70 - 130

Lab Sample ID: 880-28114-A-1-B MSD
Matrix: Solid
Analysis Batch: 52910

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 52913

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier		Result	Qualifier						
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	MSD	Limits
	%Recovery	Qualifier	
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
Matrix: Solid
Analysis Batch: 52999

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53014

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
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
Oil 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	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
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
Matrix: Solid
Analysis Batch: 52999

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

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec
		Result	Qualifier				
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

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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		Limits
	%Recovery	Qualifier	
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		Unit	D	%Rec	%Rec		RPD	Limit
		Result	Qualifier				Limits	RPD		
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		Limits
	%Recovery	Qualifier	
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		Unit	D	%Rec	%Rec	
				Result	Qualifier				Limits	RPD
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		Limits
	%Recovery	Qualifier	
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		Unit	D	%Rec	%Rec		RPD	Limit
				Result	Qualifier				Limits	RPD		
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		Limits
	%Recovery	Qualifier	
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	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
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	%Recovery	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
Diesel Range Organics (Over C10-C28)	1000	1028		mg/Kg		103	70 - 130
Surrogate	LCS		LCS			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		LCSD			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
Diesel Range Organics (Over C10-C28)	<49.9	U	996	780.5		mg/Kg		76	70 - 130

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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 MS		Limits
	%Recovery	Qualifier	
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	Sample	Spike	MSD MSD		Unit	D	%Rec	%Rec		RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD		
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 MSD		Limits
	%Recovery	Qualifier	
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 MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
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
Oil 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 MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
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 LCS		Unit	D	%Rec	%Rec	
		Result	Qualifier				Limits	RPD
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 LCS		Limits
	%Recovery	Qualifier	
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	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	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

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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	

Eurofins Carlsbad

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

Eurofins Carlsbad

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	

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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

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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

Date Collected: 05/05/23 09:00

Matrix: Solid

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

Date Collected: 05/05/23 10:10

Matrix: Solid

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

Date Collected: 05/05/23 10:15

Matrix: Solid

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

Date Collected: 05/04/23 15:05

Matrix: Solid

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

Eurofins Carlsbad

Lab Chronicle

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

Job ID: 890-4628-1
SDG: 03C1558214

Client Sample ID: FS04

Lab Sample ID: 890-4628-4

Date Collected: 05/04/23 15:05

Matrix: Solid

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	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

Lab Sample ID: 890-4628-5

Date Collected: 05/04/23 15:10

Matrix: Solid

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			5.03 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

Lab Sample ID: 890-4628-6

Date Collected: 05/04/23 15:15

Matrix: Solid

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 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

Lab Sample ID: 890-4628-7

Date Collected: 05/04/23 15:20

Matrix: Solid

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 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

Eurofins Carlsbad

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

Date Collected: 05/04/23 15:20

Matrix: Solid

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

Date Collected: 05/04/23 13:35

Matrix: Solid

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

Date Collected: 05/04/23 13:40

Matrix: Solid

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

Date Collected: 05/05/23 10:25

Matrix: Solid

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

Eurofins Carlsbad

Lab Chronicle

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

Job ID: 890-4628-1
 SDG: 03C1558214

Client Sample ID: SW02

Lab Sample ID: 890-4628-11

Date Collected: 05/05/23 10:35

Matrix: Solid

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			5.03 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

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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

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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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Environment Testing
Xenco

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

Chain of Custody

Work Order No: _____

www.xenco.com Page 1 of 2

Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Enscium, 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@enscium.com

Program:	UST/PST <input type="checkbox"/> PPP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRC <input type="checkbox"/> Superfund <input type="checkbox"/>
State of Project:	Reporting: Level II <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> TRRP <input type="checkbox"/> Level IV <input type="checkbox"/>
Deliverables:	EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other: _____

Project Name:	Remuda N 31124H	Turn Around	<input checked="" type="checkbox"/> Routine <input type="checkbox"/> Rush	Pres. Code	
Project Number:	03C1558214	Due Date:			
Project Location:	32.259471, -103.92244	TAT starts the day received by the lab, if received by 4:30pm			
Sampler's Name:	Meredita Roberts	Temp Blank:	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	Thermometer ID:	TMA-1027
PO #:		Correction Factor:		Temperature Reading:	-0.2
SAMPLE RECEIPT		Sample Custody Seals:	Yes No <input checked="" type="checkbox"/> N/A	Temperature Reading:	3.6
Samples Received Intact:	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	Corrected Temperature:			3.4
Cooler Custody Seals:					
Sample Custody Seals:					
Total Containers:					



Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Parameters	Preservative Codes
FSO1	S	5/5/23	0900	2.5'	C	1	X BTEX X TPH X Chlorides	None: NO DI Water: H ₂ O Cool: Cool MeOH: Me HCL: HC HNO ₃ : HN H ₂ SO ₄ : H ₂ H ₂ PO ₄ : HP NaHSO ₄ : NABIS Na ₂ S ₂ O ₅ : NASO ₅ Zn Acetate+NaOH: Zn NaOH+Ascorbic Acid: SABC
FSO2			1010	3.5'				Incident#: NAPP223950022
FSO3			1015	3.5'				Cost Center: 167481001
FSO4		5/4/23	1505	2'				mailto:meredita@enscium.com
FSO5			1510					
FSO6			1515					
FSO7			1520					
FSO8			1335	1'				
FSO9			1340					
SMD1		5/5/23	1025	0-3.5'				

Total 2007 / 6010 2008 / 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 SiO₂ Na Sr Ti 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 Ti 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.

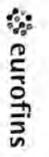
Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>Meredith Roberts</i>	<i>Amanda Stief</i>	5/6/23 0809			

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Eurofins Carlsbad

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

Chain of Custody Record



Environment Testing

Client Information (Sub Contract Lab)		Sampler	Lab PM	Carrier Tracking No(s)	COC No.		
Client Contact: Jessica Kramer		Phone:	Kramer Jessica	890-1271-1	890-1271-1		
Shipping/Receiving: Eurofins Environment Testing South Cent		E-Mail:	Jessica.Kramer@et.eurofins.com	State of Origin	Page 1 of 2		
Company: Eurofins Environment Testing South Cent		Accreditations Required (See note):	NEI,AP - Texas	New Mexico	Page 1 of 2		
Address: 1211 W Florida Ave		Date Date Requested	Analysis Requested				
City: Midland		5/12/2023	890-4628-1				
State, Zip: TX 79701		TAT Requested (days)	Preservation Codes				
Phone: 432-704-5440(Tel)			A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Ancher H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:				
Project Name: Remuda N 31 124H		Project #	M - Hexane N - None O - ASN2O2 P - Na2CO3 Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 Y - Trizma Z - other (specify)				
Site: SSOV#		SSOW#	Special Instructions/Note:				
Sample Identification - Client ID (Lab ID)							
Sample ID	Sample Date	Sample Time	Sample Type (G=Comp, G=grab)	Matrix (Water, Swab, etc.)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of containers
FS01 (890-4628-1)	5/5/23	09 00	Mountain	Solid	X	X	1
FS02 (890-4628-2)	5/5/23	10 10	Mountain	Solid	X	X	1
FS03 (890-4628-3)	5/5/23	10 15	Mountain	Solid	X	X	1
FS04 (890-4628-4)	5/4/23	15 05	Mountain	Solid	X	X	1
FS05 (890-4628-5)	5/4/23	15 10	Mountain	Solid	X	X	1
FS06 (890-4628-6)	5/4/23	15 15	Mountain	Solid	X	X	1
FS07 (890-4628-7)	5/4/23	15 20	Mountain	Solid	X	X	1
FS08 (890-4628-8)	5/4/23	13 35	Mountain	Solid	X	X	1
FS09 (890-4628-9)	5/4/23	13 40	Mountain	Solid	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 subcontracted 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/estimation 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

Deliverable Requested: I II III IV Other (Specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements: Return To Client Disposal By Lab Archive For _____ Months

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Empty Kit Relinquished by: _____ Date: _____ Time: _____ Method of Shipment: _____

Relinquished by: *[Signature]* Date/Time: _____ Company: _____

Relinquished by: _____ Date/Time: _____ Company: _____

Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seal Intact: Yes No Custody Seal No: _____

Cooler Temperature(s) °C and Other Remarks: _____

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	

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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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Environment Testing

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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



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

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

Laboratory Job ID: 890-4653-1
SDG: 03C1558214

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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.
α	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.

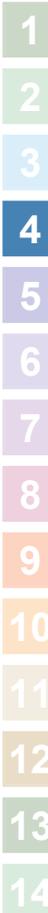
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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

Date Collected: 05/10/23 12:05

Matrix: Solid

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
Oil 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

Date Collected: 05/10/23 12:15

Matrix: Solid

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

Date Collected: 05/10/23 12:15

Matrix: Solid

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
Oil 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

Date Collected: 05/10/23 12:35

Matrix: Solid

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

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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: FS14

Lab Sample ID: 890-4653-3

Date Collected: 05/10/23 12:35

Matrix: Solid

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
Oll 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

Date Collected: 05/10/23 14:00

Matrix: Solid

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
Oll 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

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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: FS19

Lab Sample ID: 890-4653-4

Date Collected: 05/10/23 14:00
Date Received: 05/11/23 16:07
Sample Depth: 2'

Matrix: Solid

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

Date Collected: 05/11/23 10:05
Date Received: 05/11/23 16:07
Sample Depth: 3'

Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		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
Oll 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

Date Collected: 05/11/23 10:10

Matrix: Solid

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
Oil 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

Date Collected: 05/11/23 10:15

Matrix: Solid

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

Date Collected: 05/11/23 10:15

Matrix: Solid

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
Oil 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

Date Collected: 05/11/23 10:20

Matrix: Solid

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

Date Collected: 05/11/23 10:20

Matrix: Solid

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
Oll 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

Date Collected: 05/11/23 10:30

Matrix: Solid

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
Oll 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

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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: FS17

Lab Sample ID: 890-4653-9

Date Collected: 05/11/23 10:30
Date Received: 05/11/23 16:07
Sample Depth: 3'

Matrix: Solid

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

Date Collected: 05/11/23 10:55
Date Received: 05/11/23 16:07
Sample Depth: 3'

Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		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
Oll 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

Date Collected: 05/11/23 12:35

Matrix: Solid

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
Oil 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

Date Collected: 05/11/23 12:40

Matrix: Solid

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

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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: FS20

Lab Sample ID: 890-4653-12

Date Collected: 05/11/23 12:40

Matrix: Solid

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
Oil 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

Date Collected: 05/11/23 12:45

Matrix: Solid

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

Date Collected: 05/11/23 12:45

Matrix: Solid

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

Date Collected: 05/11/23 12:50

Matrix: Solid

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

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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: FS22

Lab Sample ID: 890-4653-14

Date Collected: 05/11/23 12:50

Matrix: Solid

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

Date Collected: 05/11/23 12:55

Matrix: Solid

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
Oll 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

Lab Sample ID: 890-4653-16

Date Collected: 05/11/23 13:15

Matrix: Solid

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 11:30	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
Oil 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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		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
LCS 880-53494/2-A	Lab Control Sample Dup	112	106
LCS 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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		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+

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Surrogate Summary

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

Job ID: 890-4653-1
 SDG: 03C1558214

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO1 (70-130)	OTPH1 (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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

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
Matrix: Solid
Analysis Batch: 53673

Client Sample ID: Method Blank
Prep Type: Total/NA
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
Matrix: Solid
Analysis Batch: 53673

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
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
Matrix: Solid
Analysis Batch: 53673

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53494

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	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
Matrix: Solid
Analysis Batch: 53673

Client Sample ID: FS10
Prep Type: Total/NA
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

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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
Matrix: Solid
Analysis Batch: 53673

Client Sample ID: FS10
Prep Type: Total/NA
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	MS Limits
4-Bromofluorobenzene (Surr)	81		70 - 130
1,4-Difluorobenzene (Surr)	115		70 - 130

Lab Sample ID: 890-4653-1 MSD
Matrix: Solid
Analysis Batch: 53673

Client Sample ID: FS10
Prep Type: Total/NA
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	MSD Limits
4-Bromofluorobenzene (Surr)	115		70 - 130
1,4-Difluorobenzene (Surr)	103		70 - 130

Lab Sample ID: MB 880-53497/5-A
Matrix: Solid
Analysis Batch: 53588

Client Sample ID: Method Blank
Prep Type: Total/NA
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	MB 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
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
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

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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	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	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

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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 MSD		Limits
	%Recovery	Qualifier	
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 MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
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 MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
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 MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
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
Oil 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 MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
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
Diesel Range Organics (Over C10-C28)	1000	1036		mg/Kg		104	70 - 130

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1-Chlorooctane	105		70 - 130
o-Terphenyl	127		70 - 130

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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	Limit	
										RPD
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	
		LCSD	LCSD							
Surrogate		%Recovery	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	RPD	Limit
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		
		MS	MS								
Surrogate		%Recovery	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	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
		MSD	MSD								
Surrogate		%Recovery	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

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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

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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

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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	

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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

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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

Date Collected: 05/10/23 12:05

Matrix: Solid

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

Date Collected: 05/10/23 12:15

Matrix: Solid

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

Date Collected: 05/10/23 12:35

Matrix: Solid

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

Date Collected: 05/10/23 14:00

Matrix: Solid

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

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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

Date Collected: 05/10/23 14:00

Matrix: Solid

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

Date Collected: 05/11/23 10:05

Matrix: Solid

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

Date Collected: 05/11/23 10:10

Matrix: Solid

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

Date Collected: 05/11/23 10:15

Matrix: Solid

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

Lab Sample ID: 890-4653-7

Date Collected: 05/11/23 10:15

Matrix: Solid

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
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

Lab Sample ID: 890-4653-8

Date Collected: 05/11/23 10:20

Matrix: Solid

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	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

Lab Sample ID: 890-4653-9

Date Collected: 05/11/23 10:30

Matrix: Solid

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 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

Lab Sample ID: 890-4653-10

Date Collected: 05/11/23 10:55

Matrix: Solid

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 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

Eurofins Carlsbad

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

Date Collected: 05/11/23 12:35

Matrix: Solid

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

Date Collected: 05/11/23 12:40

Matrix: Solid

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

Date Collected: 05/11/23 12:45

Matrix: Solid

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

Date Collected: 05/11/23 12:50

Matrix: Solid

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

Eurofins Carlsbad

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

Date Collected: 05/11/23 12:50

Matrix: Solid

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

Date Collected: 05/11/23 12:55

Matrix: Solid

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

Date Collected: 05/11/23 13:15

Matrix: Solid

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

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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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Environment Testing
Xenon

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

Chain of Custody

Work Order No: _____

www.xenon.com Page 1 of 2

Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolium	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

Program: UST/PST	<input type="checkbox"/> PRP	<input type="checkbox"/> Brownfields	<input type="checkbox"/> RRC	<input type="checkbox"/> Superfund
State of Project:	Reporting: Level I	<input type="checkbox"/> Level II	<input type="checkbox"/> Level III	<input type="checkbox"/> PST/UST
Deliverables: EDD	<input type="checkbox"/>	ADAPT	<input type="checkbox"/>	Other:

Project Name:	Remuda N 31 124H	Turn Around	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Rush
Project Number:	03C1558214	Due Date:	TAT starts the day received by the lab, if received by 4:30pm	
Project Location:	Connor Whitman	Pres. Code		
Sampler's Name:	Connor Whitman	Parameters	CHLORIDES (EPA: 3000.0)	
PO #:			TPH (8015)	
			BTEX (8021)	



Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab Comp	# of Cont	Preservative Codes	Sample Comments
PS10	S	5/10/23	12:05	2'	G	1	None: NO Cool: Cool HCL: HC H ₂ SO ₄ : H ₂ H ₂ PO ₄ : HP NaHSO ₄ : NABIS Na ₂ S ₂ O ₅ : NaSO ₃ Zn Acetate+NaOH: Zn NaOH+Ascorbic Acid: SARC	Incident ID: nAFP2233952022
PS12			12:15	2'		1		Cost Center: 1674811001
PS19			12:35	2'		1		AFF: [REDACTED]
PS13			2:00	2'		1		
PS11		5/11/23	10:05	3'		1		
PS13			10:10	3'		1		
PS15			10:15	3'		1		
PS16			10:20	3'		1		
PS17			10:50	3'		1		
PS18			10:55	3'		1		

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 SiO₂ Na Sr Ti 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 Ti 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 Xenon, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenon 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 Xenon. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenon, 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
[Signature]	[Signature]	5-11-23 16:07	[Signature]	[Signature]	

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	

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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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Environment Testing

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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



Eurofins Carlsbad

Job Notes

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

Laboratory Job ID: 890-4662-1
SDG: 03C1558214

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Definitions/Glossary

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

Job ID: 890-4662-1
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.
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.
α	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.

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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: FS25

Lab Sample ID: 890-4662-1

Date Collected: 05/12/23 09:30

Matrix: Solid

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
Oil 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

Date Collected: 05/12/23 09:35

Matrix: Solid

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

Eurofins Carlsbad

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

Date Collected: 05/12/23 09:35

Matrix: Solid

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
Oil 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

Date Collected: 05/12/23 10:05

Matrix: Solid

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

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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: FS27

Lab Sample ID: 890-4662-3

Date Collected: 05/12/23 10:05

Matrix: Solid

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
Oll 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

Date Collected: 05/12/23 09:40

Matrix: Solid

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
Oll 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

Eurofins Carlsbad

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

Date Collected: 05/12/23 09:40
Date Received: 05/15/23 09:36
Sample Depth: 3'

Matrix: Solid

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

Date Collected: 05/12/23 09:45
Date Received: 05/15/23 09:36
Sample Depth: 3'

Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U **	0.00200	mg/Kg		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
Oll 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

Date Collected: 05/12/23 09:50

Matrix: Solid

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
Oil 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

Date Collected: 05/12/23 09:55

Matrix: Solid

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

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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: FS31

Lab Sample ID: 890-4662-7

Date Collected: 05/12/23 09:55

Matrix: Solid

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
Oil 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

Date Collected: 05/12/23 10:00

Matrix: Solid

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

Date Collected: 05/12/23 10:00

Matrix: Solid

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
Oil 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

Date Collected: 05/12/23 08:25

Matrix: Solid

Date Received: 05/15/23 09:36

Sample Depth: 0-2

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *	0.00199	mg/Kg		05/18/23 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
Oil 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

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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: SW03

Lab Sample ID: 890-4662-9

Date Collected: 05/12/23 08:25
Date Received: 05/15/23 09:36
Sample Depth: 0-2

Matrix: Solid

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

Date Collected: 05/12/23 08:30
Date Received: 05/15/23 09:36
Sample Depth: 0-3

Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U **	0.00198	mg/Kg		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
Oll 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

Date Collected: 05/12/23 08:35

Matrix: Solid

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
Oil 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

Date Collected: 05/12/23 08:40

Matrix: Solid

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

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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: SW06

Lab Sample ID: 890-4662-12

Date Collected: 05/12/23 08:40

Matrix: Solid

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
Oil 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

Date Collected: 05/12/23 08:45

Matrix: Solid

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

Date Collected: 05/12/23 08:45

Matrix: Solid

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

Date Collected: 05/12/23 08:50

Matrix: Solid

Date Received: 05/15/23 09:36

Sample Depth: 0-2

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/23/23 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

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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: SW08

Lab Sample ID: 890-4662-14

Date Collected: 05/12/23 08:50

Matrix: Solid

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

Date Collected: 05/12/23 08:55

Matrix: Solid

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
Oll 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

Lab Sample ID: 890-4662-16

Date Collected: 05/12/23 09:00

Matrix: Solid

Date Received: 05/15/23 09:36

Sample Depth: 0-2

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/23/23 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
Oil 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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		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
LCS 880-53663/2-A	Lab Control Sample Dup	95	101
LCS 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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		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+

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Surrogate Summary

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

Job ID: 890-4662-1
 SDG: 03C1558214

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

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	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

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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
Matrix: Solid
Analysis Batch: 53967

Client Sample ID: FS25
Prep Type: Total/NA
Prep Batch: 53663

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier		Result	Qualifier				
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	MS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	90		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

Lab Sample ID: 890-4662-1 MSD
Matrix: Solid
Analysis Batch: 53967

Client Sample ID: FS25
Prep Type: Total/NA
Prep Batch: 53663

Analyte	Sample	Sample	Spike Added	MSD	MSD	Unit	D	%Rec	%Rec Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier						
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	MSD	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	95		70 - 130
1,4-Difluorobenzene (Surr)	123		70 - 130

Lab Sample ID: MB 880-53960/5-A
Matrix: Solid
Analysis Batch: 53967

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53960

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
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	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
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
Matrix: Solid
Analysis Batch: 54128

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53970

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
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

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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	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
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	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
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	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
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	LCS	Limits
	%Recovery	Qualifier	
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	LCSD	Unit	D	%Rec	%Rec Limits	RPD	Limit
		Result	Qualifier						
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	LCSD	Limits
	%Recovery	Qualifier	
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	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier		Result	Qualifier				
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

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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		Spike Added	MSD		Unit	D	%Rec	%Rec		RPD	Limit
	Result	Qualifier		Result	Qualifier				Limits	RPD		
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		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
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
Oil 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		Unit	D	%Rec	%Rec	
		Result	Qualifier				Limits	RPD
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

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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
Matrix: Solid
Analysis Batch: 53447

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53486

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	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	
		LCSD	LCSD							
Surrogate	%Recovery	Qualifier	Limits							
1-Chlorooctane	106		70 - 130							
o-Terphenyl	123		70 - 130							

Lab Sample ID: 890-4662-1 MS
Matrix: Solid
Analysis Batch: 53447

Client Sample ID: FS25
Prep Type: Total/NA
Prep Batch: 53486

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
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		
		MS	MS								
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	117		70 - 130								
o-Terphenyl	121		70 - 130								

Lab Sample ID: 890-4662-1 MSD
Matrix: Solid
Analysis Batch: 53447

Client Sample ID: FS25
Prep Type: Total/NA
Prep Batch: 53486

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	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
		MSD	MSD								
Surrogate	%Recovery	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
Matrix: Solid
Analysis Batch: 53587

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			05/18/23 01:50	1

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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

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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	RPD	RPD Limit
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	

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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

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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	

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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

Eurofins Carlsbad

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

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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

Date Collected: 05/12/23 09:30

Matrix: Solid

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

Date Collected: 05/12/23 09:35

Matrix: Solid

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

Date Collected: 05/12/23 10:05

Matrix: Solid

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

Date Collected: 05/12/23 09:40

Matrix: Solid

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

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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

Date Collected: 05/12/23 09:40

Matrix: Solid

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

Date Collected: 05/12/23 09:45

Matrix: Solid

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

Date Collected: 05/12/23 09:50

Matrix: Solid

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

Date Collected: 05/12/23 09:55

Matrix: Solid

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

Date Collected: 05/12/23 09:55

Matrix: Solid

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

Date Collected: 05/12/23 10:00

Matrix: Solid

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

Date Collected: 05/12/23 08:25

Matrix: Solid

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

Date Collected: 05/12/23 08:30

Matrix: Solid

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

Eurofins Carlsbad

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

Date Collected: 05/12/23 08:35

Matrix: Solid

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

Date Collected: 05/12/23 08:40

Matrix: Solid

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

Date Collected: 05/12/23 08:45

Matrix: Solid

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

Date Collected: 05/12/23 08:50

Matrix: Solid

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

Eurofins Carlsbad

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

Date Collected: 05/12/23 08:50

Matrix: Solid

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

Date Collected: 05/12/23 08:55

Matrix: Solid

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

Date Collected: 05/12/23 09:00

Matrix: Solid

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

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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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Environment Testing
Xenco

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 309-3334
El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Chain of Custody

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	<input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRC <input type="checkbox"/> Superfund <input type="checkbox"/>
State of Project:	
Reporting: Level I	<input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> TRRP <input type="checkbox"/> Level IV <input type="checkbox"/>
Deliverables: EDD	<input type="checkbox"/> ADAPT <input type="checkbox"/> Other:

Project Name:	Remuda N 31 124H	Turn Around	<input checked="" type="checkbox"/> Routine <input type="checkbox"/> Rush	Pres. Code	
Project Number:	03C1558214	Due Date:		ANALYSIS REQUEST	
Project Location:	Connor Whitman	TAT starts the day received by the lab, if received by 4:30pm			
Sampler's Name:	Connor Whitman	Temp Blank:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Wet Ice:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
PO #:		Thermometer ID:	TM-0027		
SAMPLE RECEIPT		Cooler Custody Seals:	Yes No N/A	Correction Factor:	-D.2
Samples Received Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Sample Custody Seals:	Yes No N/A	Temperature Reading:	2.2
Cooler Custody Seals:	Yes No N/A	Total Containers:		Corrected Temperature:	2.0



Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Parameters	Preservative Codes	Sample Comments
FS25	S	5/12/23	9:30	3'	C	1	CHLORIDES (EPA: 3000.0)	None: NO	DI Water: H ₂ O
FS26			9:35	3'	C	1	TPH (8015)	Cool: Cool	MeOH: Me
FS27			10:05	3'	C	1	BTEX (8021)	HCL: HC	HNO ₃ : HN
FS28			9:00	3'	C	1		H ₂ SO ₄ : H ₂	NaOH: Na
FS29			9:45	3'	C	1		H ₃ PO ₄ : HP	
FS30			9:10	3'	C	1		NaHSO ₄ : NABIS	
FS31			9:55	1'	C	1		Na ₂ S ₂ O ₅ : NaSO ₃	
FS32			10:00	4'	C	1		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 SiO₂ Na Sr Ti 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
<i>[Signature]</i>	<i>[Signature]</i>	5/15/23 09:06			



Environment Testing

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 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

Chain of Custody

Work Order No: _____

www.xenco.com Page 2 of 2

Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolium	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	<input type="checkbox"/> PRE <input type="checkbox"/> Brownfields <input type="checkbox"/> RRC <input type="checkbox"/> Superfund <input type="checkbox"/>
State of Project:	Reporting: Level II <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> TRRP <input type="checkbox"/> Level IV <input type="checkbox"/>
Deliverables: EDD	<input type="checkbox"/> ADAPT <input type="checkbox"/> Other: _____

Project Name:	Remuda N 31 124H	Turn Around	<input checked="" type="checkbox"/> Routine <input type="checkbox"/> Rush
Project Number:	03C1558214	Due Date:	
Project Location:	Connor Whitman	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Connor Whitman	Temp Blank:	Yes No
PO #:		Thermometer ID:	Yes No
SAMPLE RECEIPT		Cooler Custody Seals:	Yes No N/A
Samples Received Intact:	Yes No	Correction Factor:	Yes No N/A
Sample Custody Seals:	Yes No N/A	Temperature Reading:	Yes No N/A
Total Containers:	Corrected Temperature:		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	ANALYSIS REQUEST															
							CHLORIDES (EPA: 3000.0)	TPH (8015)	BTEX (8021)													
SV03	S	5/12/23	8:25	0-2	C	1																
SV04	S		8:30	0-7		1																
SV05	S		8:35	0-3		1																
SV06	S		8:40	0-3		1																
SV07	S		8:45	0-3		1																
SV08	S		8:50	0-2		1																
SV09	S		8:55	0-3		1																
SV10	S		9:00	0-2		1																

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 SiO₂ Na Sr Ti 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: 17470 / 7471

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>Chick</i>	<i>Amberly Stoff</i>	5/15/23 08:36			

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	

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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	

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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

April 30, 2025

BEN BELILL
ENSOLUM, LLC
705 W WADLEY AVE.
MIDLAND, TX 79705

RE: REMUDA N 31 124H

Enclosed are the results of analyses for samples received by the laboratory on 04/14/25 12:10.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Total Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2 Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2 Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene
Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705	Project: REMUDA N 31 124H Project Number: 03C1558214 Project Manager: BEN BELILL Fax To:	Reported: 30-Apr-25 20:37
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Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FS 33 4	H252192-01	Soil	11-Apr-25 14:25	14-Apr-25 12:10
FS 34 4	H252192-02	Soil	11-Apr-25 14:27	14-Apr-25 12:10
FS 35 4	H252192-03	Soil	11-Apr-25 14:35	14-Apr-25 12:10
SW 12 0-4	H252192-04	Soil	11-Apr-25 14:38	14-Apr-25 12:10
SW 13 0-4	H252192-05	Soil	11-Apr-25 14:42	14-Apr-25 12:10
SW 11 0-4	H252192-06	Soil	11-Apr-25 15:11	14-Apr-25 12:10
FS 38 4	H252192-07	Soil	11-Apr-25 15:18	14-Apr-25 12:10
FS 36 4	H252192-08	Soil	11-Apr-25 16:00	14-Apr-25 12:10

04/30/25 - Client changed the sample ID of -07 (see COC). This is the revised report and will replace the one sent on 04/15/25.

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705	Project: REMUDA N 31 124H Project Number: 03C1558214 Project Manager: BEN BELILL Fax To:	Reported: 30-Apr-25 20:37
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**FS 33 4
H252192-01 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	16.0		16.0	mg/kg	4	5041508	KV	15-Apr-25	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	5041431	JH	14-Apr-25	8021B	
Toluene*	<0.050		0.050	mg/kg	50	5041431	JH	14-Apr-25	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	5041431	JH	14-Apr-25	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	5041431	JH	14-Apr-25	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	5041431	JH	14-Apr-25	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			99.2 %	71.5-134		5041431	JH	14-Apr-25	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	5041411	MS	14-Apr-25	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	5041411	MS	14-Apr-25	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	5041411	MS	14-Apr-25	8015B	

Surrogate: 1-Chlorooctane			91.5 %	44.4-145		5041411	MS	14-Apr-25	8015B	
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Surrogate: 1-Chlorooctadecane			85.7 %	40.6-153		5041411	MS	14-Apr-25	8015B	
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Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705	Project: REMUDA N 31 124H Project Number: 03C1558214 Project Manager: BEN BELILL Fax To:	Reported: 30-Apr-25 20:37
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**FS 34 4
H252192-02 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	<16.0		16.0	mg/kg	4	5041508	KV	15-Apr-25	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	5041431	JH	14-Apr-25	8021B	
Toluene*	<0.050		0.050	mg/kg	50	5041431	JH	14-Apr-25	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	5041431	JH	14-Apr-25	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	5041431	JH	14-Apr-25	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	5041431	JH	14-Apr-25	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			99.0 %		71.5-134	5041431	JH	14-Apr-25	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	5041411	MS	14-Apr-25	8015B	
DRO >C10-C28*	10.3		10.0	mg/kg	1	5041411	MS	14-Apr-25	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	5041411	MS	14-Apr-25	8015B	

Surrogate: 1-Chlorooctane			85.9 %		44.4-145	5041411	MS	14-Apr-25	8015B	
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Surrogate: 1-Chlorooctadecane			80.8 %		40.6-153	5041411	MS	14-Apr-25	8015B	
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Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705	Project: REMUDA N 31 124H Project Number: 03C1558214 Project Manager: BEN BELILL Fax To:	Reported: 30-Apr-25 20:37
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**FS 35 4
H252192-03 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	16.0		16.0	mg/kg	4	5041508	KV	15-Apr-25	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	5041431	JH	14-Apr-25	8021B	
Toluene*	<0.050		0.050	mg/kg	50	5041431	JH	14-Apr-25	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	5041431	JH	14-Apr-25	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	5041431	JH	14-Apr-25	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	5041431	JH	14-Apr-25	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			98.1 %		71.5-134	5041431	JH	14-Apr-25	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	5041411	MS	14-Apr-25	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	5041411	MS	14-Apr-25	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	5041411	MS	14-Apr-25	8015B	

<i>Surrogate: 1-Chlorooctane</i>			95.1 %		44.4-145	5041411	MS	14-Apr-25	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			88.6 %		40.6-153	5041411	MS	14-Apr-25	8015B	
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Analytical Results For:

ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705	Project: REMUDA N 31 124H Project Number: 03C1558214 Project Manager: BEN BELILL Fax To:	Reported: 30-Apr-25 20:37
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**SW 12 0-4
H252192-04 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	96.0		16.0	mg/kg	4	5041508	KV	15-Apr-25	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	5041431	JH	14-Apr-25	8021B	
Toluene*	<0.050		0.050	mg/kg	50	5041431	JH	14-Apr-25	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	5041431	JH	14-Apr-25	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	5041431	JH	14-Apr-25	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	5041431	JH	14-Apr-25	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			99.6 %		71.5-134	5041431	JH	14-Apr-25	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	5041411	MS	14-Apr-25	8015B	
DRO >C10-C28*	376		10.0	mg/kg	1	5041411	MS	14-Apr-25	8015B	
EXT DRO >C28-C36	154		10.0	mg/kg	1	5041411	MS	14-Apr-25	8015B	

<i>Surrogate: 1-Chlorooctane</i>			89.6 %		44.4-145	5041411	MS	14-Apr-25	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			75.1 %		40.6-153	5041411	MS	14-Apr-25	8015B	
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Analytical Results For:

ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705	Project: REMUDA N 31 124H Project Number: 03C1558214 Project Manager: BEN BELILL Fax To:	Reported: 30-Apr-25 20:37
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**SW 13 0-4
H252192-05 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	16.0		16.0	mg/kg	4	5041508	KV	15-Apr-25	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	5041431	JH	14-Apr-25	8021B	
Toluene*	<0.050		0.050	mg/kg	50	5041431	JH	14-Apr-25	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	5041431	JH	14-Apr-25	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	5041431	JH	14-Apr-25	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	5041431	JH	14-Apr-25	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			99.4 %		71.5-134	5041431	JH	14-Apr-25	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	5041411	MS	14-Apr-25	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	5041411	MS	14-Apr-25	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	5041411	MS	14-Apr-25	8015B	

<i>Surrogate: 1-Chlorooctane</i>			86.6 %		44.4-145	5041411	MS	14-Apr-25	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			80.1 %		40.6-153	5041411	MS	14-Apr-25	8015B	
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Analytical Results For:

ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705	Project: REMUDA N 31 124H Project Number: 03C1558214 Project Manager: BEN BELILL Fax To:	Reported: 30-Apr-25 20:37
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**SW 11 0-4
H252192-06 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	176		16.0	mg/kg	4	5041508	KV	15-Apr-25	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	5041431	JH	14-Apr-25	8021B	
Toluene*	<0.050		0.050	mg/kg	50	5041431	JH	14-Apr-25	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	5041431	JH	14-Apr-25	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	5041431	JH	14-Apr-25	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	5041431	JH	14-Apr-25	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			100 %		71.5-134	5041431	JH	14-Apr-25	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	5041411	MS	14-Apr-25	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	5041411	MS	14-Apr-25	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	5041411	MS	14-Apr-25	8015B	

Surrogate: 1-Chlorooctane			87.2 %		44.4-145	5041411	MS	14-Apr-25	8015B	
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Surrogate: 1-Chlorooctadecane			80.6 %		40.6-153	5041411	MS	14-Apr-25	8015B	
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Analytical Results For:

ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705	Project: REMUDA N 31 124H Project Number: 03C1558214 Project Manager: BEN BELILL Fax To:	Reported: 30-Apr-25 20:37
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**FS 38 4
H252192-07 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	256		16.0	mg/kg	4	5041508	KV	15-Apr-25	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	5041431	JH	14-Apr-25	8021B	
Toluene*	<0.050		0.050	mg/kg	50	5041431	JH	14-Apr-25	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	5041431	JH	14-Apr-25	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	5041431	JH	14-Apr-25	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	5041431	JH	14-Apr-25	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			99.8 %		71.5-134	5041431	JH	14-Apr-25	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	5041411	MS	14-Apr-25	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	5041411	MS	14-Apr-25	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	5041411	MS	14-Apr-25	8015B	

Surrogate: 1-Chlorooctane			87.3 %		44.4-145	5041411	MS	14-Apr-25	8015B	
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Surrogate: 1-Chlorooctadecane			80.1 %		40.6-153	5041411	MS	14-Apr-25	8015B	
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Analytical Results For:

ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705	Project: REMUDA N 31 124H Project Number: 03C1558214 Project Manager: BEN BELILL Fax To:	Reported: 30-Apr-25 20:37
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**FS 36 4
H252192-08 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	16.0		16.0	mg/kg	4	5041508	KV	15-Apr-25	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	5041431	JH	14-Apr-25	8021B	
Toluene*	<0.050		0.050	mg/kg	50	5041431	JH	14-Apr-25	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	5041431	JH	14-Apr-25	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	5041431	JH	14-Apr-25	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	5041431	JH	14-Apr-25	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			99.9 %		71.5-134	5041431	JH	14-Apr-25	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	5041411	MS	14-Apr-25	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	5041411	MS	14-Apr-25	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	5041411	MS	14-Apr-25	8015B	

<i>Surrogate: 1-Chlorooctane</i>			89.0 %		44.4-145	5041411	MS	14-Apr-25	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			81.3 %		40.6-153	5041411	MS	14-Apr-25	8015B	
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Analytical Results For:

ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705	Project: REMUDA N 31 124H Project Number: 03C1558214 Project Manager: BEN BELILL Fax To:	Reported: 30-Apr-25 20:37
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Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5041508 - 1:4 DI Water										
Blank (5041508-BLK1)										
Prepared & Analyzed: 15-Apr-25										
Chloride	ND	16.0	mg/kg							
LCS (5041508-BS1)										
Prepared & Analyzed: 15-Apr-25										
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (5041508-BSD1)										
Prepared & Analyzed: 15-Apr-25										
Chloride	400	16.0	mg/kg	400		100	80-120	3.92	20	

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Analytical Results For:

ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705	Project: REMUDA N 31 124H Project Number: 03C1558214 Project Manager: BEN BELILL Fax To:	Reported: 30-Apr-25 20:37
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Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5041431 - Volatiles

Blank (5041431-BLK1)

Prepared & Analyzed: 14-Apr-25

Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	0.0504		mg/kg	0.0500		101	71.5-134			

LCS (5041431-BS1)

Prepared & Analyzed: 14-Apr-25

Benzene	2.10	0.050	mg/kg	2.00		105	82.8-130			
Toluene	2.14	0.050	mg/kg	2.00		107	86-128			
Ethylbenzene	2.07	0.050	mg/kg	2.00		104	85.9-128			
m,p-Xylene	4.09	0.100	mg/kg	4.00		102	89-129			
o-Xylene	2.03	0.050	mg/kg	2.00		101	86.1-125			
Total Xylenes	6.12	0.150	mg/kg	6.00		102	88.2-128			
Surrogate: 4-Bromofluorobenzene (PID)	0.0481		mg/kg	0.0500		96.2	71.5-134			

LCS Dup (5041431-BSD1)

Prepared & Analyzed: 14-Apr-25

Benzene	2.18	0.050	mg/kg	2.00		109	82.8-130	3.95	15.8	
Toluene	2.23	0.050	mg/kg	2.00		111	86-128	4.17	15.9	
Ethylbenzene	2.18	0.050	mg/kg	2.00		109	85.9-128	4.89	16	
m,p-Xylene	4.29	0.100	mg/kg	4.00		107	89-129	4.74	16.2	
o-Xylene	2.12	0.050	mg/kg	2.00		106	86.1-125	4.71	16.7	
Total Xylenes	6.42	0.150	mg/kg	6.00		107	88.2-128	4.73	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	0.0488		mg/kg	0.0500		97.6	71.5-134			

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Analytical Results For:

ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705	Project: REMUDA N 31 124H Project Number: 03C1558214 Project Manager: BEN BELILL Fax To:	Reported: 30-Apr-25 20:37
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Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5041411 - General Prep - Organics

Blank (5041411-BLK1)		Prepared & Analyzed: 14-Apr-25								
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
<i>Surrogate: 1-Chlorooctane</i>	43.5		mg/kg	50.0		87.0	44.4-145			
<i>Surrogate: 1-Chlorooctadecane</i>	40.1		mg/kg	50.0		80.1	40.6-153			

LCS (5041411-BS1)		Prepared & Analyzed: 14-Apr-25								
GRO C6-C10	190	10.0	mg/kg	200		95.2	81.5-123			
DRO >C10-C28	190	10.0	mg/kg	200		94.9	77.7-122			
Total TPH C6-C28	380	10.0	mg/kg	400		95.0	80.9-121			
<i>Surrogate: 1-Chlorooctane</i>	43.7		mg/kg	50.0		87.5	44.4-145			
<i>Surrogate: 1-Chlorooctadecane</i>	41.3		mg/kg	50.0		82.6	40.6-153			

LCS Dup (5041411-BSD1)		Prepared & Analyzed: 14-Apr-25								
GRO C6-C10	193	10.0	mg/kg	200		96.6	81.5-123	1.50	13	
DRO >C10-C28	190	10.0	mg/kg	200		95.2	77.7-122	0.315	15.6	
Total TPH C6-C28	384	10.0	mg/kg	400		95.9	80.9-121	0.911	18.5	
<i>Surrogate: 1-Chlorooctane</i>	46.2		mg/kg	50.0		92.4	44.4-145			
<i>Surrogate: 1-Chlorooctadecane</i>	42.9		mg/kg	50.0		85.8	40.6-153			

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
 (575) 393-2326 FAX (575) 393-2476

BILL TO

ANALYSIS REQUEST

Company Name: Ensolum, LLC
 Project Manager: Ben Bellill
 Address: 601 N Marientfeld Street, Suite 400
 City: Midland State: TX Zip: 79701
 Phone #: 989-854-0852 Fax #: _____
 Project #: 03C1558214 Project Owner: XTO Energy
 Project Name: Remuda N 31 124H - SPILLS
 Project Location: 32.25947, -103.92244
 City: Carlsbad State: NM Zip: 88220
 P.O. #: _____
 Company: XTO Energy, Inc
 Attn: Colton Brown
 Address: 3104 E Greene St
 City: Carlsbad State: NM Zip: 88220
 Phone #: _____
 Fax #: _____

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	TPH 8015	BTEX 8021	Chloride 4500
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:					
HS3192	1 FS33	4	C	1			X					4/15	1425	X	X	X
	2 FS34	4											1437	X	X	X
	3 FS35	4											1435	X	X	X
	4 SW12	0-4											1438	X	X	X
	5 SW13	0-4											1442	X	X	X
	6 SW1	0-4											1511	X	X	X
	7 FS36	4											1518	X	X	X
	8 FS36	4											1600	X	X	X

* Customer requested ID changes.

4/30/25

Relinquished By: _____
 Date: 12/10
 Received By: _____
 Date: 4/25
 Turnaround Time: Standard
 Incident Number: APP2233950022
 Cost Center: 1674811001
 GFCM: 48605000

Delivered By: (Circle One) Observed Temp. °C: 0.8
 Corrected Temp. °C: 1.1
 Sample Condition: Cool Intact Yes No
 Checked By: _____
 Turnaround Time: Standard Rush
 Bacteria (only) Sample Condition: Cool Intact Yes No
 Corrected Temp. °C: _____

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinalabsnm.com



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

April 30, 2025

BEN BELILL
ENSOLUM, LLC
705 W WADLEY AVE.
MIDLAND, TX 79705

RE: REMUDA N 31 124H - SPILLS

Enclosed are the results of analyses for samples received by the laboratory on 04/29/25 12:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene
Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM, LLC
 BEN BELILL
 705 W WADLEY AVE.
 MIDLAND TX, 79705
 Fax To:

Received:	04/29/2025	Sampling Date:	04/28/2025
Reported:	04/30/2025	Sampling Type:	Soil
Project Name:	REMUDA N 31 124H - SPILLS	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.25947, -103.92244		

Sample ID: FS 37 2' (H252556-01)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/29/2025	ND	1.85	92.4	2.00	0.634	
Toluene*	<0.050	0.050	04/29/2025	ND	1.99	99.5	2.00	1.14	
Ethylbenzene*	<0.050	0.050	04/29/2025	ND	2.02	101	2.00	0.374	
Total Xylenes*	<0.150	0.150	04/29/2025	ND	6.24	104	6.00	0.233	
Total BTEX	<0.300	0.300	04/29/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 112 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	04/30/2025	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/30/2025	ND	183	91.6	200	2.81	
DRO >C10-C28*	66.4	10.0	04/30/2025	ND	188	94.0	200	2.44	
EXT DRO >C28-C36	12.5	10.0	04/30/2025	ND					

Surrogate: 1-Chlorooctane 79.4 % 44.4-145

Surrogate: 1-Chlorooctadecane 76.4 % 40.6-153

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM, LLC
 BEN BELILL
 705 W WADLEY AVE.
 MIDLAND TX, 79705
 Fax To:

Received:	04/29/2025	Sampling Date:	04/28/2025
Reported:	04/30/2025	Sampling Type:	Soil
Project Name:	REMUDA N 31 124H - SPILLS	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.25947, -103.92244		

Sample ID: SW 12 0-4' (H252556-02)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/29/2025	ND	1.85	92.4	2.00	0.634	
Toluene*	<0.050	0.050	04/29/2025	ND	1.99	99.5	2.00	1.14	
Ethylbenzene*	<0.050	0.050	04/29/2025	ND	2.02	101	2.00	0.374	
Total Xylenes*	<0.150	0.150	04/29/2025	ND	6.24	104	6.00	0.233	
Total BTEX	<0.300	0.300	04/29/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 112 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	04/30/2025	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/30/2025	ND	183	91.6	200	2.81	
DRO >C10-C28*	<10.0	10.0	04/30/2025	ND	188	94.0	200	2.44	
EXT DRO >C28-C36	<10.0	10.0	04/30/2025	ND					

Surrogate: 1-Chlorooctane 78.9 % 44.4-145

Surrogate: 1-Chlorooctadecane 73.6 % 40.6-153

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM, LLC
 BEN BELILL
 705 W WADLEY AVE.
 MIDLAND TX, 79705
 Fax To:

Received:	04/29/2025	Sampling Date:	04/28/2025
Reported:	04/30/2025	Sampling Type:	Soil
Project Name:	REMUDA N 31 124H - SPILLS	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.25947, -103.92244		

Sample ID: SW 14 0-4' (H252556-03)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/29/2025	ND	2.05	103	2.00	0.0562	
Toluene*	<0.050	0.050	04/29/2025	ND	2.23	111	2.00	2.20	
Ethylbenzene*	<0.050	0.050	04/29/2025	ND	2.12	106	2.00	3.07	
Total Xylenes*	<0.150	0.150	04/29/2025	ND	6.35	106	6.00	3.14	
Total BTEX	<0.300	0.300	04/29/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	04/30/2025	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/30/2025	ND	183	91.6	200	2.81	
DRO >C10-C28*	34.1	10.0	04/30/2025	ND	188	94.0	200	2.44	
EXT DRO >C28-C36	<10.0	10.0	04/30/2025	ND					

Surrogate: 1-Chlorooctane 75.0 % 44.4-145

Surrogate: 1-Chlorooctadecane 71.6 % 40.6-153

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Ernstman, LLC

BILL TO

ANALYSIS REQUEST

Company Name: _____ P.O. #: _____
 Project Manager: _____ Company: XTO Energy, Inc
 Address: 601 N Marlenfield Street, Suite 400 Attn: Colton Brown
 City: Midland State: TX ZIP: 79701 Address: 3104 E Greene St
 Phone #: 989-854-0852 Project XTO Energy, Inc City: Carlsbad
 Project #: _____ State: NM Zip: 88220
 Project Name: Remuda N 31 124H - SPILLS Phone #: _____
 Project Location: 32.25947, -103.92244 Fax #: _____
 Sampler Name: Alex Ferrell

Sample I.D.	Depth (Feet)	(GRAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.	SAMPLING	DATE	TIME	TPH 8015	BTEX 8021	Chloride 4500
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :							
1	2	C 1	1	X							4/28/25	1610	X	X	X	
2	0-4	C 1	1	X							4/28/25	1534	X	X	X	
3	0-4	C 1	1	X							4/28/25	1614	X	X	X	

PLEASE NOTE: Liability and Damages: Customer's liability and client's exclusive remedy for any claim arising whether based in contract or tort shall be limited to the amount paid by the client for the analysis. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits, incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

FOR LAB USE ONLY

Delivered By: (Circle One) Sampler - UPS Bus Other: _____

Observed Temp. °C: _____ Corrected Temp. °C: _____

Sample Condition: Cool Intact No No

Checked By: (Initials) _____

Turnaround Time: Standard Rush _____

Thermometer ID: #140 #103

Correction Factor: _____

Barrels (only) Sample Condition: Cool Intact Observed Temp. °C: _____ Corrected Temp. °C: _____

Relinquished By: _____ Date: 4-29-25 Time: 12:55 Received By: *James O'Leary* Date: _____ Time: _____

Verbal Result: Yes No Add'l Phone #: _____

REMARKS: Incident Number: nAPP2233950022 Cost Center: 1674811001 GFCH: 46805000



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

May 27, 2025

BEN BELILL
ENSOLUM, LLC
705 W WADLEY AVE.
MIDLAND, TX 79705

RE: REMUDA N 31 124H

Enclosed are the results of analyses for samples received by the laboratory on 05/20/25 13:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C25-00101. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene
Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM, LLC
 BEN BELILL
 705 W WADLEY AVE.
 MIDLAND TX, 79705
 Fax To:

Received:	05/20/2025	Sampling Date:	05/16/2025
Reported:	05/27/2025	Sampling Type:	Soil
Project Name:	REMUDA N 31 124H	Sampling Condition:	Cool & Intact
Project Number:	03C1558214 (SPILLS)	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.25947, -103.92244		

Sample ID: BF 01 (H253023-01)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/21/2025	ND	2.02	101	2.00	5.89		
Toluene*	<0.050	0.050	05/21/2025	ND	2.14	107	2.00	10.9		
Ethylbenzene*	<0.050	0.050	05/21/2025	ND	2.12	106	2.00	11.9		
Total Xylenes*	<0.150	0.150	05/21/2025	ND	6.53	109	6.00	12.3		
Total BTEX	<0.300	0.300	05/21/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 114 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	05/21/2025	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	05/21/2025	ND	190	94.8	200	1.09		
DRO >C10-C28*	<10.0	10.0	05/21/2025	ND	182	91.0	200	1.78		
EXT DRO >C28-C36	<10.0	10.0	05/21/2025	ND						

Surrogate: 1-Chlorooctane 95.7 % 44.4-145

Surrogate: 1-Chlorooctadecane 104 % 40.6-153

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

BILL TO

ANALYSIS REQUEST

Company Name: Ensolum, LLC
 Project Manager: Benjamin Bellill
 Address: 601 N Marientfield Street, Suite 400
 City: Midland State: TX ZIP: 79701
 Phone #: 989-854-0852 Project Owner: XTO Energy, Inc
 Project #: 03C1558214
 Project Name: Remuda N 31 124H - SPILLS
 Project Location: 32.25947, -103.92244
 Sampler Name: Alex Ferrell
 P.O. #: _____
 Company: XTO Energy, Inc
 Attn: Colton Brown
 Address: 3104 E Greene St
 City: Carlsbad State: NM Zip: 88220
 Phone #: _____ Fax #: _____

Sample I.D.	Depth (Feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.	DATE	TIME	TPH 8015	BTEX 8021	Chloride 4500
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :						
H25 3023 1 BF01	N/A	C	1			X				X	5/16/25	0912	X	X	X

DATE NOTE: Liability and Damage: Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analysis. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the analytical service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: *[Signature]* Date: 5-20-25 Received By: *[Signature]* Verbal Result: Yes No Add'l Phone #: _____
 Time: 1:335
 Date: _____ Received By: *[Signature]* KThomason@ensolum.com
 REMARKS: Incident Number: nAPP2233950022 Cost Center: 1674811001 GF:CM: 48605000

Observed Temp. °C: 21.4
 Corrected Temp. °C: 21.7
 Sample Condition: Cool Intact Yes No
 CHECKED BY: *[Signature]*
 Turnaround Time: Standard Rush
 Thermometer ID: #1410
 Correction Factor: +0.30
 Bacteria (only) Sample Condition: Cool Intact Yes No
 Observed Temp. °C: _____
 Corrected Temp. °C: _____



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

June 23, 2025

BEN BELILL

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: REMUDA N 31 124H

Enclosed are the results of analyses for samples received by the laboratory on 06/19/25 13:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C25-00101. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	06/19/2025	Sampling Date:	06/17/2025
Reported:	06/23/2025	Sampling Type:	Soil
Project Name:	REMUDA N 31 124H	Sampling Condition:	Cool & Intact
Project Number:	03C1558214	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO		

Sample ID: SS 10 0.5' (H253659-01)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/20/2025	ND	1.95	97.4	2.00	1.71	
Toluene*	<0.050	0.050	06/20/2025	ND	2.05	102	2.00	1.98	
Ethylbenzene*	<0.050	0.050	06/20/2025	ND	2.03	102	2.00	2.11	
Total Xylenes*	<0.150	0.150	06/20/2025	ND	6.04	101	6.00	2.35	
Total BTEX	<0.300	0.300	06/20/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.5 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	06/20/2025	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/20/2025	ND	198	99.1	200	5.54	
DRO >C10-C28*	<10.0	10.0	06/20/2025	ND	220	110	200	13.0	
EXT DRO >C28-C36	<10.0	10.0	06/20/2025	ND					

Surrogate: 1-Chlorooctane 71.3 % 44.4-145

Surrogate: 1-Chlorooctadecane 70.7 % 40.6-153

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	06/19/2025	Sampling Date:	06/17/2025
Reported:	06/23/2025	Sampling Type:	Soil
Project Name:	REMUDA N 31 124H	Sampling Condition:	Cool & Intact
Project Number:	03C1558214	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO		

Sample ID: SS 11 0.5' (H253659-02)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/20/2025	ND	1.95	97.4	2.00	1.71	
Toluene*	<0.050	0.050	06/20/2025	ND	2.05	102	2.00	1.98	
Ethylbenzene*	<0.050	0.050	06/20/2025	ND	2.03	102	2.00	2.11	
Total Xylenes*	<0.150	0.150	06/20/2025	ND	6.04	101	6.00	2.35	
Total BTEX	<0.300	0.300	06/20/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.3 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	06/20/2025	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/20/2025	ND	198	99.1	200	5.54	
DRO >C10-C28*	<10.0	10.0	06/20/2025	ND	220	110	200	13.0	
EXT DRO >C28-C36	<10.0	10.0	06/20/2025	ND					

Surrogate: 1-Chlorooctane 87.7 % 44.4-145

Surrogate: 1-Chlorooctadecane 88.0 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	06/19/2025	Sampling Date:	06/17/2025
Reported:	06/23/2025	Sampling Type:	Soil
Project Name:	REMUDA N 31 124H	Sampling Condition:	Cool & Intact
Project Number:	03C1558214	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO		

Sample ID: SS 12 0.5' (H253659-03)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/20/2025	ND	1.95	97.4	2.00	1.71	
Toluene*	<0.050	0.050	06/20/2025	ND	2.05	102	2.00	1.98	
Ethylbenzene*	<0.050	0.050	06/20/2025	ND	2.03	102	2.00	2.11	
Total Xylenes*	<0.150	0.150	06/20/2025	ND	6.04	101	6.00	2.35	
Total BTEX	<0.300	0.300	06/20/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.8 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	06/20/2025	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/20/2025	ND	198	99.1	200	5.54	
DRO >C10-C28*	<10.0	10.0	06/20/2025	ND	220	110	200	13.0	
EXT DRO >C28-C36	<10.0	10.0	06/20/2025	ND					

Surrogate: 1-Chlorooctane 77.2 % 44.4-145

Surrogate: 1-Chlorooctadecane 74.3 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	06/19/2025	Sampling Date:	06/17/2025
Reported:	06/23/2025	Sampling Type:	Soil
Project Name:	REMUDA N 31 124H	Sampling Condition:	Cool & Intact
Project Number:	03C1558214	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO		

Sample ID: SS 13 0.5' (H253659-04)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/20/2025	ND	1.95	97.4	2.00	1.71		
Toluene*	<0.050	0.050	06/20/2025	ND	2.05	102	2.00	1.98		
Ethylbenzene*	<0.050	0.050	06/20/2025	ND	2.03	102	2.00	2.11		
Total Xylenes*	<0.150	0.150	06/20/2025	ND	6.04	101	6.00	2.35		
Total BTEX	<0.300	0.300	06/20/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.7 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	06/20/2025	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	06/20/2025	ND	198	99.1	200	5.54		
DRO >C10-C28*	<10.0	10.0	06/20/2025	ND	220	110	200	13.0		
EXT DRO >C28-C36	<10.0	10.0	06/20/2025	ND						

Surrogate: 1-Chlorooctane 88.8 % 44.4-145

Surrogate: 1-Chlorooctadecane 88.7 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	06/19/2025	Sampling Date:	06/17/2025
Reported:	06/23/2025	Sampling Type:	Soil
Project Name:	REMUDA N 31 124H	Sampling Condition:	Cool & Intact
Project Number:	03C1558214	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO		

Sample ID: SS 14 0.5' (H253659-05)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/23/2025	ND	1.99	99.7	2.00	7.81		
Toluene*	<0.050	0.050	06/23/2025	ND	2.05	103	2.00	7.63		
Ethylbenzene*	<0.050	0.050	06/23/2025	ND	2.02	101	2.00	7.25		
Total Xylenes*	<0.150	0.150	06/23/2025	ND	6.01	100	6.00	7.79		
Total BTEX	<0.300	0.300	06/23/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.1 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	06/20/2025	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	06/20/2025	ND	198	99.1	200	5.54		
DRO >C10-C28*	<10.0	10.0	06/20/2025	ND	220	110	200	13.0		
EXT DRO >C28-C36	<10.0	10.0	06/20/2025	ND						

Surrogate: 1-Chlorooctane 99.5 % 44.4-145

Surrogate: 1-Chlorooctadecane 102 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	06/19/2025	Sampling Date:	06/17/2025
Reported:	06/23/2025	Sampling Type:	Soil
Project Name:	REMUDA N 31 124H	Sampling Condition:	Cool & Intact
Project Number:	03C1558214	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO		

Sample ID: SS 15 0.5' (H253659-06)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/20/2025	ND	2.02	101	2.00	1.52	
Toluene*	<0.050	0.050	06/20/2025	ND	2.06	103	2.00	1.24	
Ethylbenzene*	<0.050	0.050	06/20/2025	ND	2.07	104	2.00	0.232	
Total Xylenes*	<0.150	0.150	06/20/2025	ND	6.09	102	6.00	0.000329	
Total BTEX	<0.300	0.300	06/20/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	06/20/2025	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/20/2025	ND	198	99.1	200	5.54	
DRO >C10-C28*	<10.0	10.0	06/20/2025	ND	220	110	200	13.0	
EXT DRO >C28-C36	<10.0	10.0	06/20/2025	ND					

Surrogate: 1-Chlorooctane 89.6 % 44.4-145

Surrogate: 1-Chlorooctadecane 88.9 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	06/19/2025	Sampling Date:	06/17/2025
Reported:	06/23/2025	Sampling Type:	Soil
Project Name:	REMUDA N 31 124H	Sampling Condition:	Cool & Intact
Project Number:	03C1558214	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO		

Sample ID: SS 16 0.5' (H253659-07)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/20/2025	ND	2.02	101	2.00	1.52		
Toluene*	<0.050	0.050	06/20/2025	ND	2.06	103	2.00	1.24		
Ethylbenzene*	<0.050	0.050	06/20/2025	ND	2.07	104	2.00	0.232		
Total Xylenes*	<0.150	0.150	06/20/2025	ND	6.09	102	6.00	0.000329		
Total BTEX	<0.300	0.300	06/20/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	06/20/2025	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	06/20/2025	ND	198	99.1	200	5.54		
DRO >C10-C28*	<10.0	10.0	06/20/2025	ND	220	110	200	13.0		
EXT DRO >C28-C36	<10.0	10.0	06/20/2025	ND						

Surrogate: 1-Chlorooctane 102 % 44.4-145

Surrogate: 1-Chlorooctadecane 109 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

1 of 1

BILL TO

ANALYSIS REQUEST

Company Name: Ensolum, LLC
 Project Manager: Ben Beill
 Address: 3122 National Parks Hwy
 City: Carlsbad State: NM Zip: 88220
 Phone #: 337 257-8307 Fax #: 88220
 Project #: 03C1558214 Project Owner: XTO
 Project Name: Remuda N 31 124H
 Project Location:
 Sampler Name: Connor Whitman
 P.O. #: Company: XTO Energy Inc.
 Attn: Colton Brown
 Address: 3104 E. Green St.
 City: Carlsbad State: NM Zip: 88220
 Phone #: Fax #:

Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	BTEX	TPH	CHLORIDE
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:					
HS3659	SS10	0.5	G	1								6-17-25	1000			
	SS11												1005			
	SS12												1015			
	SS13												1020			
	SS14												1025			
	SS15												1030			
	SS16															

PLEASE NOTE: Liability and Damages: Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates, or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated provisions or otherwise.

Relinquished By: *HS*
 Date: 1/22/2026
 Time: 1320
 Received By: *Stockrigney*
 Date: *1/22/2026*
 Time: *1320*
 Observed Temp. °C: 2.8
 Corrected Temp. °C: 3.1
 Sample Condition: Intact Cool Yes No
 CHECKED BY: *SR*
 Turnaround Time: 40 to 30
 Standard: *RUSH*
 Bacteria (only) Sample Condition: Cool Intact Yes No
 Corrected Temp. °C: *4.8*
 REMARKS: Cost Center: 1674811001 Incident ID: nA-PP2233950022
 GFCA: 48605000 AFE:
 Verbal Result: Yes No Add'l Phone #:
 All Results are emailed. Please provide Email address:
 EBeill@ensolum.com, TMorrissey@ensolum.com, kthomason@ensolum.com

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com



Appendix F

Spill Volume Calculation

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)

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 4.25	Volume Recovered (bbls) 0.39
<input checked="" type="checkbox"/> 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> 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.

State of New Mexico
 Oil Conservation Division

Incident ID	NAPP2233950022
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> 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: <u>Garrett Green</u>	Title: <u>SSHE Coordinator</u>
Signature: <u></u>	Date: <u>12/5/2022</u>
email: <u>garrett.green@exxonmobil.com</u>	Telephone: <u>575-200-0729</u>
<u>OCD Only</u>	
Received by: <u>Jocelyn Harimon</u>	Date: <u>12/05/2022</u>

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

Action 163928

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

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

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

QUESTIONS

Action 545475

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 545475
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2233950022
Incident Name	NAPP2233950022 REMUDA N 31 124H @ K-31-23S-30E
Incident Type	Produced Water Release
Incident Status	Remediation Closure Report Received

Location of Release Source	
<i>Please answer all the questions in this group.</i>	
Site Name	REMUDA N 31 124H
Date Release Discovered	11/22/2022
Surface Owner	State

Incident Details	
<i>Please answer all the questions in this group.</i>	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
<i>Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.</i>	
Crude Oil Released (bbls) Details	Cause: Equipment Failure Flow Line - Production Crude Oil Released: 4 BBL Recovered: 0 BBL Lost: 4 BBL.
Produced Water Released (bbls) Details	Cause: Equipment Failure Flow Line - Production Produced Water Released: 17 BBL Recovered: 2 BBL Lost: 15 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	No
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Not answered.

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Energy, Minerals and Natural Resources
Oil Conservation Division
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Santa Fe, NM 87505

QUESTIONS, Page 2

Action 545475

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 545475
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	No, according to supplied volumes this does not appear to be a "gas only" report.
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	No
Reasons why this would be considered a submission for a notification of a major release	<i>Unavailable.</i>

With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.

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	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	<i>Not answered.</i>

Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.

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.

I hereby agree and sign off to the above statement	Name: Richard Kotzur Title: Senior Project Manager Email: NMEEnvNotifications@exxonmobil.com Date: 01/22/2026
--	--

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Phone: (505) 476-3441

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

QUESTIONS, Page 3

Action 545475

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 545475
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Site Characterization
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). 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 in feet below ground surface (ft bgs)	Between 100 and 500 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 300 and 500 (ft.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between ½ and 1 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Between 1 and 5 (mi.)
A wetland	Between 300 and 500 (ft.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Zero feet, overlying, or within area
Categorize the risk of this well / site being in a karst geology	Medium
A 100-year floodplain	Between 1 and 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	Yes

Remediation Plan
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

Requesting a remediation plan approval with this submission	Yes
<i>Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.</i>	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No

Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)

Chloride (EPA 300.0 or SM4500 Cl B)	3040
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	97.9
GRO+DRO (EPA SW-846 Method 8015M)	97.9
BTEX (EPA SW-846 Method 8021B or 8260B)	0
Benzene (EPA SW-846 Method 8021B or 8260B)	0

Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.

On what estimated date will the remediation commence	04/26/2023
On what date will (or did) the final sampling or liner inspection occur	05/16/2025
On what date will (or was) the remediation complete(d)	05/16/2025
What is the estimated surface area (in square feet) that will be reclaimed	7315
What is the estimated volume (in cubic yards) that will be reclaimed	1060
What is the estimated surface area (in square feet) that will be remediated	7315
What is the estimated volume (in cubic yards) that will be remediated	860

These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed. The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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Oil Conservation Division
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QUESTIONS, Page 4

Action 545475

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 545475
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Remediation Plan (continued)

Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:

(Select all answers below that apply.)

(Ex Situ) Excavation and off-site disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for off-site disposal	fEEM0112334510 HALFWAY DISPOSAL AND LANDFILL
OR which OCD approved well (API) will be used for off-site disposal	Not answered.
OR is the off-site disposal site, to be used, out-of-state	Not answered.
OR is the off-site disposal site, to be used, an NMED facility	Not answered.
(Ex Situ) Excavation and on-site remediation (i.e. On-Site Land Farms)	Not answered.
(In Situ) Soil Vapor Extraction	Not answered.
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	Not answered.
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	Not answered.
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	Not answered.
Ground Water Abatement pursuant to 19.15.30 NMAC	Not answered.
OTHER (Non-listed remedial process)	Not answered.

Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.

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.

I hereby agree and sign off to the above statement	Name: Richard Kotzur Title: Senior Project Manager Email: NMEnvNotifications@exxonmobil.com Date: 01/22/2026
--	---

The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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Energy, Minerals and Natural Resources
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QUESTIONS, Page 5

Action 545475

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 545475
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Deferral Requests Only	
<i>Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.</i>	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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Energy, Minerals and Natural Resources
Oil Conservation Division
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QUESTIONS, Page 6

Action 545475

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 545475
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	473671
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	06/18/2025
What was the (estimated) number of samples that were to be gathered	10
What was the sampling surface area in square feet	2000

Remediation Closure Request

Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.

Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	7315
What was the total volume (cubic yards) remediated	860
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	7315
What was the total volume (in cubic yards) reclaimed	1060

Summarize any additional remediation activities not included by answers (above)	Site assessment, delineation, excavation, and confirmation soil sampling activities were conducted at the Site to address the extent of impacted soil from the November 2022 release of produced water and crude oil onto the well pad and into the adjacent pipeline ROW. Approximately 860 cubic yards of impacted and/or waste-containing soil were excavated from the Site. Laboratory analytical results for all final confirmation soil samples collected indicated COC concentrations were compliant with the Closure Criteria and reclamation requirement, where applicable. Based on the soil sample laboratory analytical results, no further remediation is required. Approximately 200 cubic yards of waste containing soil remain on pad to a maximum depth of 4 feet bgs. The soil will be removed during pad abandonment and reclamation activities.
---	---

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (in .pdf format) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

I hereby agree and sign off to the above statement	Name: Richard Kotzur Title: Senior Project Manager Email: NMEnvNotifications@exxonmobil.com Date: 01/22/2026
--	---

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

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

QUESTIONS, Page 7

Action 545475

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 545475
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Reclamation Report	
<i>Only answer the questions in this group if all reclamation steps have been completed.</i>	
Requesting a reclamation approval with this submission	No

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

CONDITIONS

Action 545475

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 545475
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your Remediation Closure Report for Incident #NAPP2233950022 REMUDA N 31 124H, thank you. This Remediation Closure Report is approved.	2/18/2026