Location:	**Remuda 4-24-30 CTB**	
Spill Date:	**11/20/2022**	
Area 1		
Approximate Area =	1906.00	sq. ft.
Average Saturation (or depth) of spill =	2.00	inches
Average Porosity Factor =	0.03	
VOLUME OF LEAK		
Total Crude Oil =	0.00	bbls
Total Produced Water =	9.70	bbls
TOTAL VOLUME OF LEAK		
Total Crude Oil =	**0.00**	**bbls**
Total Produced Water =	**9.70**	**bbls**
TOTAL VOLUME RECOVERED		
Total Crude Oil =	**0.00**	**bbls**
Total Produced Water =	**8.00**	**bbls**

ENSOLUM

March 24, 2025

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

Re: Closure Request Addendum
Remuda Basin 4-24-30 CTB
Incident Number NAPP2233351770
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared this *Closure Request Addendum* to present additional remediation activities completed at the Remuda Basin 4-24-30 CTB (Site), in response to the denial of the original *Closure Request*, submitted to the New Mexico Oil Conservation Division (NMOCD) on May 19, 2023. In the denial, NMOCD indicated that an inadequate number of confirmation sidewall soil samples were collected. Based on soil sampling activities described below, XTO is submitting this *Closure Request Addendum* and requesting no further action for Incident Number NAPP2233351770.

BACKGROUND

The Site is located in Unit A, Section 4, Township 24 South, Range 30 East, in Eddy County, New Mexico (32.253334°, -103.881797°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On November 20, 2022, internal corrosion caused a pinhole to developed on a produced water flowline check valve, resulting in the release of 9.70 barrels (bbls) of produced water into a lined containment and on to the surface of the well pad. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; and 8.00 bbls were recovered. A 48-hour advance notice of liner inspection was provided via email to the NMOCD. A liner integrity inspection was conducted by XTO personnel following the fluid recovery and upon inspection, the liner was determined to be insufficient. XTO submitted a Release Notification Form C-141 (Form C-141) on November 29, 2022. The release was assigned Incident Number NAPP2233351770.

The Closure Request detailed the Site characterization completed to assess the applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented in the original *Closure Request*, submitted May 19, 2023. Potential Site receptors are identified on Figure 1.

Based on the results of the Site characterization, the following 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

Between January 9 and February 22, 2023, Ensolum conducted Site assessment, delineation, and excavation activities in response to the release. XTO submitted a *Closure Request* on May 19, 2023, requesting no further action (NFA) following delineation of the release and excavation of all soil exceeding the Closure Criteria and/or the reclamation requirement. Delineation samples were collected from the release as shown on Figure 2. Confirmation samples were collected from the excavation as shown on Figure 3. All previously completed remedial activities can be found in the original *Closure Request* included in Appendix A. On June 26, 2023, NMOCD denied the *Closure Request* for Incident Number NAPP2233351770 for the following reasons:

> *Closure rejected. Per 19.15.29.12 D (1) The responsible party must test the remediated areas for contamination with representative five-point composite samples from the walls and base, and individual grab samples from any wet or discolored areas. The samples must be analyzed for the constituents listed in Table I of 19.15.29.12 NMAC or constituents from other applicable remediation standards. Side wall samples located in the areas of FS01 through FS03 were not collected therefore, lateral delineation of this area has not been completed. Delineation samples will need to be collected in this area prior to the release being closed. Samples will need to be analyzed for all constituents listed in Table 1 and enough samples will need to be collected to fully define the lateral extents of the release. Minimal impacts found beneath the liner are above the reclamation standard for TPH. These impacts will need to be addressed at plugging and abandonment or during a major facility reconstruction, whichever comes first.*

CONFIRMATION SOIL SAMPLING ACTIVITIES

On December 19, 2024, Ensolum personnel returned to the Site to collect additional sidewall samples on the southern edge of the previously existing excavation. Five-point composite soil samples (SW05 through SW07) were collected representing areas no more than 200 square feet from the sidewalls of the previous excavation at depths ranging from the ground surface to 1-foot bgs. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing.

The confirmation soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. All confirmation 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 Cardinal Laboratories (Cardinal) in Hobbs, New Mexico, for analysis of the following contaminants of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH- GRO, TPH- DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following Standard Method SM4500. The release extent, excavation extent, and confirmation soil sample locations are presented on Figure 4.

Laboratory analytical results for all confirmation soil samples collected indicated all COC concentrations were in compliance with the most stringent Table I Closure Criteria. The laboratory analytical results are summarized on Table 1 and the complete laboratory analytical reports are included in Appendix C.

As previously reported, the excavation area measured approximately 1,993 square feet. A total of 140 cubic yards of impacted soil were removed from the Site. The impacted soil was transported and properly disposed of at the R360 Disposal Facility in Hobbs, New Mexico. The excavation has been backfilled with material purchased locally and the Site has been recontoured to match pre-existing site conditions.

CLOSURE REQUEST

Additional soil sampling activities were conducted at the Site to address the November 20, 2022, produced water release and June 26, 2023 NMOCD denial. Laboratory analytical results from all confirmation samples, collected from the final excavation extent, indicated that all COC concentrations were in compliance with the Closure Criteria. Based on soil sample analytical results, no further remediation is required. The excavation was backfilled with material purchased locally and the surface recontoured to match pre-existing Site conditions.

Excavation of impacted soil has mitigated impacts at this Site. Depth to groundwater has been determined to be greater than 100 feet bgs and no other sensitive receptors were identified near the release extent. XTO believes these remedial actions are protective of human health, the environment, and groundwater. As such, XTO respectfully requests closure for Incident Number NAPP2233351770.

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

Sincerely,
Ensolum, LLC

Hadlie Green
Project Geologist

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

cc: Kaylan Dirkx, XTO
Colton Brown, XTO
BLM

Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Figure 4	Confirmation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	*Closure Request*; May 19, 2023
Appendix B	Photographic Log
Appendix C	Laboratory Analytical Reports & Chain-of-Custody Documentation

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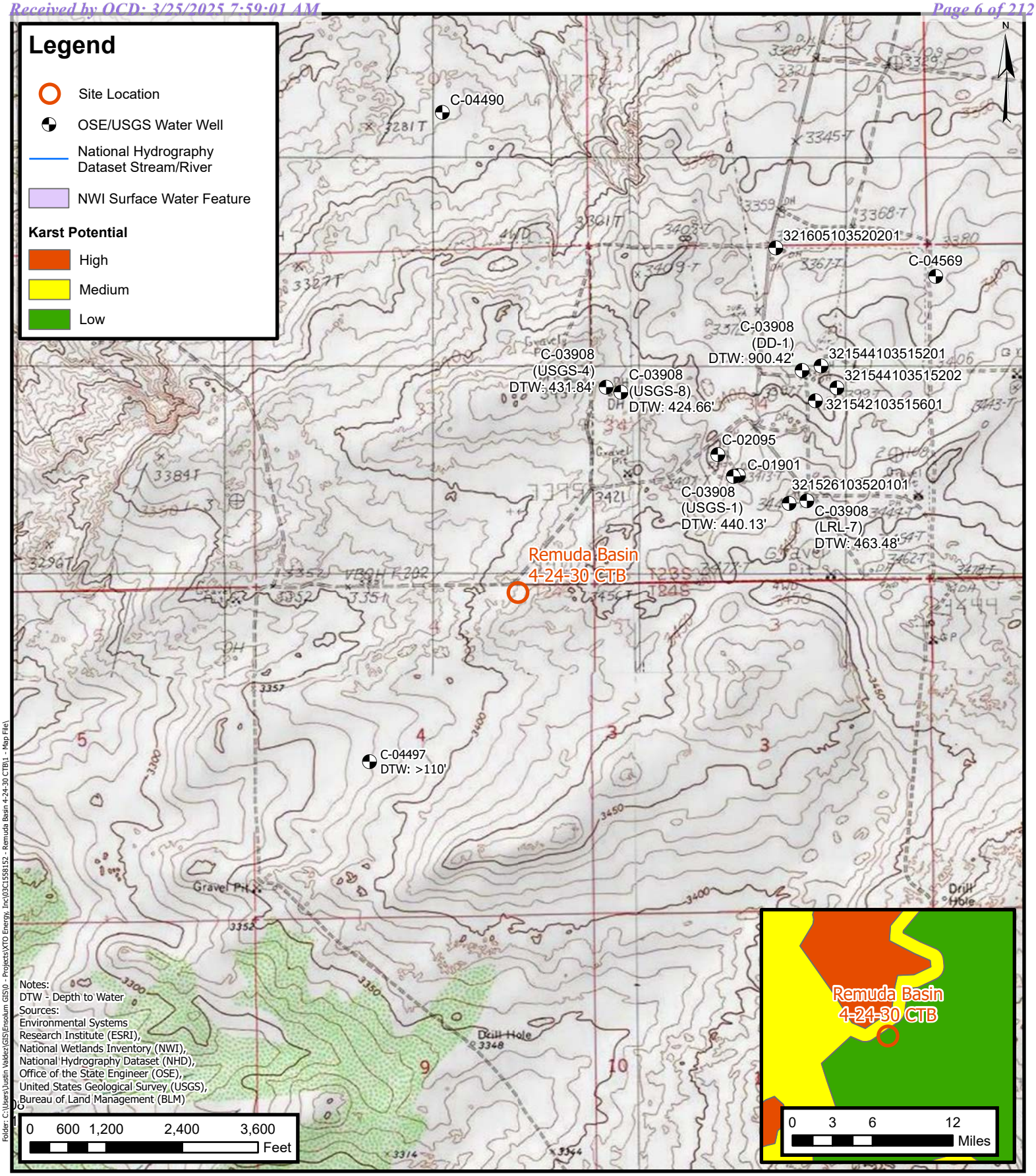
FIGURES



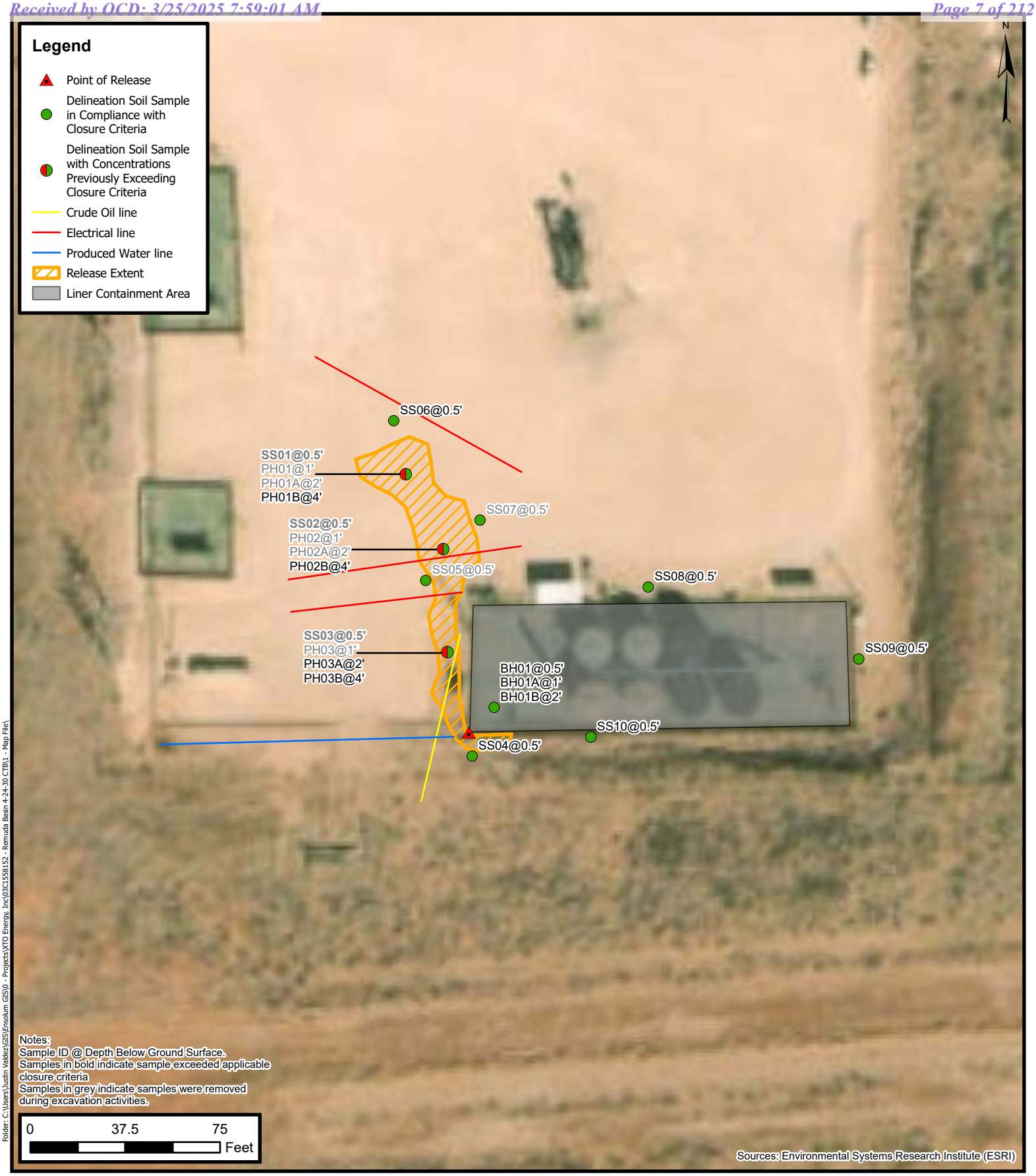
Folder: C:\Users\Justin Valdez\GIS\Ensolum GIS\0 - Projects\XTO Energy, Inc\03C1558152 - Remuda Basin 4-24-30 CTB\1 - Map File\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

XTO Energy, Inc
Remuda Basin 4-24-30 CTB
Incident Number: NAPP2233351770
Unit A, Sec 4, T24S, R30E
Eddy County, New Mexico

FIGURE 1



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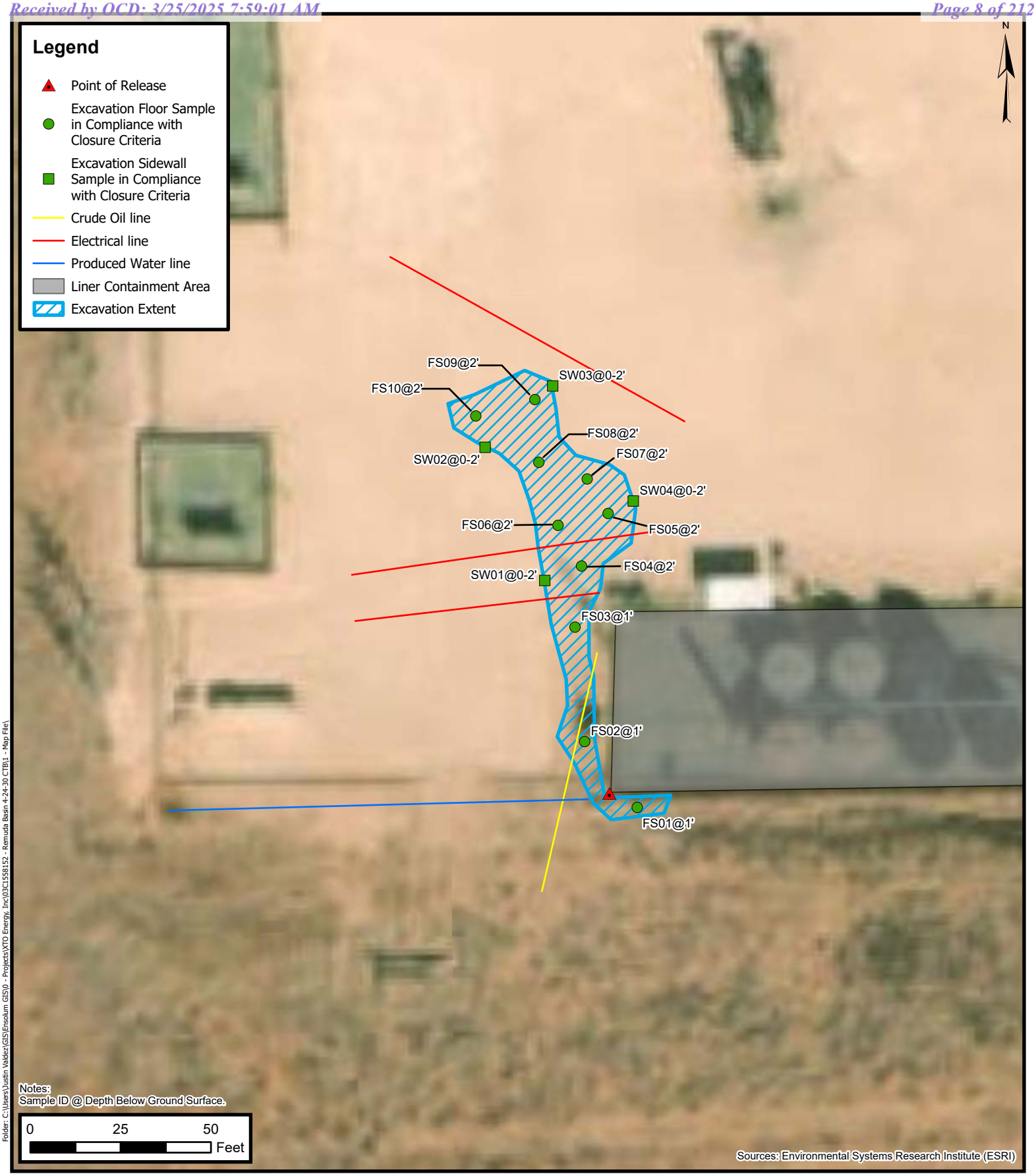
Delineation Soil Sample Locations

XTO Energy, Inc
Remuda Basin 4-24-30 CTB
Incident Number: NAPP2233351770
Unit A, Sec 4, T24S, R30E
Eddy County, New Mexico

FIGURE 2



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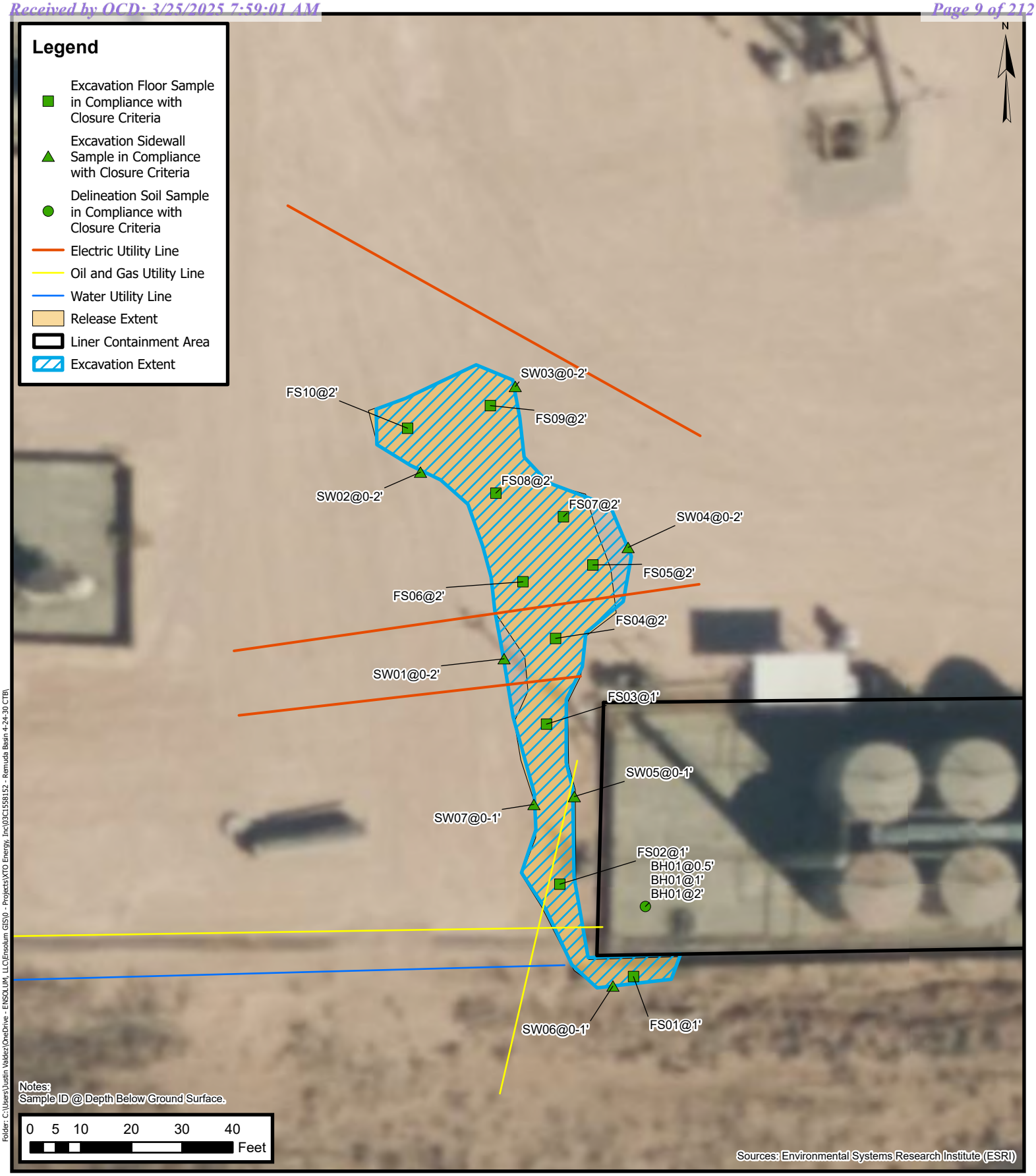
ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Excavation Soil Sample Locations

XTO Energy, Inc
Remuda Basin 4-24-30 CTB
Incident Number: NAPP2233351770
Unit A, Sec 4, T24S, R30E
Eddy County, New Mexico

FIGURE 3



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ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Confirmation Soil Sample Locations

XTO Energy, Inc.
Remuda Basin 4-24-30 CTB
Incident Number: NAPP2233351770
Unit A, Sec 4, T 24S, R 30E
Eddy County, New Mexico

FIGURE 4

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Remuda Basin 4-24-30 CTB
XTO Energy, Inc
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Delineation Soil Samples										
~~SS01~~	~~01/09/2023~~	~~0.5~~	~~2.48~~	~~4.23~~	~~2,670~~	~~10,100~~	~~1,770~~	~~**12,770**~~	~~**14,540**~~	~~176~~
~~PH01~~	~~01/16/2023~~	~~1~~	~~<0.00201~~	~~0.130~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~8.86~~
~~PH01A~~	~~01/16/2023~~	~~2~~	~~<0.00199~~	~~<0.00398~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~<4.97~~
PH01B	01/16/2023	4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	<5.03
~~SS02~~	~~01/09/2023~~	~~0.5~~	~~4.73~~	~~**96.6**~~	~~2,610~~	~~8,700~~	~~1,350~~	~~**11,310**~~	~~**12,660**~~	~~211~~
~~PH02~~	~~01/16/2023~~	~~1~~	~~<0.00199~~	~~<0.00398~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~10.7~~
~~PH02A~~	~~01/16/2023~~	~~2~~	~~<0.00200~~	~~<0.00399~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~11.1~~
PH02B	01/16/2023	4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	15.0
~~SS03~~	~~01/09/2023~~	~~0.5~~	~~0.0152~~	~~15.9~~	~~1,050~~	~~9,580~~	~~1,200~~	~~**10,630**~~	~~**11,830**~~	~~63.8~~
~~PH03~~	~~01/16/2023~~	~~1~~	~~<0.00201~~	~~0.0312~~	~~<49.9~~	~~82.3~~	~~<49.9~~	~~82.3~~	~~82.3~~	~~31.8~~
PH03A	01/16/2023	2	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	24.3
PH03B	01/16/2023	4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	13.5
SS04	01/16/2023	0.5	<0.00200	<0.00401	<49.9	58.6	<49.9	58.6	58.6	70.8
~~SS05~~	~~01/16/2023~~	~~0.5~~	~~<0.00200~~	~~<0.00399~~	~~<49.8~~	~~169~~	~~<49.8~~	~~169~~	~~169~~	~~190~~
SS06	01/16/2023	0.5	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	82.6
~~SS07~~	~~01/16/2023~~	~~0.5~~	~~<0.00199~~	~~<0.00398~~	~~<49.8~~	~~212~~	~~<49.8~~	~~212~~	~~212~~	~~195~~
SS08	01/16/2023	0.5	<0.00199	<0.00398	<49.9	70.9	<49.9	70.9	70.9	215
SS09	01/16/2023	0.5	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	81.6
SS10	01/16/2023	0.5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	50.1
BH01	01/16/2023	0.5	<0.00200	<0.00401	<49.9	186	<49.9	186	186	470
BH01A	01/16/2023	1	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	337
BH01B	01/16/2023	2	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	59.5

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Remuda Basin 4-24-30 CTB
XTO Energy, Inc
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			**10**	**50**	**NE**	**NE**	**NE**	**1,000**	**2,500**	**20,000**
Confirmation Soil Samples										
FS01	02/21/2023	1	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	86.9
FS02	02/21/2023	1	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	22.6
FS03	02/21/2023	1	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	11.9
FS04	02/21/2023	2	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	18.7
FS05	02/21/2023	2	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	30.1
FS06	02/21/2023	2	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	44.9
FS07	02/21/2023	2	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	20.0
FS08	02/21/2023	2	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	13.0
FS09	02/21/2023	2	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	12.1
FS10	02/21/2023	2	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	20.1
SW01	02/21/2023	0-2	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	27.3
SW02	02/21/2023	0-2	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	7.04
SW03	02/21/2023	0-2	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	<50.0	25.1
SW04	02/21/2023	0-2	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	22.7
SW05	12/19/2024	0-1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
SW06	12/19/2024	0-1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
SW07	12/19/2024	0-1	<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
NMAC: New Mexico Administrative Code
GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
TPH: Total Petroleum Hydrocarbon
~~Grey~~ text indicates soil sample removed during excavation activities

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APPENDIX A

Closure Request; May 19, 2023

ENSOLUM

May 17, 2023

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

Re: Closure Request
Remuda Basin 4-24-30 CTB
Incident Number NAPP2233351770
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 assessment and soil sampling activities performed at the Remuda Basin 4-24-30 Central Tank Battery (CTB; Site). The purpose of the Site assessment and soil sampling activities was to assess for the presence or absence of impacts to soil following a produced water release. Based on field observations and laboratory analytical results, XTO is submitting this *Closure Request* describing Site assessment and excavation activities that have occurred and requesting no further action for Incident Number NAPP2233351770.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit A, Section 4, Township 24 South, Range 30 East, in Eddy County, New Mexico (32.25359°, -103.88134°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On November 20, 2022, internal corrosion caused a pinhole to developed on a produced water flowline check valve, resulting in the release of 9.70 barrels (bbls) of produced water into a lined containment and on to the surface of the well pad. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; and 8.00 bbls were recovered. A 48-hour advance notice of liner inspection was provided via email to the New Mexico Oil Conservation Division (NMOCD). A liner integrity inspection was conducted by XTO personnel following the fluid recovery and upon inspection, the liner was determined to be insufficient. XTO submitted a Release Notification Form C-141 (Form C-141) on November 29, 2022. The release was assigned Incident Number NAPP2233351770.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

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

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on a soil boring drilled for determination of regional groundwater depth. On December 28, 2020, a soil boring permitted by New Mexico Office of the State Engineer (OSE file number C-4497) was completed slightly greater than ½ mile (approximately 3,009 feet) southwest of the Site location utilizing

a truck-mounted hollow-stem auger rig. Soil boring C-4497 was drilled to a depth of 110 feet bgs. A field geologist logged and described soils continuously. No moisture or groundwater was encountered during drilling activities. The borehole was left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period without observing groundwater, it was confirmed that groundwater beneath the Site is greater than 110 feet bgs. The borehole was properly abandoned with drill cuttings and hydrated bentonite chips. The Well Log is included in Appendix A. Although the NMOCD prefers water well data for estimating depth to water be no more than ½ mile away, NMOCD's *Procedures for Implementation of the Spill Rule*, dated September 6, 2019, indicates NMOCD will consider information that does not meet that preference on a case-by-case basis. In this instance, the water well is only a few feet outside the ½-mile preference. In addition, there are a significant number of water wells in the opposite direction of the Site with similar depth to groundwater results. A report from the United States Department of Energy (DOE) regarding Project Gnome-Coach includes recent groundwater elevation measurements at four monitoring wells (identified as C-03908 in the OSE database and on Figure 1). All wells contain water greater than 400 feet deep. A summary of groundwater levels for wells associated with C-03908 is provided in Appendix A. The full report, *2022 Groundwater Monitoring and Inspection Report Gnome*-Coach dated March 2023, can be located on the DOE Legacy Management website. All existing data from water wells to the northeast are consistent with that information. This regional data, which is just outside the ½-mile distance preference, supports the estimate for depth to groundwater being greater than 100 feet.

The closest continuously flowing or significant watercourse to the Site is a seasonal dry wash, located approximately 5,372 feet north of the Site. The Site is greater than 200 feet from any lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Potential site receptors are identified on Figure 1.

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

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

SITE ASSESSMENT AND DELINEATION ACTIVITIES

Between Janurary 9, and January 16, 2023, Site assessment and delineation activities were conducted to evaluate the release extent based on information provided on the Form C-141. Seven delineation soil samples (SS01 through SS07) were collected within and around the release extent at a depth of 0.5 feet bgs. Three lateral delineation soil samples (SS08 through SS10) were collected at a depth of 0.5 feet bgs to confirm the release did not extend outside the lined containment towards the north, south, or east. One borehole (BH01) was advanved by use of hand auger at the location of the tear in the liner identified during the liner integrity inspection. Three potholes (PH01 through PH03) were advanced by use of heavy equipment in the vicinity of soil samples SS01 through SS03, respectively. Discrete delineation soil samples were collected in the borehole and all potholes from depths ranging from 0.5 feet to 4 feet bgs. Delineation soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride utilizing Hach® chloride QuanTab® test strips. Field

screening results and observations from the borehole and potholes were documented on lithologic/soil sampling logs, which are included as Appendix B. Borehole BH01 was backfilled with the soil removed and XTO repaired the tear in the liner. The liner containment, release extent, and delineation soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was conducted during the Site visit and a photographic log is included in Appendix C.

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

EXCAVATION ACTIVITIES

Between January 16, and February 22, 2023, Ensolum personnel oversaw excavation activities. Soil was excavated from the release extent in the area represented by delineation soil samples SS01 through SS03, SS05, and SS07 which contained elevated TPH concentrations. Excavation activities were performed by use of heavy equipment and hydrovacuum. To direct excavation activities, Ensolum personnel field screened soil as described above.

Following removal of soil, Ensolum personnel collected 5-point composite soil samples representing up to 200 square feet from the floor of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples FS01 through FS10 were collected from the floor of the excavation at depths ranging from 1-foot to 2 feet bgs. Composite soil samples SW01 through SW04 were collected from the sidewalls of the excavation from ground surface to 2 feet bgs. The sidewalls were included in composite soil samples FS01 through FS03 due to the shallow nature of the excavation in these areas. The excavation soil samples were field screened, handled, and analyzed following the same procedures as described above. The excavation extent and excavation soil sample locations are presented on Figure 3.

The final excavation extent measured approximately 1,993 square feet. A total of approximately 140 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Landfill Disposal Facility in Hobbs, New Mexico. After completion of confirmation sampling, the excavation area was secured with fencing.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for delineation soil samples SS01 through SS03 indicated TPH concentrations exceed the Site Closure Criteria. All other delineation and excavation soil samples collected indicated COC concentrations were compliant with the Closure Criteria. This includes borehole BH01, which was advanced within the lined containment area. All lateral and vertical delineation samples were compliant with the reclamation requirement. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix D.

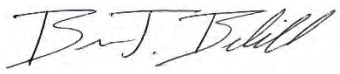
CLOSURE REQUEST

Site assessment, delineation, and excavation activities were conducted at the Site to assess for the presence or absence of impacted soil from the November 20, 2022 release of produced water into the lined containment and onto the ground surface. Following the failed liner integrity inspection at the Site, Ensolum personnel advanced borehole BH01 at the location of the tear in the liner to assess for the potential for impacts underlying the liner containment. Lateral soil samples SS08 through SS10 were collected north, south, and east of the containment area. Laboratory analytical results for BH01 and SS08 through SS10 indicated all COC concentrations were in compliance with the Closure Criteria and provide vertical and lateral delineation to the strictest Table I Closure Criteria. Excavation activities were completed based on laboratory analytical results for delineation soil samples SS01 through SS03, SS05, and SS07 which indicated elevated TPH concentrations. All excavation soil samples collected from the final excavation extent indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria. Based on the soil sample analytical results, no further remediation was required. The tear in the liner was subsequently repaired and the excavation was backfilled on May 3, 2023, with material purchased locally and the Site was recontoured to match pre-existing site conditions.

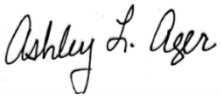
Excavation of impacted soil has mitigated impacts at this Site. Depth to groundwater has been determined to be greater than 100 feet bgs and no other sensitive receptors were identified near the release extent. XTO believes these remedial actions are protective of human health, the environment, and groundwater. Based on initial response efforts, soil sample laboratory analytical results, and excavation of impacted soil, XTO respectfully requests closure for Incident Number NAPP2233351770.

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

Sincerely,
Ensolum, LLC



Benjamin J. Belill
Project Geologist



Ashley L. Ager, MS, PG
Principal

cc: Garrett Green, XTO
Shelby Pennington, XTO
BLM

Appendices:

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

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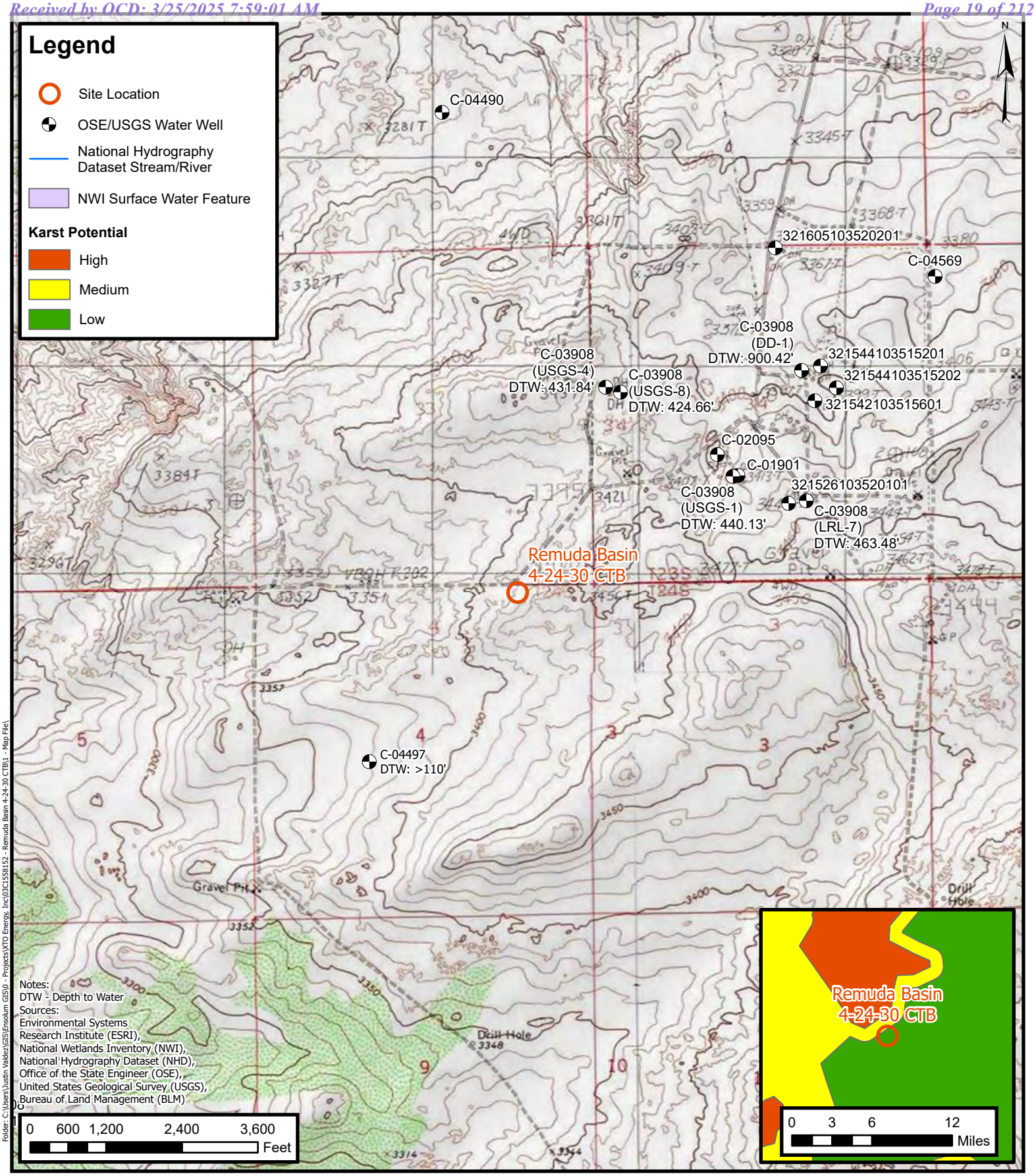
FIGURES



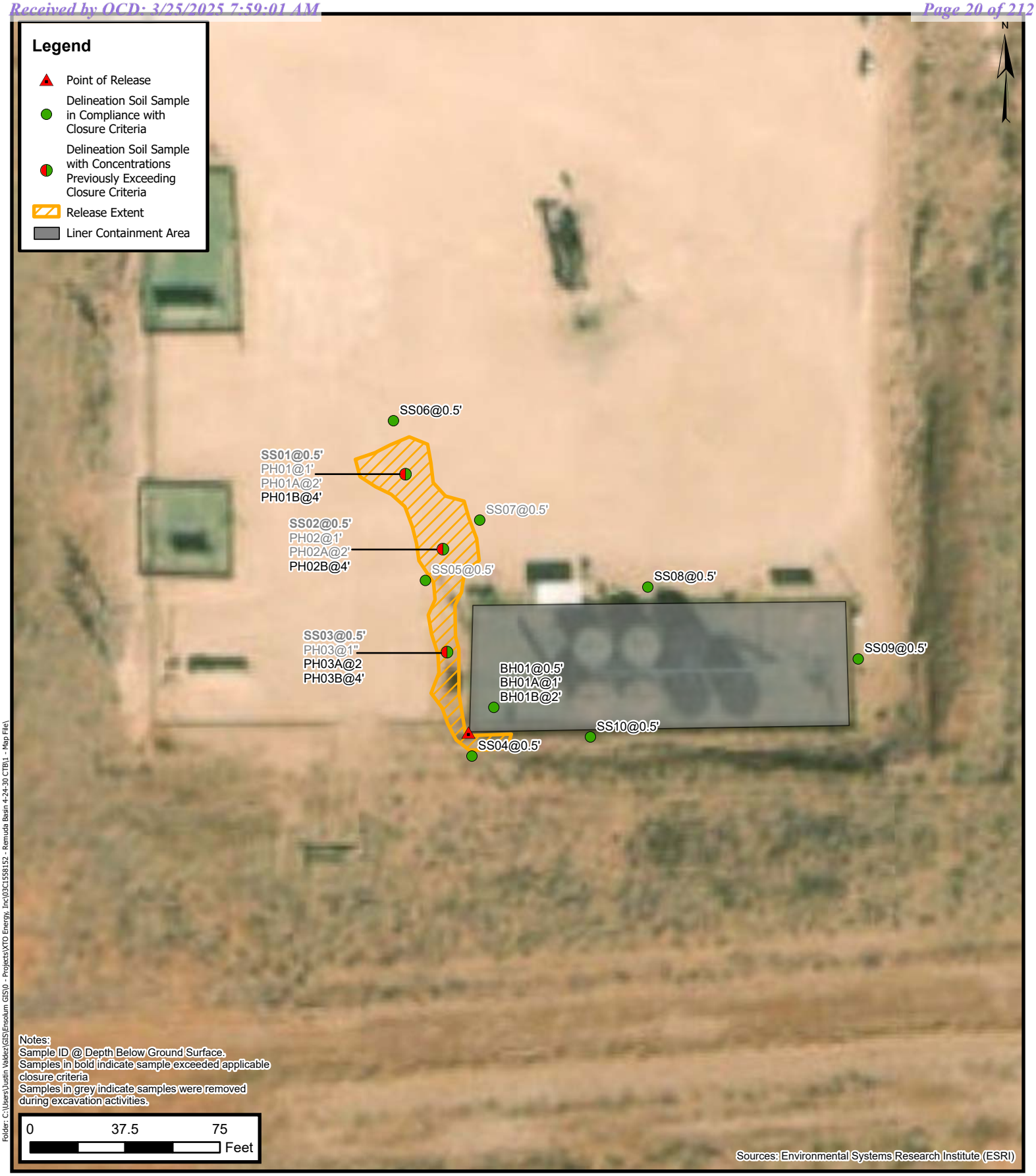
Folder: C:\Users\Justin Valdez\GIS\Ensolum GIS\0 - Projects\XTO Energy, Inc\03C1558152 - Remuda Basin 4-24-30 CTB\1 - Map File\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

XTO Energy, Inc
Remuda Basin 4-24-30 CTB
Incident Number: NAPP2233351770
Unit A, Sec 4, T24S, R30E
Eddy County, New Mexico

FIGURE 1



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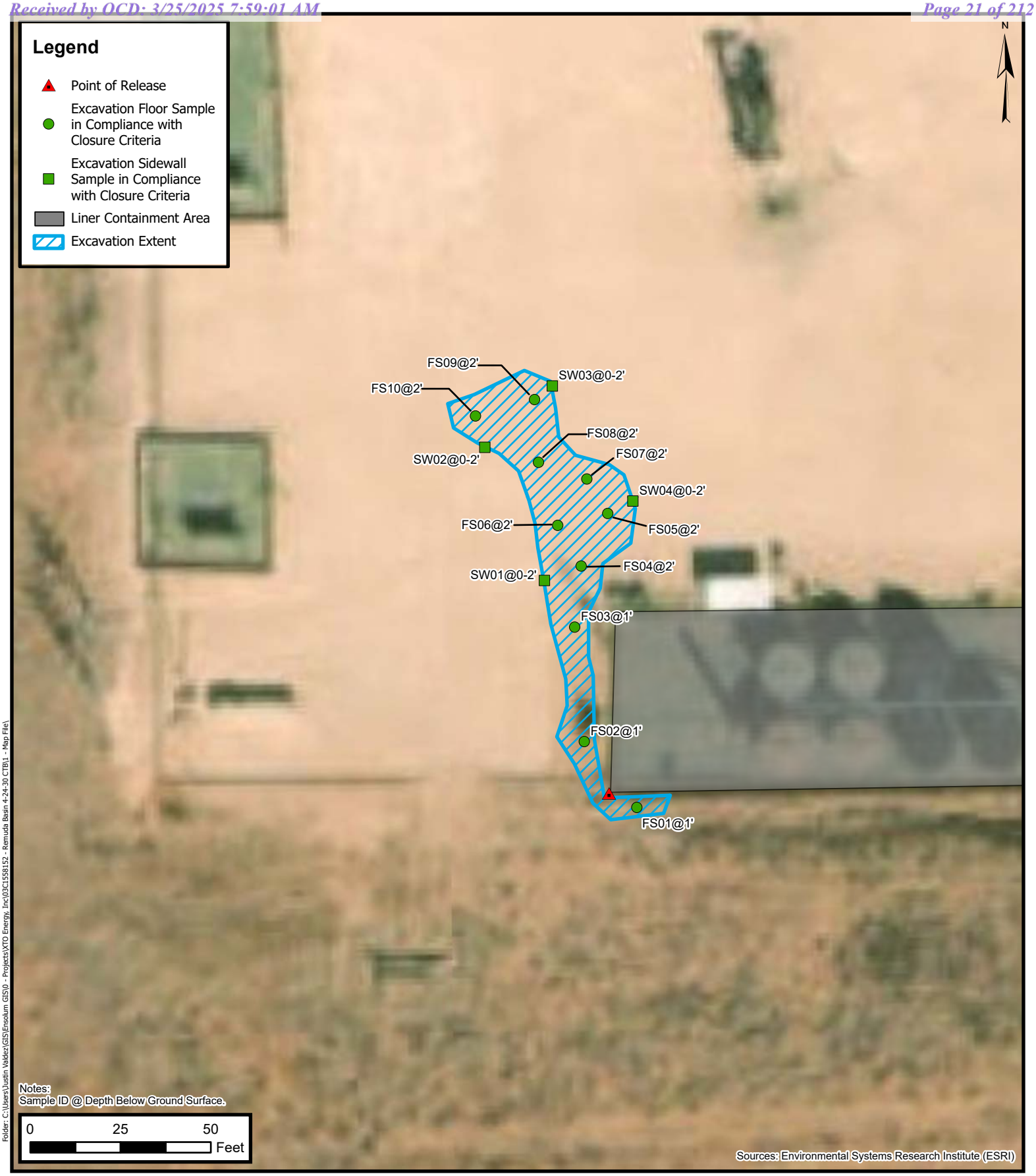
Delineation Soil Sample Locations

XTO Energy, Inc
Remuda Basin 4-24-30 CTB
Incident Number: NAPP2233351770
Unit A, Sec 4, T24S, R30E
Eddy County, New Mexico

FIGURE 2



Folder: C:\Users\Justin Valdez\GIS\Ensolum GIS\0 - Projects\XTO Energy, Inc\03C1558152 - Remuda Basin 4-24-30 CTB\1 - Map File\

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Environmental, Engineering and Hydrogeologic Consultants

Excavation Soil Sample Locations

XTO Energy, Inc
Remuda Basin 4-24-30 CTB
Incident Number: NAPP2233351770
Unit A, Sec 4, T24S, R30E
Eddy County, New Mexico

FIGURE 3

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Remuda Basin 4-24-30 CTB
XTO Energy, Inc
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Delineation Soil Samples										
~~SS01~~	~~01/09/2023~~	~~0.5~~	~~2.48~~	~~4.23~~	~~2,670~~	~~10,100~~	~~1,770~~	~~**12,770**~~	~~**14,540**~~	~~176~~
~~PH01~~	~~01/16/2023~~	~~1~~	~~<0.00201~~	~~0.130~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~8.86~~
~~PH01A~~	~~01/16/2023~~	~~2~~	~~<0.00199~~	~~<0.00398~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~<4.97~~
PH01B	01/16/2023	4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	<5.03
~~SS02~~	~~01/09/2023~~	~~0.5~~	~~4.73~~	~~**96.6**~~	~~2,610~~	~~8,700~~	~~1,350~~	~~**11,310**~~	~~**12,660**~~	~~211~~
~~PH02~~	~~01/16/2023~~	~~1~~	~~<0.00199~~	~~<0.00398~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~10.7~~
~~PH02A~~	~~01/16/2023~~	~~2~~	~~<0.00200~~	~~<0.00399~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~11.1~~
PH02B	01/16/2023	4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	15.0
~~SS03~~	~~01/09/2023~~	~~0.5~~	~~0.0152~~	~~15.9~~	~~1,050~~	~~9,580~~	~~1,200~~	~~**10,630**~~	~~**11,830**~~	~~63.8~~
~~PH03~~	~~01/16/2023~~	~~1~~	~~<0.00201~~	~~0.0312~~	~~<49.9~~	~~82.3~~	~~<49.9~~	~~82.3~~	~~82.3~~	~~31.8~~
PH03A	01/16/2023	2	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	24.3
PH03B	01/16/2023	4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	13.5
SS04	01/16/2023	0.5	<0.00200	<0.00401	<49.9	58.6	<49.9	58.6	58.6	70.8
~~SS05~~	~~01/16/2023~~	~~0.5~~	~~<0.00200~~	~~<0.00399~~	~~<49.8~~	~~169~~	~~<49.8~~	~~169~~	~~169~~	~~190~~
SS06	01/16/2023	0.5	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	82.6
~~SS07~~	~~01/16/2023~~	~~0.5~~	~~<0.00199~~	~~<0.00398~~	~~<49.8~~	~~212~~	~~<49.8~~	~~212~~	~~212~~	~~195~~
SS08	01/16/2023	0.5	<0.00199	<0.00398	<49.9	70.9	<49.9	70.9	70.9	215
SS09	01/16/2023	0.5	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	81.6
SS10	01/16/2023	0.5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	50.1
BH01	01/16/2023	0.5	<0.00200	<0.00401	<49.9	186	<49.9	186	186	470
BH01A	01/16/2023	1	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	337
BH01B	01/16/2023	2	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	59.5
Confirmation Soil Samples										
FS01	02/21/2023	1	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	86.9
FS02	02/21/2023	1	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	22.6
FS03	02/21/2023	1	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	11.9
FS04	02/21/2023	2	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	18.7
FS05	02/21/2023	2	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	30.1
FS06	02/21/2023	2	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	44.9
FS07	02/21/2023	2	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	20.0
FS08	02/21/2023	2	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	13.0

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Remuda Basin 4-24-30 CTB
XTO Energy, Inc
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			**10**	**50**	**NE**	**NE**	**NE**	**1,000**	**2,500**	**20,000**
FS09	02/21/2023	2	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	12.1
FS10	02/21/2023	2	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	20.1
SW01	02/21/2023	0-2	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	27.3
SW02	02/21/2023	0-2	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	7.04
SW03	02/21/2023	0-2	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	<50.0	25.1
SW04	02/21/2023	0-2	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	22.7

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

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

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

NMAC: New Mexico Administrative Code

Grey text indicates soil sample removed during excavation activities

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APPENDIX A

Referenced Well Records

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

OSE DII JAN 28 2021 PM4:24

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
POD1 (BH-01)	n/a	C-4497

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

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

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32°	14'	46.69"	N
	LONGITUDE	-103°	53'	20.46"	W

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

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

NE SW Sec. 4 T24S R30E

2. DRILLING & CASING INFORMATION

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

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
12/28/2020	12/28/2020	temporary well material	110	n/a

COMPLETED WELL IS: ☐ ARTESIAN ☑ DRY HOLE ☐ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): n/a

DRILLING FLUID: ☑ AIR ☐ MUD ADDITIVES – SPECIFY:

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

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

3. ANNULAR MATERIAL

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

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/30/17)

FILE NO. C-4497	POD NO. 1	TRN NO. 682526	
LOCATION 23 1 T24S Sec4 R30E		WELL TAG ID NO. NA	PAGE 1 OF 2

OSE DII JAN 28 2021 PM4:24

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	1.5	1.5	CALICHE, poor-moderate consolidation, few sand, fine grain, light brown, dry	Y ✓ N	
1.5	5	3.5	SAND, well graded, fine grain, few gravel, sub angular, 2-8mm. Red/brown, dry	Y ✓ N	
5	16	11	SAND, fine grain, poorly graded, few gravel, some clay, red/brown, moist	Y ✓ N	
16	85	69	SAND, well graded, large grain, little clay, noncohesive,, red/brown, moist	Y ✓ N	
85	--	--	SANDSTONE, very poorly consolidated, medium-fine grain, well graded,	Y ✓ N	
--	105	20	few caliche gravel, sub angular, 1.5-7mm, light brown - almond brown, moist	Y ✓ N	
105	--	--	SANDSTONE, highly consolidated, medium-fine grain, poorly graded,	Y ✓ N	
--	110	5	few clay, low plasticity, noncohesive, light brown-almond brown, dry	Y ✓ N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

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

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

5. TEST; RIG SUPERVISION

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

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

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

Shane Eldridge

6. SIGNATURE

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

Jack Atkins — Jackie D. Atkins — 01/15/2021

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

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

FILE NO. C-4497	POD NO. 1	TRN NO. 682526
LOCATION 23 T24S Sec4 R30E	WELL TAG ID NO. NA	PAGE 2 OF 2

John R. D Antonio, Jr., P.E.
State Engineer

Roswell Office
1900 WEST SECOND STREET
ROSWELL, NM 88201

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER

Trn Nbr: 682526
File Nbr: C 04497
Well File Nbr: C 04497 POD1

Feb. 05, 2021

TACOMA MORRISSEY
WSP USA
3300 NORTH A STREET
BLDG 1 #222
MIDLAND, TX 79705

Greetings:

The above numbered permit was issued in your name on 12/01/2020.

The Well Record was received in this office on 01/28/2021, stating that it had been completed on 12/28/2020, and was a dry well. The well is to be plugged according to 19.27.4.30 NMAC.

Please note that another well can be drilled under this permit if the well is completed and the well log filed on or before 12/01/2021.

If you have any questions, please feel free to contact us.

Sincerely,

Andrew Dennis
(575)622-6521

drywell

Released to Imaging: 3/26/2025 8:37:43 AM
Received by OCD: 3/25/2025 7:59:01 AM

Table 2. Gnome-Coach Site Monitoring Well Network Water Levels

Well	Date	DTW (ft)[a]	TOC Elevation (ft amsl)	TSZ Elevation (ft amsl)	BSZ Elevation (ft amsl)	Formation/ Unit Monitored	Groundwater Elevation (ft amsl)
USGS-1	2/8/2022	440.13[b]	3428.72	2909[c]	2877[c]	Culebra Dolomite	2988.68
USGS-4	2/8/2022	431.84	3415.84	2942[c]	2909[c]		2988.96[c]
USGS-8	2/8/2022	424.66	3413.37	2949[c]	2917[c]		2988.71[c]
LRL-7	2/8/2022	463.48	3444.64	2655[d]	2129[d]	Salado Formation	2981.16[d]
DD-1	2/8/2022	900.42	3399.53[e]	2261[d]	U/NM		2499.11[d]

Notes:
The TOC elevations are provided in U.S. State Plane, Zone New Mexico East, coordinate system, with vertical data based on NAVD 88 and horizontal data based on NAD 83 (DOE 2015a).
[a] Depth to water has not been corrected for true vertical depth.
[b] Well USGS-1 has a dedicated submersible pump that was not operating at the time of the water level measurement.
[c] Elevation has been corrected for true vertical depth. (At the current water-level depths, the deviation correction for USGS-1 is 0.09 ft; the deviation correction for USGS-4 is 4.96 ft; and no correction is required for USGS-8 because it did not deviate from vertical.)
[d] Elevations for LRL-7 and DD-1 have not been corrected for true vertical depth because borehole deviation data are not available for these wells.
[e] TOC elevation is estimated because of repairs to the wellhead after the well was vandalized in 2014 (DOE 2016a).

Abbreviations:
BSZ = bottom of screen zone, uncased, open, or perforated interval in ft amsl
DTW = depth to water (all measurements obtained from north top-of-casing)
ft amsl = feet above mean sea level
NAD 83 = North American Datum of 1983
NAVD 88 = North American Vertical Datum of 1988
TOC = top-of-casing elevation in ft amsl (NAVD 88)
TSZ = top of screen zone, uncased, open, or perforated interval in ft amsl
U/NM = unknown or not measured (the construction and open intervals of reentry well DD-1 are unknown)

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APPENDIX B

Lithologic Soil Sampling Logs

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	Sample Name: BH01	Date: 1/16/2023
	Site Name: Remuda 4-24-30	
	Incident Number: NAPP223351770	
	Job Number: 03C1558152	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: MR	Method: Hand Auger
Coordinates: 32.25359, -103.88134	Hole Diameter: 3.5"	Total Depth: 2'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride tests performed with 1:4 dilution factor of soil to distilled water and 40% correction factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	224	49.0	Y	BH01	0.5	0.5	SP-SM	0-1', SAND, red, fine-grained silt/sand mix, poorly sorted, sub-rounded grains, moist, odor, staining.
M	341.6	14.7	N	BH01A	1	1	SP	1'-2', SAND, red, fine-grained silt/sand mix, poorly sorted, sub-ground grains, moist, odor, no staining.
M	<162.4	3.1	N	BH01B	2	2		2', SAND, red, fine-grained silt/sand mix, poorly sorted, sub-rounded grains, moist, little odor, no staining.
							TD	Total Depth @ 2' bgs.

ENSOLUM

Sample Name: PH01	Date: 1/16/2023	
Site Name: Remuda 4-24-30 CTB		
Incident Number: NAPP223351770		
Job Number: 03C1558152		
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: MR	Method: Backhoe
Coordinates: 32.25359, -103.88134	Hole Diameter: NA	Total Depth: 6'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride tests performed with 1:4 dilution factor of soil to distilled water and 40% correction factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
							CCHE (fill)	0-0.5', CALICHE, light brown, poorly sorted, sub-rounded grains, odor, moist, stained, fill.
M	<162.4	916.8	Y	SS01	0.5	0.5	SP-SM	0.5'-2', SAND, orange/red, poorly sorted, sub-round grains, odor, moist, no staining.
M	162.4	219.0	N	PH01	1	1		
M	<162.4	41.5	N	PH01A	2	2	SP	2'-6', SAND, dark brown/red, poorly sorted, sub-rounded grains, odor, moist, no staining.
M	<162.4	32.3	N			3		
M	<162.4	13.1	N	PH01B	4	4		
M	<162.4	5.4	N			5		5'-6', no odor.
M	<162.4	1	N	PH01C	6	6		
							TD	Total Depth @ 6' bgs.

ENSOLUM

	Sample Name: PH02	Date: 1/16/2023
	Site Name: Remuda 4-24-30 CTB	
	Incident Number: NAPP223351770	
	Job Number: 03C1558152	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: MR	Method: Backhoe
Coordinates: 32.25359, -103.88134	Hole Diameter: NA	Total Depth: 6'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride tests performed with 1:4 dilution factor of soil to distilled water and 40% correction factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
							CCHE	0-0.5' CALICHE, light brown, poorly sorted, sub-rounded grains, odor, moist, stained.
M	162.4	1266	Y	SS02	0.5	0.5	SP-SM	0.5'-2', SAND, orange/red, poorly sorted, sub-round grains, odor, moist, no staining.
M	<162.4	53.7	N	PH02	1	1		
M	<162.4	64.7	N	PH02A	2	2	SP	2-5' SAND, dark brown/red, poorly sorted, sub-rounded grains, odor, moist, no staining.
M	<162.4	24.6	N			3		
M	<162.4	6.6	N	PH02B	4	4		4'-6', no odor.
M	<162.4	3.8	N			5		
M	<162.4	2.6	N	PH02C	6	6		
							TD	Total Depth @ 6' bgs.

ENSOLUM

	Sample Name: PH03	Date: 1/16/2023
	Site Name: Remuda 4-24-30 CTB	
	Incident Number: NAPP223351770	
	Job Number: 03C1558152	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: MR	Method: Backhoe
Coordinates: 32.25359, -103.88134	Hole Diameter: NA	Total Depth: 7'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride tests performed with 1:4 dilution factor of soil to distilled water and 40% correction factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
							CCHE	0-0.5' CALICHE, light brown, poorly sorted, sub-rounded grains, odor, moist, stained.
M	162.4	525.6	Y	SS03	0.5	0.5	SP	0.5'-7' SAND, orange/red, poorly sorted, sub-round grains, odor, moist, no staining.
M	<162.4	388.8	N	PH03	1	1		
M	<162.4	37.9	N	PH03A	2	2		
M	<162.4	11.1	N			3		3'-6' trace odor.
M	<162.4	8	N	PH03B	4	4		
M	<162.4	11.4	N			5		
M	<162.4	3.1	N	PH03C	6	6		6'-7', no odor.
M	<162.4	2.4	N			7		
							TD	Total Depth @ 7' bgs.

ENSOLUM

APPENDIX C

Photographic Log

ENSOLUM

Photographic Log
XTO Energy, Inc
Remuda Basin 4-24-30 CTB
Incident Number NAPP2233351770

Photograph 1 Date: 01/09/2023
Description: Site assessment, release extent area.
View: South

Photograph 2 Date: 01/09/2023
Description: Site assessment, release extent area.
View: North

Photograph 3 Date: 01/09/2023
Description: Liner inspection
View: North

Photograph 4 Date: 01/09/2023
Description: Liner inspection, liner tear.
View: South

ENSOLUM

Photographic Log
XTO Energy, Inc
Remuda Basin 4-24-30 CTB
Incident Number NAPP2233351770

Photograph 5 Date: 01/16/2023
Description: Delineation activities, BH01.
View: South

Photograph 6 Date: 01/16/2023
Description: Liner patch, BH01.
View: North

Photograph 7 Date: 02/20/2023
Description: Excavation activities, excavation extent.
View: North

Photograph 8 Date: 02/21/2023
Description: Excavation activities, final excavation extent.
View: South

ENSOLUM

APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 1/26/2023 11:32:53 AM

JOB DESCRIPTION

Remuda 4-24-30 CTB
SDG NUMBER 03C1558152

JOB NUMBER

890-3786-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Released to Imaging: 3/26/2025 8:37:45 AM

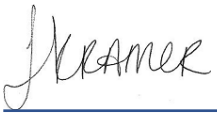
my EOL

Eurofins Carlsbad

Job Notes

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

Authorization



Generated
1/26/2023 11:32:53 AM

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

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Laboratory Job ID: 890-3786-1
SDG: 03C1558152

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3786-1
SDG: 03C1558152

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
H	Sample was prepped or analyzed beyond the specified holding time
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
F2	MS/MSD RPD exceeds control limits
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3786-1
SDG: 03C1558152

Job ID: 890-3786-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3786-1

Receipt
The samples were received on 1/10/2023 9:05 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.6°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SS01 (890-3786-1), SS02 (890-3786-2) and SS03 (890-3786-3).

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-43678 and analytical batch 880-43961 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 sample was outside control limits: SS03 (890-3786-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Reanalysis of the following sample(s) was performed outside of the analytical holding time.: SS01 (890-3786-1) and SS02 (890-3786-2).

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

GC Semi VOA
Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 880-43804 and analytical batch 880-43781 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: SS01 (890-3786-1), SS02 (890-3786-2) and SS03 (890-3786-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (MB 880-43804/1-A). Evidence of matrix interferences is not obvious.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-43786 and analytical batch 880-43927 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3786-1
SDG: 03C1558152

Client Sample ID: SS01

Lab Sample ID: 890-3786-1
Matrix: Solid
Date Collected: 01/09/23 13:55
Date Received: 01/10/23 09:05
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	2.48		0.0399		mg/Kg		01/10/23 15:37	01/17/23 09:02	20
Toluene	0.399		0.0399		mg/Kg		01/10/23 15:37	01/17/23 09:02	20
Ethylbenzene	0.967		0.0399		mg/Kg		01/10/23 15:37	01/17/23 09:02	20
m-Xylene & p-Xylene	0.246		0.0798		mg/Kg		01/10/23 15:37	01/17/23 09:02	20
o-Xylene	0.142		0.0399		mg/Kg		01/10/23 15:37	01/17/23 09:02	20
Xylenes, Total	0.388		0.0798		mg/Kg		01/10/23 15:37	01/17/23 09:02	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*663*	*S1+*	*70 - 130*	*01/10/23 15:37*	*01/17/23 09:02*	*20*
1,4-Difluorobenzene (Surr)	*52*	*S1-*	*70 - 130*	*01/10/23 15:37*	*01/17/23 09:02*	*20*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	4.23		0.0798		mg/Kg			01/25/23 11:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	14500		250		mg/Kg			01/13/23 12:42	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	2670		250		mg/Kg		01/12/23 11:42	01/13/23 04:07	5
Diesel Range Organics (Over C10-C28)	10100		250		mg/Kg		01/12/23 11:42	01/13/23 04:07	5
Oil Range Organics (Over C28-C36)	1770		250		mg/Kg		01/12/23 11:42	01/13/23 04:07	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*153*	*S1+*	*70 - 130*	*01/12/23 11:42*	*01/13/23 04:07*	*5*
o-Terphenyl	*201*	*S1+*	*70 - 130*	*01/12/23 11:42*	*01/13/23 04:07*	*5*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	176		4.99		mg/Kg			01/13/23 21:12	1

Client Sample ID: SS02

Lab Sample ID: 890-3786-2
Matrix: Solid
Date Collected: 01/09/23 14:00
Date Received: 01/10/23 09:05
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	4.73	H	0.495		mg/Kg		01/25/23 09:03	01/25/23 22:13	250
Toluene	36.5	H	0.495		mg/Kg		01/25/23 09:03	01/25/23 22:13	250
Ethylbenzene	11.3	H	0.495		mg/Kg		01/25/23 09:03	01/25/23 22:13	250
m-Xylene & p-Xylene	32.4	H	0.990		mg/Kg		01/25/23 09:03	01/25/23 22:13	250
o-Xylene	11.7	H	0.495		mg/Kg		01/25/23 09:03	01/25/23 22:13	250
Xylenes, Total	44.1	H	0.990		mg/Kg		01/25/23 09:03	01/25/23 22:13	250

Client Sample Results

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3786-1
SDG: 03C1558152

Client Sample ID: SS02

Lab Sample ID: 890-3786-2
Matrix: Solid
Date Collected: 01/09/23 14:00
Date Received: 01/10/23 09:05
Sample Depth: 0.5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	143	S1+	70 - 130	01/10/23 15:37	01/17/23 09:23	20
1,4-Difluorobenzene (Surr)	82		70 - 130	01/10/23 15:37	01/17/23 09:23	20

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	96.6		0.990	mg/Kg			01/25/23 11:34	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	12700		250	mg/Kg			01/13/23 12:42	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	2610		250	mg/Kg		01/12/23 11:42	01/13/23 04:29	5
Diesel Range Organics (Over C10-C28)	8700		250	mg/Kg		01/12/23 11:42	01/13/23 04:29	5
Oil Range Organics (Over C28-C36)	1350		250	mg/Kg		01/12/23 11:42	01/13/23 04:29	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	155	S1+	70 - 130	01/12/23 11:42	01/13/23 04:29	5
o-Terphenyl	171	S1+	70 - 130	01/12/23 11:42	01/13/23 04:29	5

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	211		5.03	mg/Kg			01/13/23 21:18	1

Client Sample ID: SS03

Lab Sample ID: 890-3786-3
Matrix: Solid
Date Collected: 01/09/23 14:05
Date Received: 01/10/23 09:05
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0152		0.00199	mg/Kg		01/10/23 15:37	01/17/23 09:44	1
Toluene	0.213		0.0402	mg/Kg		01/18/23 08:29	01/18/23 14:19	20
Ethylbenzene	0.131		0.00199	mg/Kg		01/10/23 15:37	01/17/23 09:44	1
m-Xylene & p-Xylene	15.4		0.797	mg/Kg		01/19/23 09:48	01/19/23 18:28	200
o-Xylene	0.189		0.00199	mg/Kg		01/10/23 15:37	01/17/23 09:44	1
Xylenes, Total	22.3		0.797	mg/Kg		01/19/23 09:48	01/19/23 18:28	200

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	256	S1+	70 - 130	01/10/23 15:37	01/17/23 09:44	1
1,4-Difluorobenzene (Surr)	115		70 - 130	01/10/23 15:37	01/17/23 09:44	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	15.9		0.797	mg/Kg			01/17/23 14:40	1

Client Sample Results

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3786-1
SDG: 03C1558152

Client Sample ID: SS03

Date Collected: 01/09/23 14:05
Date Received: 01/10/23 09:05
Sample Depth: 0.5

Lab Sample ID: 890-3786-3

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	11800		250		mg/Kg			01/13/23 12:42	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	1050		250		mg/Kg		01/12/23 11:42	01/13/23 04:52	5
Diesel Range Organics (Over C10-C28)	9580		250		mg/Kg		01/12/23 11:42	01/13/23 04:52	5
Oil Range Organics (Over C28-C36)	1200		250		mg/Kg		01/12/23 11:42	01/13/23 04:52	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*158*	*S1+*	*70 - 130*	*01/12/23 11:42*	*01/13/23 04:52*	*5*
o-Terphenyl	*178*	*S1+*	*70 - 130*	*01/12/23 11:42*	*01/13/23 04:52*	*5*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	63.8	F1	5.04		mg/Kg			01/13/23 21:24	1

Surrogate Summary

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3786-1
SDG: 03C1558152

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)											
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)										
880-23505-A-3-C MS	Matrix Spike	90	97										
880-23505-A-3-D MSD	Matrix Spike Duplicate	101	98										
880-24055-A-1-A MS	Matrix Spike	100	114										
880-24055-A-1-B MSD	Matrix Spike Duplicate	95	113										
890-3786-1	SS01	663 S1+	52 S1-										
890-3786-2	SS02	143 S1+	82										
890-3786-3	SS03	256 S1+	115										
890-3857-A-1-G MS	Matrix Spike	97	110										
890-3857-A-1-H MSD	Matrix Spike Duplicate	96	112										
890-3860-A-1-E MS	Matrix Spike	127	101										
890-3860-A-1-F MSD	Matrix Spike Duplicate	114	99										
LCS 880-43678/1-A	Lab Control Sample	107	100										
LCS 880-44226/1-A	Lab Control Sample	89	104										
LCS 880-44316/1-A	Lab Control Sample	93	113										
LCS 880-44700/1-A	Lab Control Sample	92	112										
LCSD 880-43678/2-A	Lab Control Sample Dup	98	100										
LCSD 880-44226/2-A	Lab Control Sample Dup	112	99										
LCSD 880-44316/2-A	Lab Control Sample Dup	98	109										
LCSD 880-44700/2-A	Lab Control Sample Dup	97	108										
MB 880-43678/5-A	Method Blank	90	91										
MB 880-43910/5-A	Method Blank	99	100										
MB 880-44226/5-A	Method Blank	82	90										
MB 880-44316/5-A	Method Blank	95	108										
MB 880-44700/5-A	Method Blank	103	111										

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)											
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)										
890-3786-1	SS01	153 S1+	201 S1+										
890-3786-2	SS02	155 S1+	171 S1+										
890-3786-3	SS03	158 S1+	178 S1+										
890-3804-A-1-F MS	Matrix Spike	96	100										
890-3804-A-1-G MSD	Matrix Spike Duplicate	98	102										
LCS 880-43804/2-A	Lab Control Sample	106	107										
LCSD 880-43804/3-A	Lab Control Sample Dup	122	121										
MB 880-43804/1-A	Method Blank	144 S1+	154 S1+										

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3786-1
SDG: 03C1558152

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-43678/5-A
Matrix: Solid
Analysis Batch: 43961

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43678

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/10/23 15:37	01/17/23 01:44	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/10/23 15:37	01/17/23 01:44	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/10/23 15:37	01/17/23 01:44	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/10/23 15:37	01/17/23 01:44	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/10/23 15:37	01/17/23 01:44	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/10/23 15:37	01/17/23 01:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*01/10/23 15:37*	*01/17/23 01:44*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*01/10/23 15:37*	*01/17/23 01:44*	*1*

Lab Sample ID: LCS 880-43678/1-A
Matrix: Solid
Analysis Batch: 43961

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43678

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08210		mg/Kg		82	70 - 130		
Toluene			0.100	0.08137		mg/Kg		81	70 - 130		
Ethylbenzene			0.100	0.09476		mg/Kg		95	70 - 130		
m-Xylene & p-Xylene			0.200	0.1803		mg/Kg		90	70 - 130		
o-Xylene			0.100	0.09496		mg/Kg		95	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 880-43678/2-A
Matrix: Solid
Analysis Batch: 43961

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 43678

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09206		mg/Kg		92	70 - 130	11	35
Toluene			0.100	0.08730		mg/Kg		87	70 - 130	7	35
Ethylbenzene			0.100	0.09689		mg/Kg		97	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.1821		mg/Kg		91	70 - 130	1	35
o-Xylene			0.100	0.09499		mg/Kg		95	70 - 130	0	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 880-23505-A-3-C MS
Matrix: Solid
Analysis Batch: 43961

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 43678

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U F1	0.101	0.03404	F1	mg/Kg		33	70 - 130		
Toluene	0.0490	F1	0.101	0.1070	F1	mg/Kg		58	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3786-1
SDG: 03C1558152

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

Lab Sample ID: 880-23505-A-3-C MS
Matrix: Solid
Analysis Batch: 43961

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 43678

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	0.0311	F1	0.101	0.07371	F1	mg/Kg		42	70 - 130
m-Xylene & p-Xylene	0.0525	F1	0.202	0.09648	F1	mg/Kg		22	70 - 130
o-Xylene	0.0721	F1	0.101	0.1043	F1	mg/Kg		32	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: 880-23505-A-3-D MSD
Matrix: Solid
Analysis Batch: 43961

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 43678

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U F1	0.0990	0.03062	F1	mg/Kg		30	70 - 130	11	35
Toluene	0.0490	F1	0.0990	0.1063	F1	mg/Kg		58	70 - 130	1	35
Ethylbenzene	0.0311	F1	0.0990	0.07521	F1	mg/Kg		45	70 - 130	2	35
m-Xylene & p-Xylene	0.0525	F1	0.198	0.1023	F1	mg/Kg		25	70 - 130	6	35
o-Xylene	0.0721	F1	0.0990	0.1102	F1	mg/Kg		38	70 - 130	6	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: MB 880-43910/5-A
Matrix: Solid
Analysis Batch: 43961

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43910

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/13/23 13:50	01/16/23 14:39	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/13/23 13:50	01/16/23 14:39	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/13/23 13:50	01/16/23 14:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/13/23 13:50	01/16/23 14:39	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/13/23 13:50	01/16/23 14:39	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/13/23 13:50	01/16/23 14:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*01/13/23 13:50*	*01/16/23 14:39*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*01/13/23 13:50*	*01/16/23 14:39*	*1*

Lab Sample ID: MB 880-44226/5-A
Matrix: Solid
Analysis Batch: 44223

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 44226

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/18/23 08:29	01/18/23 11:41	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/18/23 08:29	01/18/23 11:41	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/18/23 08:29	01/18/23 11:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/18/23 08:29	01/18/23 11:41	1

QC Sample Results

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3786-1
SDG: 03C1558152

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

Lab Sample ID: MB 880-44226/5-A
Matrix: Solid
Analysis Batch: 44223

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 44226

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/18/23 08:29	01/18/23 11:41	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/18/23 08:29	01/18/23 11:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*70 - 130*	*01/18/23 08:29*	*01/18/23 11:41*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*01/18/23 08:29*	*01/18/23 11:41*	*1*

Lab Sample ID: LCS 880-44226/1-A
Matrix: Solid
Analysis Batch: 44223

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 44226

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09903		mg/Kg		99	70 - 130		
Toluene			0.100	0.09706		mg/Kg		97	70 - 130		
Ethylbenzene			0.100	0.08273		mg/Kg		83	70 - 130		
m-Xylene & p-Xylene			0.200	0.1705		mg/Kg		85	70 - 130		
o-Xylene			0.100	0.09254		mg/Kg		93	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 880-44226/2-A
Matrix: Solid
Analysis Batch: 44223

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 44226

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1030		mg/Kg		103	70 - 130	4	35
Toluene			0.100	0.1089		mg/Kg		109	70 - 130	12	35
Ethylbenzene			0.100	0.1053		mg/Kg		105	70 - 130	24	35
m-Xylene & p-Xylene			0.200	0.2353		mg/Kg		118	70 - 130	32	35
o-Xylene			0.100	0.1291		mg/Kg		129	70 - 130	33	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 890-3860-A-1-E MS
Matrix: Solid
Analysis Batch: 44223

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 44226

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U	0.0990	0.09265		mg/Kg		94	70 - 130		
Toluene	<0.00201	U	0.0990	0.09939		mg/Kg		100	70 - 130		
Ethylbenzene	<0.00201	U	0.0990	0.09605		mg/Kg		97	70 - 130		
m-Xylene & p-Xylene	<0.00402	U	0.198	0.2160		mg/Kg		109	70 - 130		
o-Xylene	<0.00201	U	0.0990	0.1191		mg/Kg		120	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3786-1
SDG: 03C1558152

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

Lab Sample ID: 890-3860-A-1-E MS
Matrix: Solid
Analysis Batch: 44223

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 44226

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	127		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

Lab Sample ID: 890-3860-A-1-F MSD
Matrix: Solid
Analysis Batch: 44223

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 44226

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.101	0.08187		mg/Kg		81	70 - 130	12	35
Toluene	<0.00201	U	0.101	0.08779		mg/Kg		87	70 - 130	12	35
Ethylbenzene	<0.00201	U	0.101	0.08013		mg/Kg		79	70 - 130	18	35
m-Xylene & p-Xylene	<0.00402	U	0.202	0.1785		mg/Kg		89	70 - 130	19	35
o-Xylene	<0.00201	U	0.101	0.09776		mg/Kg		97	70 - 130	20	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	114		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

Lab Sample ID: MB 880-44316/5-A
Matrix: Solid
Analysis Batch: 44312

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 44316

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/19/23 09:48	01/19/23 12:04	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/19/23 09:48	01/19/23 12:04	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/19/23 09:48	01/19/23 12:04	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/19/23 09:48	01/19/23 12:04	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/19/23 09:48	01/19/23 12:04	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/19/23 09:48	01/19/23 12:04	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130	01/19/23 09:48	01/19/23 12:04	1
1,4-Difluorobenzene (Surr)	108		70 - 130	01/19/23 09:48	01/19/23 12:04	1

Lab Sample ID: LCS 880-44316/1-A
Matrix: Solid
Analysis Batch: 44312

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 44316

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08919		mg/Kg		89	70 - 130		
Toluene			0.100	0.09173		mg/Kg		92	70 - 130		
Ethylbenzene			0.100	0.08988		mg/Kg		90	70 - 130		
m-Xylene & p-Xylene			0.200	0.1824		mg/Kg		91	70 - 130		
o-Xylene			0.100	0.08756		mg/Kg		88	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	93		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3786-1
SDG: 03C1558152

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

Lab Sample ID: LCS 880-44316/1-A
Matrix: Solid
Analysis Batch: 44312

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 44316

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

Lab Sample ID: LCSD 880-44316/2-A
Matrix: Solid
Analysis Batch: 44312

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 44316

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09534		mg/Kg		95	70 - 130	7	35
Toluene			0.100	0.09337		mg/Kg		93	70 - 130	2	35
Ethylbenzene			0.100	0.09216		mg/Kg		92	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1896		mg/Kg		95	70 - 130	4	35
o-Xylene			0.100	0.09054		mg/Kg		91	70 - 130	3	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: 890-3857-A-1-G MS
Matrix: Solid
Analysis Batch: 44312

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 44316

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U	0.0998	0.09932		mg/Kg		100	70 - 130		
Toluene	<0.00199	U	0.0998	0.09690		mg/Kg		97	70 - 130		
Ethylbenzene	<0.00199	U	0.0998	0.09484		mg/Kg		95	70 - 130		
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1940		mg/Kg		97	70 - 130		
o-Xylene	<0.00199	U	0.0998	0.09254		mg/Kg		92	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

Lab Sample ID: 890-3857-A-1-H MSD
Matrix: Solid
Analysis Batch: 44312

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 44316

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.100	0.09902		mg/Kg		99	70 - 130	0	35
Toluene	<0.00199	U	0.100	0.09524		mg/Kg		95	70 - 130	2	35
Ethylbenzene	<0.00199	U	0.100	0.09273		mg/Kg		93	70 - 130	2	35
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1901		mg/Kg		95	70 - 130	2	35
o-Xylene	<0.00199	U	0.100	0.09053		mg/Kg		90	70 - 130	2	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3786-1
SDG: 03C1558152

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

Lab Sample ID: MB 880-44700/5-A
Matrix: Solid
Analysis Batch: 44693

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 44700

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/25/23 09:03	01/25/23 12:59	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/25/23 09:03	01/25/23 12:59	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/25/23 09:03	01/25/23 12:59	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/25/23 09:03	01/25/23 12:59	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/25/23 09:03	01/25/23 12:59	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/25/23 09:03	01/25/23 12:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*01/25/23 09:03*	*01/25/23 12:59*	*1*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*01/25/23 09:03*	*01/25/23 12:59*	*1*

Lab Sample ID: LCS 880-44700/1-A
Matrix: Solid
Analysis Batch: 44693

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 44700

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09940		mg/Kg		99	70 - 130		
Toluene			0.100	0.09449		mg/Kg		94	70 - 130		
Ethylbenzene			0.100	0.09243		mg/Kg		92	70 - 130		
m-Xylene & p-Xylene			0.200	0.1888		mg/Kg		94	70 - 130		
o-Xylene			0.100	0.08937		mg/Kg		89	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

Lab Sample ID: LCSD 880-44700/2-A
Matrix: Solid
Analysis Batch: 44693

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 44700

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1032		mg/Kg		103	70 - 130	4	35
Toluene			0.100	0.09936		mg/Kg		99	70 - 130	5	35
Ethylbenzene			0.100	0.09755		mg/Kg		98	70 - 130	5	35
m-Xylene & p-Xylene			0.200	0.2000		mg/Kg		100	70 - 130	6	35
o-Xylene			0.100	0.09499		mg/Kg		95	70 - 130	6	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: 880-24055-A-1-A MS
Matrix: Solid
Analysis Batch: 44693

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 44700

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U	0.101	0.08870		mg/Kg		88	70 - 130		
Toluene	<0.00201	U	0.101	0.08167		mg/Kg		81	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3786-1
SDG: 03C1558152

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

Lab Sample ID: 880-24055-A-1-A MS
Matrix: Solid
Analysis Batch: 44693

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 44700

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U	0.101	0.08122		mg/Kg		81	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.202	0.1683		mg/Kg		83	70 - 130
o-Xylene	<0.00201	U	0.101	0.08015		mg/Kg		80	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*

Lab Sample ID: 880-24055-A-1-B MSD
Matrix: Solid
Analysis Batch: 44693

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 44700

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0996	0.09476		mg/Kg		95	70 - 130	7	35
Toluene	<0.00201	U	0.0996	0.08803		mg/Kg		88	70 - 130	7	35
Ethylbenzene	<0.00201	U	0.0996	0.08358		mg/Kg		84	70 - 130	3	35
m-Xylene & p-Xylene	<0.00402	U	0.199	0.1708		mg/Kg		86	70 - 130	1	35
o-Xylene	<0.00201	U	0.0996	0.08168		mg/Kg		82	70 - 130	2	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*

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

Lab Sample ID: MB 880-43804/1-A
Matrix: Solid
Analysis Batch: 43781

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43804

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/12/23 11:42	01/12/23 19:44	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/12/23 11:42	01/12/23 19:44	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/12/23 11:42	01/12/23 19:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*144*	*S1+*	*70 - 130*	*01/12/23 11:42*	*01/12/23 19:44*	*1*
o-Terphenyl	*154*	*S1+*	*70 - 130*	*01/12/23 11:42*	*01/12/23 19:44*	*1*

Lab Sample ID: LCS 880-43804/2-A
Matrix: Solid
Analysis Batch: 43781

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43804

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	949.4		mg/Kg		95	70 - 130
Diesel Range Organics (Over C10-C28)	1000	934.9		mg/Kg		93	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3786-1
SDG: 03C1558152

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

Lab Sample ID: LCS 880-43804/2-A
Matrix: Solid
Analysis Batch: 43781

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43804

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*106*		*70 - 130*
o-Terphenyl	*107*		*70 - 130*

Lab Sample ID: LCSD 880-43804/3-A
Matrix: Solid
Analysis Batch: 43781

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 43804

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	914.9		mg/Kg		91	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			1000	1075		mg/Kg		108	70 - 130	14	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*122*		*70 - 130*
o-Terphenyl	*121*		*70 - 130*

Lab Sample ID: 890-3804-A-1-F MS
Matrix: Solid
Analysis Batch: 43781

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 43804

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 F2	998	891.6		mg/Kg		88	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	998	983.2		mg/Kg		99	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*96*		*70 - 130*
o-Terphenyl	*100*		*70 - 130*

Lab Sample ID: 890-3804-A-1-G MSD
Matrix: Solid
Analysis Batch: 43781

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 43804

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 F2	997	1139	F2	mg/Kg		113	70 - 130	24	20
Diesel Range Organics (Over C10-C28)	<49.9	U	997	1082		mg/Kg		109	70 - 130	10	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*98*		*70 - 130*
o-Terphenyl	*102*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3786-1
SDG: 03C1558152

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-43786/1-A
Matrix: Solid
Analysis Batch: 43927

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			01/13/23 19:39	1

Lab Sample ID: LCS 880-43786/2-A
Matrix: Solid
Analysis Batch: 43927

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	269.2		mg/Kg		108	90 - 110		

Lab Sample ID: LCSD 880-43786/3-A
Matrix: Solid
Analysis Batch: 43927

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	274.1		mg/Kg		110	90 - 110	2	20

Lab Sample ID: 890-3786-3 MS
Matrix: Solid
Analysis Batch: 43927

Client Sample ID: SS03
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	63.8	F1	252	356.8	F1	mg/Kg		116	90 - 110		

Lab Sample ID: 890-3786-3 MSD
Matrix: Solid
Analysis Batch: 43927

Client Sample ID: SS03
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	63.8	F1	252	370.6	F1	mg/Kg		122	90 - 110	4	20

QC Association Summary

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3786-1
SDG: 03C1558152

GC VOA

Prep Batch: 43678

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3786-1	SS01	Total/NA	Solid	5035	
890-3786-2	SS02	Total/NA	Solid	5035	
890-3786-3	SS03	Total/NA	Solid	5035	
MB 880-43678/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-43678/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-43678/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-23505-A-3-C MS	Matrix Spike	Total/NA	Solid	5035	
880-23505-A-3-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 43910

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-43910/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 43961

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3786-1	SS01	Total/NA	Solid	8021B	43678
890-3786-2	SS02	Total/NA	Solid	8021B	43678
890-3786-3	SS03	Total/NA	Solid	8021B	43678
MB 880-43678/5-A	Method Blank	Total/NA	Solid	8021B	43678
MB 880-43910/5-A	Method Blank	Total/NA	Solid	8021B	43910
LCS 880-43678/1-A	Lab Control Sample	Total/NA	Solid	8021B	43678
LCSD 880-43678/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	43678
880-23505-A-3-C MS	Matrix Spike	Total/NA	Solid	8021B	43678
880-23505-A-3-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	43678

Analysis Batch: 44179

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3786-1	SS01	Total/NA	Solid	Total BTEX	
890-3786-2	SS02	Total/NA	Solid	Total BTEX	
890-3786-3	SS03	Total/NA	Solid	Total BTEX	

Analysis Batch: 44223

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3786-3	SS03	Total/NA	Solid	8021B	44226
MB 880-44226/5-A	Method Blank	Total/NA	Solid	8021B	44226
LCS 880-44226/1-A	Lab Control Sample	Total/NA	Solid	8021B	44226
LCSD 880-44226/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	44226
890-3860-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	44226
890-3860-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	44226

Prep Batch: 44226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3786-3	SS03	Total/NA	Solid	5035	
MB 880-44226/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-44226/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-44226/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3860-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
890-3860-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

QC Association Summary

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3786-1
SDG: 03C1558152

GC VOA

Analysis Batch: 44312

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3786-3	SS03	Total/NA	Solid	8021B	44316
MB 880-44316/5-A	Method Blank	Total/NA	Solid	8021B	44316
LCS 880-44316/1-A	Lab Control Sample	Total/NA	Solid	8021B	44316
LCSD 880-44316/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	44316
890-3857-A-1-G MS	Matrix Spike	Total/NA	Solid	8021B	44316
890-3857-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	44316

Prep Batch: 44316

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3786-3	SS03	Total/NA	Solid	5035	
MB 880-44316/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-44316/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-44316/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3857-A-1-G MS	Matrix Spike	Total/NA	Solid	5035	
890-3857-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 44693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3786-2	SS02	Total/NA	Solid	8021B	44700
MB 880-44700/5-A	Method Blank	Total/NA	Solid	8021B	44700
LCS 880-44700/1-A	Lab Control Sample	Total/NA	Solid	8021B	44700
LCSD 880-44700/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	44700
880-24055-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	44700
880-24055-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	44700

Prep Batch: 44700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3786-2	SS02	Total/NA	Solid	5035	
MB 880-44700/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-44700/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-44700/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-24055-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-24055-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

GC Semi VOA

Analysis Batch: 43781

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3786-1	SS01	Total/NA	Solid	8015B NM	43804
890-3786-2	SS02	Total/NA	Solid	8015B NM	43804
890-3786-3	SS03	Total/NA	Solid	8015B NM	43804
MB 880-43804/1-A	Method Blank	Total/NA	Solid	8015B NM	43804
LCS 880-43804/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	43804
LCSD 880-43804/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	43804
890-3804-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B NM	43804
890-3804-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	43804

Prep Batch: 43804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3786-1	SS01	Total/NA	Solid	8015NM Prep	
890-3786-2	SS02	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3786-1
SDG: 03C1558152

GC Semi VOA (Continued)

Prep Batch: 43804 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3786-3	SS03	Total/NA	Solid	8015NM Prep	
MB 880-43804/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-43804/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-43804/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3804-A-1-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3804-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 43890

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3786-1	SS01	Total/NA	Solid	8015 NM	
890-3786-2	SS02	Total/NA	Solid	8015 NM	
890-3786-3	SS03	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 43786

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3786-1	SS01	Soluble	Solid	DI Leach	
890-3786-2	SS02	Soluble	Solid	DI Leach	
890-3786-3	SS03	Soluble	Solid	DI Leach	
MB 880-43786/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-43786/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-43786/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3786-3 MS	SS03	Soluble	Solid	DI Leach	
890-3786-3 MSD	SS03	Soluble	Solid	DI Leach	

Analysis Batch: 43927

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3786-1	SS01	Soluble	Solid	300.0	43786
890-3786-2	SS02	Soluble	Solid	300.0	43786
890-3786-3	SS03	Soluble	Solid	300.0	43786
MB 880-43786/1-A	Method Blank	Soluble	Solid	300.0	43786
LCS 880-43786/2-A	Lab Control Sample	Soluble	Solid	300.0	43786
LCSD 880-43786/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	43786
890-3786-3 MS	SS03	Soluble	Solid	300.0	43786
890-3786-3 MSD	SS03	Soluble	Solid	300.0	43786

Lab Chronicle

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3786-1
SDG: 03C1558152

Client Sample ID: SS01

Date Collected: 01/09/23 13:55
Date Received: 01/10/23 09:05

Lab Sample ID: 890-3786-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	43678	01/10/23 15:37	MNR	EET MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	43961	01/17/23 09:02	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44179	01/25/23 11:34	SM	EET MID
Total/NA	Analysis	8015 NM		1			43890	01/13/23 12:42	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	43804	01/12/23 11:42	DM	EET MID
Total/NA	Analysis	8015B NM		5	1 uL	1 uL	43781	01/13/23 04:07	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	43786	01/12/23 09:15	KS	EET MID
Soluble	Analysis	300.0		1			43927	01/13/23 21:12	CH	EET MID

Client Sample ID: SS02

Date Collected: 01/09/23 14:00
Date Received: 01/10/23 09:05

Lab Sample ID: 890-3786-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	43678	01/10/23 15:37	MNR	EET MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	43961	01/17/23 09:23	MNR	EET MID
Total/NA	Prep	5035			5.05 g	5 mL	44700	01/25/23 09:03	MNR	EET MID
Total/NA	Analysis	8021B		250	5 mL	5 mL	44693	01/25/23 22:13	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44179	01/25/23 11:34	SM	EET MID
Total/NA	Analysis	8015 NM		1			43890	01/13/23 12:42	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	43804	01/12/23 11:42	DM	EET MID
Total/NA	Analysis	8015B NM		5	1 uL	1 uL	43781	01/13/23 04:29	AJ	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	43786	01/12/23 09:15	KS	EET MID
Soluble	Analysis	300.0		1			43927	01/13/23 21:18	CH	EET MID

Client Sample ID: SS03

Date Collected: 01/09/23 14:05
Date Received: 01/10/23 09:05

Lab Sample ID: 890-3786-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	43678	01/10/23 15:37	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43961	01/17/23 09:44	MNR	EET MID
Total/NA	Prep	5035			5.02 g	5 mL	44316	01/19/23 09:48	MNR	EET MID
Total/NA	Analysis	8021B		200	5 mL	5 mL	44312	01/19/23 18:28	MNR	EET MID
Total/NA	Prep	5035			4.98 g	5 mL	44226	01/18/23 08:29	MNR	EET MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	44223	01/18/23 14:19	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44179	01/17/23 14:40	SM	EET MID
Total/NA	Analysis	8015 NM		1			43890	01/13/23 12:42	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	43804	01/12/23 11:42	DM	EET MID
Total/NA	Analysis	8015B NM		5	1 uL	1 uL	43781	01/13/23 04:52	AJ	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	43786	01/12/23 09:15	KS	EET MID
Soluble	Analysis	300.0		1			43927	01/13/23 21:24	CH	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 4-24-30 CTB

Job ID: 890-3786-1
SDG: 03C1558152

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3786-1
SDG: 03C1558152

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3786-1
SDG: 03C1558152

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3786-1	SS01	Solid	01/09/23 13:55	01/10/23 09:05	0.5
890-3786-2	SS02	Solid	01/09/23 14:00	01/10/23 09:05	0.5
890-3786-3	SS03	Solid	01/09/23 14:05	01/10/23 09:05	0.5

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Chain of Custody

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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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Ben Belill	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy
Address:	3122 Nat'l Parks Hwy	Address:	3104 E Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	989-854-0852	Email:	bbelill@ensolum.com

Work Order Comments

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

Project Name:	Remuda 4-24-30 CTB	Turn Around	☑ Routine ☐ Rush
Project Number:	03C1558152	Due Date:	
Project Location:	32.25359, -103.8813	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Meredith Roberts		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	TMW007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.3
Sample Custody Seals:	Yes No N/A	Temperature Reading:	2.9
Total Containers:		Corrected Temperature:	2.6

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	BTEX	Chlorides	TPH	Sample Comments
SS01	S	1/9/23	1355	0.5'	G	1		X	X	X	Incident #: nAPP2233517770
SS02	S	1/9/23	1400	0.5'	G	1		X	X	X	
SS03	S	1/9/23	1405	0.5'	G	1		X	X	X	Cost Center: 2124871001

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

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

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

Revised Date: 08/25/2020 Rev. 2020.2

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Received by OCD: 3/25/2025 7:59:01 AM

Released to Imaging: 3/26/2025 8:37:43 AM

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3786-1
SDG Number: 03C1558152

Login Number: 3786
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3786-1
SDG Number: 03C1558152

Login Number: 3786
List Number: 2
Creator: Teel, Brianna

List Source: Eurofins Midland
List Creation: 01/11/23 11:43 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	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 1/24/2023 2:48:16 PM

JOB DESCRIPTION

Remuda 4-24-30 CTB
SDG NUMBER 03C1558152

JOB NUMBER

890-3871-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Released to Imaging: 3/26/2025 8:37:45 AM

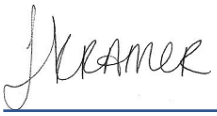
my EOL

Eurofins Carlsbad

Job Notes

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

Authorization



Generated
1/24/2023 2:48:16 PM

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

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Laboratory Job ID: 890-3871-1
SDG: 03C1558152

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3871-1
SDG: 03C1558152

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3871-1
SDG: 03C1558152

Job ID: 890-3871-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3871-1

Receipt
The samples were received on 1/17/2023 8:15 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 2.4°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SS04 (890-3871-1), SS05 (890-3871-2), SS06 (890-3871-3), SS07 (890-3871-4), SS08 (890-3871-5), SS09 (890-3871-6) and SS10 (890-3871-7).

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: SS04 (890-3871-1), SS05 (890-3871-2), SS06 (890-3871-3), SS07 (890-3871-4), (LCS 880-44389/1-A), (890-3856-A-1-F) and (890-3856-A-1-E MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-44250 and analytical batch 880-44506 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3871-1
SDG: 03C1558152

Client Sample ID: SS04

Date Collected: 01/16/23 10:45
Date Received: 01/17/23 08:15
Sample Depth: 0.5

Lab Sample ID: 890-3871-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:20	01/24/23 06:19	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:20	01/24/23 06:19	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:20	01/24/23 06:19	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		01/19/23 16:20	01/24/23 06:19	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:20	01/24/23 06:19	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		01/19/23 16:20	01/24/23 06:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*62*	*S1-*	*70 - 130*	*01/19/23 16:20*	*01/24/23 06:19*	*1*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*01/19/23 16:20*	*01/24/23 06:19*	*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			01/24/23 13:50	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**58.6**		49.9		mg/Kg			01/24/23 14:41	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		01/19/23 11:53	01/23/23 23:22	1
Diesel Range Organics (Over C10-C28)	**58.6**		49.9		mg/Kg		01/19/23 11:53	01/23/23 23:22	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/19/23 11:53	01/23/23 23:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*119*		*70 - 130*	*01/19/23 11:53*	*01/23/23 23:22*	*1*
o-Terphenyl	*104*		*70 - 130*	*01/19/23 11:53*	*01/23/23 23:22*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**70.8**		5.05		mg/Kg			01/22/23 16:57	1

Client Sample ID: SS05

Date Collected: 01/16/23 10:50
Date Received: 01/17/23 08:15
Sample Depth: 0.5

Lab Sample ID: 890-3871-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:20	01/24/23 08:09	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:20	01/24/23 08:09	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:20	01/24/23 08:09	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		01/19/23 16:20	01/24/23 08:09	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:20	01/24/23 08:09	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		01/19/23 16:20	01/24/23 08:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*141*	*S1+*	*70 - 130*	*01/19/23 16:20*	*01/24/23 08:09*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3871-1
SDG: 03C1558152

Client Sample ID: SS05

Lab Sample ID: 890-3871-2
Matrix: Solid

Date Collected: 01/16/23 10:50
Date Received: 01/17/23 08:15
Sample Depth: 0.5

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*	*01/19/23 16:20*	*01/24/23 08:09*	*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			01/24/23 13:50	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**169**		49.8	mg/Kg			01/24/23 14:41	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		01/19/23 11:53	01/24/23 00:26	1
Diesel Range Organics (Over C10-C28)	**169**		49.8	mg/Kg		01/19/23 11:53	01/24/23 00:26	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		01/19/23 11:53	01/24/23 00:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*133*	*S1+*	*70 - 130*	*01/19/23 11:53*	*01/24/23 00:26*	*1*
o-Terphenyl	*111*		*70 - 130*	*01/19/23 11:53*	*01/24/23 00:26*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**190**		5.04	mg/Kg			01/22/23 17:03	1

Client Sample ID: SS06

Lab Sample ID: 890-3871-3
Matrix: Solid

Date Collected: 01/16/23 10:55
Date Received: 01/17/23 08:15
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		01/19/23 16:20	01/24/23 08:37	1
Toluene	<0.00202	U	0.00202	mg/Kg		01/19/23 16:20	01/24/23 08:37	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		01/19/23 16:20	01/24/23 08:37	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		01/19/23 16:20	01/24/23 08:37	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		01/19/23 16:20	01/24/23 08:37	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		01/19/23 16:20	01/24/23 08:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*	*01/19/23 16:20*	*01/24/23 08:37*	*1*
1,4-Difluorobenzene (Surr)	*75*		*70 - 130*	*01/19/23 16:20*	*01/24/23 08:37*	*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			01/24/23 13:50	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			01/24/23 14:41	1

Client Sample Results

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3871-1
SDG: 03C1558152

Client Sample ID: SS06

Date Collected: 01/16/23 10:55
Date Received: 01/17/23 08:15
Sample Depth: 0.5

Lab Sample ID: 890-3871-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		01/19/23 11:53	01/24/23 00:48	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		01/19/23 11:53	01/24/23 00:48	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/19/23 11:53	01/24/23 00:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*01/19/23 11:53*	*01/24/23 00:48*	*1*
o-Terphenyl	*102*		*70 - 130*	*01/19/23 11:53*	*01/24/23 00:48*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**82.6**	**F1**	5.01		mg/Kg			01/22/23 17:10	1

Client Sample ID: SS07

Date Collected: 01/16/23 11:00
Date Received: 01/17/23 08:15
Sample Depth: 0.5

Lab Sample ID: 890-3871-4
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		01/19/23 16:20	01/24/23 09:04	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/19/23 16:20	01/24/23 09:04	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/19/23 16:20	01/24/23 09:04	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/19/23 16:20	01/24/23 09:04	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/19/23 16:20	01/24/23 09:04	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/19/23 16:20	01/24/23 09:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*149*	*S1+*	*70 - 130*	*01/19/23 16:20*	*01/24/23 09:04*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*01/19/23 16:20*	*01/24/23 09:04*	*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			01/24/23 13:50	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**212**		49.8		mg/Kg			01/24/23 14:41	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		01/19/23 11:53	01/24/23 01:09	1
Diesel Range Organics (Over C10-C28)	**212**		49.8		mg/Kg		01/19/23 11:53	01/24/23 01:09	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		01/19/23 11:53	01/24/23 01:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*01/19/23 11:53*	*01/24/23 01:09*	*1*
o-Terphenyl	*87*		*70 - 130*	*01/19/23 11:53*	*01/24/23 01:09*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3871-1
SDG: 03C1558152

Client Sample ID: SS07

Lab Sample ID: 890-3871-4
Matrix: Solid
Date Collected: 01/16/23 11:00
Date Received: 01/17/23 08:15
Sample Depth: 0.5

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**195**		5.05		mg/Kg			01/22/23 17:28	1

Client Sample ID: SS08

Lab Sample ID: 890-3871-5
Matrix: Solid
Date Collected: 01/16/23 15:05
Date Received: 01/17/23 08:15
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		01/19/23 16:20	01/24/23 09:31	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/19/23 16:20	01/24/23 09:31	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/19/23 16:20	01/24/23 09:31	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/19/23 16:20	01/24/23 09:31	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/19/23 16:20	01/24/23 09:31	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/19/23 16:20	01/24/23 09:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*137*	*S1+*	*70 - 130*	*01/19/23 16:20*	*01/24/23 09:31*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*01/19/23 16:20*	*01/24/23 09:31*	*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			01/24/23 13:50	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**70.9**		49.9		mg/Kg			01/24/23 14:41	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		01/19/23 11:53	01/24/23 01:30	1
Diesel Range Organics (Over C10-C28)	**70.9**		49.9		mg/Kg		01/19/23 11:53	01/24/23 01:30	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/19/23 11:53	01/24/23 01:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*141*	*S1+*	*70 - 130*	*01/19/23 11:53*	*01/24/23 01:30*	*1*
o-Terphenyl	*116*		*70 - 130*	*01/19/23 11:53*	*01/24/23 01:30*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**215**		4.96		mg/Kg			01/22/23 17:34	1

Client Sample Results

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3871-1
SDG: 03C1558152

Client Sample ID: SS09

Lab Sample ID: 890-3871-6
Matrix: Solid
Date Collected: 01/16/23 15:00
Date Received: 01/17/23 08:15
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		01/19/23 16:20	01/24/23 09:59	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:20	01/24/23 09:59	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:20	01/24/23 09:59	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		01/19/23 16:20	01/24/23 09:59	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:20	01/24/23 09:59	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		01/19/23 16:20	01/24/23 09:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*70*		*70 - 130*	*01/19/23 16:20*	*01/24/23 09:59*	*1*
1,4-Difluorobenzene (Surr)	*72*		*70 - 130*	*01/19/23 16:20*	*01/24/23 09:59*	*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			01/24/23 13:50	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			01/24/23 14:41	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		01/19/23 11:53	01/24/23 01:52	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/19/23 11:53	01/24/23 01:52	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/19/23 11:53	01/24/23 01:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*01/19/23 11:53*	*01/24/23 01:52*	*1*
o-Terphenyl	*99*		*70 - 130*	*01/19/23 11:53*	*01/24/23 01:52*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**81.6**		5.04		mg/Kg			01/22/23 17:53	1

Client Sample ID: SS10

Lab Sample ID: 890-3871-7
Matrix: Solid
Date Collected: 01/16/23 14:55
Date Received: 01/17/23 08:15
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		01/19/23 16:20	01/24/23 10:26	1
Toluene	<0.00201	U	0.00201		mg/Kg		01/19/23 16:20	01/24/23 10:26	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		01/19/23 16:20	01/24/23 10:26	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		01/19/23 16:20	01/24/23 10:26	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		01/19/23 16:20	01/24/23 10:26	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		01/19/23 16:20	01/24/23 10:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*01/19/23 16:20*	*01/24/23 10:26*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3871-1
SDG: 03C1558152

Client Sample ID: SS10
Date Collected: 01/16/23 14:55
Date Received: 01/17/23 08:15
Sample Depth: 0.5

Lab Sample ID: 890-3871-7
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*80*		*70 - 130*	*01/19/23 16:20*	*01/24/23 10:26*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			01/24/23 13:50	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			01/24/23 14:41	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		01/19/23 11:53	01/24/23 02:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/19/23 11:53	01/24/23 02:13	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/19/23 11:53	01/24/23 02:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*124*		*70 - 130*	*01/19/23 11:53*	*01/24/23 02:13*	*1*
o-Terphenyl	*98*		*70 - 130*	*01/19/23 11:53*	*01/24/23 02:13*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**50.1**		4.98		mg/Kg			01/22/23 17:59	1

Surrogate Summary

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3871-1
SDG: 03C1558152

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-3856-A-1-D MS	Matrix Spike	113	83
890-3856-A-1-E MSD	Matrix Spike Duplicate	134 S1+	81
890-3871-1	SS04	62 S1-	83
890-3871-2	SS05	141 S1+	82
890-3871-3	SS06	125	75
890-3871-4	SS07	149 S1+	86
890-3871-5	SS08	137 S1+	84
890-3871-6	SS09	70	72
890-3871-7	SS10	113	80
LCS 880-44389/1-A	Lab Control Sample	141 S1+	92
LCSD 880-44389/2-A	Lab Control Sample Dup	131 S1+	91
MB 880-44389/5-A	Method Blank	98	75
MB 880-44394/5-A	Method Blank	93	82

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-3871-1	SS04	119	104
890-3871-1 MS	SS04	117	91
890-3871-1 MSD	SS04	100	81
890-3871-2	SS05	133 S1+	111
890-3871-3	SS06	113	102
890-3871-4	SS07	102	87
890-3871-5	SS08	141 S1+	116
890-3871-6	SS09	112	99
890-3871-7	SS10	124	98
LCS 880-44322/2-A	Lab Control Sample	114	105
LCSD 880-44322/3-A	Lab Control Sample Dup	97	92
MB 880-44322/1-A	Method Blank	110	106

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3871-1
SDG: 03C1558152

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-44389/5-A
Matrix: Solid
Analysis Batch: 44514

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 44389

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:20	01/24/23 01:56	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:20	01/24/23 01:56	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:20	01/24/23 01:56	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/19/23 16:20	01/24/23 01:56	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:20	01/24/23 01:56	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/19/23 16:20	01/24/23 01:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*01/19/23 16:20*	*01/24/23 01:56*	*1*
1,4-Difluorobenzene (Surr)	*75*		*70 - 130*	*01/19/23 16:20*	*01/24/23 01:56*	*1*

Lab Sample ID: LCS 880-44389/1-A
Matrix: Solid
Analysis Batch: 44514

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 44389

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1154		mg/Kg		115	70 - 130		
Toluene			0.100	0.08920		mg/Kg		89	70 - 130		
Ethylbenzene			0.100	0.07834		mg/Kg		78	70 - 130		
m-Xylene & p-Xylene			0.200	0.1634		mg/Kg		82	70 - 130		
o-Xylene			0.100	0.08474		mg/Kg		85	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*141*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*

Lab Sample ID: LCSD 880-44389/2-A
Matrix: Solid
Analysis Batch: 44514

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 44389

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1216		mg/Kg		122	70 - 130	5	35
Toluene			0.100	0.1022		mg/Kg		102	70 - 130	14	35
Ethylbenzene			0.100	0.09859		mg/Kg		99	70 - 130	23	35
m-Xylene & p-Xylene			0.200	0.2131		mg/Kg		107	70 - 130	26	35
o-Xylene			0.100	0.1073		mg/Kg		107	70 - 130	23	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*131*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*

Lab Sample ID: 890-3856-A-1-D MS
Matrix: Solid
Analysis Batch: 44514

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 44389

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U F1	0.100	0.06415	F1	mg/Kg		64	70 - 130		
Toluene	<0.00201	U F2 F1	0.100	0.04187	F1	mg/Kg		42	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3871-1
SDG: 03C1558152

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

Lab Sample ID: 890-3856-A-1-D MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 44514 — **Prep Batch: 44389**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U F1	0.100	0.05385	F1	mg/Kg		54	70 - 130
m-Xylene & p-Xylene	<0.00402	U F2 F1	0.200	0.05011	F1	mg/Kg		25	70 - 130
o-Xylene	<0.00201	U F1	0.100	0.06244	F1	mg/Kg		62	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*

Lab Sample ID: 890-3856-A-1-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 44514 — **Prep Batch: 44389**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U F1	0.0990	0.06444	F1	mg/Kg		65	70 - 130	0	35
Toluene	<0.00201	U F2 F1	0.0990	0.06113	F2 F1	mg/Kg		62	70 - 130	37	35
Ethylbenzene	<0.00201	U F1	0.0990	0.06203	F1	mg/Kg		63	70 - 130	14	35
m-Xylene & p-Xylene	<0.00402	U F2 F1	0.198	0.07636	F2 F1	mg/Kg		39	70 - 130	42	35
o-Xylene	<0.00201	U F1	0.0990	0.07037		mg/Kg		71	70 - 130	12	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*134*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*

Lab Sample ID: MB 880-44394/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 44514 — **Prep Batch: 44394**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/19/23 16:42	01/23/23 12:08	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/19/23 16:42	01/23/23 12:08	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/19/23 16:42	01/23/23 12:08	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/19/23 16:42	01/23/23 12:08	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/19/23 16:42	01/23/23 12:08	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/19/23 16:42	01/23/23 12:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*01/19/23 16:42*	*01/23/23 12:08*	*1*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*	*01/19/23 16:42*	*01/23/23 12:08*	*1*

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

Lab Sample ID: MB 880-44322/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 44517 — **Prep Batch: 44322**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/19/23 11:53	01/23/23 22:18	1

QC Sample Results

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3871-1
SDG: 03C1558152

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

Lab Sample ID: MB 880-44322/1-A
Matrix: Solid
Analysis Batch: 44517

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 44322

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/19/23 11:53	01/23/23 22:18	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/19/23 11:53	01/23/23 22:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*110*		*70 - 130*	*01/19/23 11:53*	*01/23/23 22:18*	*1*
o-Terphenyl	*106*		*70 - 130*	*01/19/23 11:53*	*01/23/23 22:18*	*1*

Lab Sample ID: LCS 880-44322/2-A
Matrix: Solid
Analysis Batch: 44517

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 44322

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	967.5		mg/Kg		97	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1199		mg/Kg		120	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*114*		*70 - 130*
o-Terphenyl	*105*		*70 - 130*

Lab Sample ID: LCSD 880-44322/3-A
Matrix: Solid
Analysis Batch: 44517

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 44322

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	962.2		mg/Kg		96	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	1067		mg/Kg		107	70 - 130	12	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*97*		*70 - 130*
o-Terphenyl	*92*		*70 - 130*

Lab Sample ID: 890-3871-1 MS
Matrix: Solid
Analysis Batch: 44517

Client Sample ID: SS04
Prep Type: Total/NA
Prep Batch: 44322

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	998	1270		mg/Kg		127	70 - 130		
Diesel Range Organics (Over C10-C28)	58.6		998	1128		mg/Kg		107	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*117*		*70 - 130*
o-Terphenyl	*91*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3871-1
SDG: 03C1558152

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

Lab Sample ID: 890-3871-1 MSD — **Client Sample ID: SS04**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 44517 — **Prep Batch: 44322**

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	997	1079		mg/Kg		108	70 - 130	16	20
Diesel Range Organics (Over C10-C28)	58.6		997	997.5		mg/Kg		94	70 - 130	12	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*100*		*70 - 130*
o-Terphenyl	*81*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-44250/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 44506

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			01/22/23 15:25	1

Lab Sample ID: LCS 880-44250/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 44506

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	262.2		mg/Kg		105	90 - 110		

Lab Sample ID: LCSD 880-44250/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 44506

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	262.8		mg/Kg		105	90 - 110	0	20

Lab Sample ID: 890-3871-3 MS — **Client Sample ID: SS06**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 44506

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	82.6	F1	251	374.5	F1	mg/Kg		117	90 - 110		

Lab Sample ID: 890-3871-3 MSD — **Client Sample ID: SS06**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 44506

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	82.6	F1	251	365.3	F1	mg/Kg		113	90 - 110	2	20

QC Association Summary

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3871-1
SDG: 03C1558152

GC VOA

Prep Batch: 44389

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3871-1	SS04	Total/NA	Solid	5035	
890-3871-2	SS05	Total/NA	Solid	5035	
890-3871-3	SS06	Total/NA	Solid	5035	
890-3871-4	SS07	Total/NA	Solid	5035	
890-3871-5	SS08	Total/NA	Solid	5035	
890-3871-6	SS09	Total/NA	Solid	5035	
890-3871-7	SS10	Total/NA	Solid	5035	
MB 880-44389/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-44389/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-44389/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3856-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
890-3856-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 44394

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-44394/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 44514

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3871-1	SS04	Total/NA	Solid	8021B	44389
890-3871-2	SS05	Total/NA	Solid	8021B	44389
890-3871-3	SS06	Total/NA	Solid	8021B	44389
890-3871-4	SS07	Total/NA	Solid	8021B	44389
890-3871-5	SS08	Total/NA	Solid	8021B	44389
890-3871-6	SS09	Total/NA	Solid	8021B	44389
890-3871-7	SS10	Total/NA	Solid	8021B	44389
MB 880-44389/5-A	Method Blank	Total/NA	Solid	8021B	44389
MB 880-44394/5-A	Method Blank	Total/NA	Solid	8021B	44394
LCS 880-44389/1-A	Lab Control Sample	Total/NA	Solid	8021B	44389
LCSD 880-44389/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	44389
890-3856-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	44389
890-3856-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	44389

Analysis Batch: 44642

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3871-1	SS04	Total/NA	Solid	Total BTEX	
890-3871-2	SS05	Total/NA	Solid	Total BTEX	
890-3871-3	SS06	Total/NA	Solid	Total BTEX	
890-3871-4	SS07	Total/NA	Solid	Total BTEX	
890-3871-5	SS08	Total/NA	Solid	Total BTEX	
890-3871-6	SS09	Total/NA	Solid	Total BTEX	
890-3871-7	SS10	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 44322

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3871-1	SS04	Total/NA	Solid	8015NM Prep	
890-3871-2	SS05	Total/NA	Solid	8015NM Prep	
890-3871-3	SS06	Total/NA	Solid	8015NM Prep	
890-3871-4	SS07	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3871-1
SDG: 03C1558152

GC Semi VOA (Continued)

Prep Batch: 44322 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3871-5	SS08	Total/NA	Solid	8015NM Prep	
890-3871-6	SS09	Total/NA	Solid	8015NM Prep	
890-3871-7	SS10	Total/NA	Solid	8015NM Prep	
MB 880-44322/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-44322/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-44322/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3871-1 MS	SS04	Total/NA	Solid	8015NM Prep	
890-3871-1 MSD	SS04	Total/NA	Solid	8015NM Prep	

Analysis Batch: 44517

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3871-1	SS04	Total/NA	Solid	8015B NM	44322
890-3871-2	SS05	Total/NA	Solid	8015B NM	44322
890-3871-3	SS06	Total/NA	Solid	8015B NM	44322
890-3871-4	SS07	Total/NA	Solid	8015B NM	44322
890-3871-5	SS08	Total/NA	Solid	8015B NM	44322
890-3871-6	SS09	Total/NA	Solid	8015B NM	44322
890-3871-7	SS10	Total/NA	Solid	8015B NM	44322
MB 880-44322/1-A	Method Blank	Total/NA	Solid	8015B NM	44322
LCS 880-44322/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	44322
LCSD 880-44322/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	44322
890-3871-1 MS	SS04	Total/NA	Solid	8015B NM	44322
890-3871-1 MSD	SS04	Total/NA	Solid	8015B NM	44322

Analysis Batch: 44650

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3871-1	SS04	Total/NA	Solid	8015 NM	
890-3871-2	SS05	Total/NA	Solid	8015 NM	
890-3871-3	SS06	Total/NA	Solid	8015 NM	
890-3871-4	SS07	Total/NA	Solid	8015 NM	
890-3871-5	SS08	Total/NA	Solid	8015 NM	
890-3871-6	SS09	Total/NA	Solid	8015 NM	
890-3871-7	SS10	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 44250

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3871-1	SS04	Soluble	Solid	DI Leach	
890-3871-2	SS05	Soluble	Solid	DI Leach	
890-3871-3	SS06	Soluble	Solid	DI Leach	
890-3871-4	SS07	Soluble	Solid	DI Leach	
890-3871-5	SS08	Soluble	Solid	DI Leach	
890-3871-6	SS09	Soluble	Solid	DI Leach	
890-3871-7	SS10	Soluble	Solid	DI Leach	
MB 880-44250/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-44250/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-44250/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3871-3 MS	SS06	Soluble	Solid	DI Leach	
890-3871-3 MSD	SS06	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3871-1
SDG: 03C1558152

HPLC/IC

Analysis Batch: 44506

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3871-1	SS04	Soluble	Solid	300.0	44250
890-3871-2	SS05	Soluble	Solid	300.0	44250
890-3871-3	SS06	Soluble	Solid	300.0	44250
890-3871-4	SS07	Soluble	Solid	300.0	44250
890-3871-5	SS08	Soluble	Solid	300.0	44250
890-3871-6	SS09	Soluble	Solid	300.0	44250
890-3871-7	SS10	Soluble	Solid	300.0	44250
MB 880-44250/1-A	Method Blank	Soluble	Solid	300.0	44250
LCS 880-44250/2-A	Lab Control Sample	Soluble	Solid	300.0	44250
LCSD 880-44250/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	44250
890-3871-3 MS	SS06	Soluble	Solid	300.0	44250
890-3871-3 MSD	SS06	Soluble	Solid	300.0	44250

Lab Chronicle

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3871-1
SDG: 03C1558152

Client Sample ID: SS04

Date Collected: 01/16/23 10:45
Date Received: 01/17/23 08:15

Lab Sample ID: 890-3871-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	44389	01/19/23 16:20	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44514	01/24/23 06:19	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44642	01/24/23 13:50	AJ	EET MID
Total/NA	Analysis	8015 NM		1			44650	01/24/23 14:41	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	44322	01/19/23 11:53	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44517	01/23/23 23:22	AJ	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	44250	01/18/23 12:17	KS	EET MID
Soluble	Analysis	300.0		1			44506	01/22/23 16:57	CH	EET MID

Client Sample ID: SS05

Date Collected: 01/16/23 10:50
Date Received: 01/17/23 08:15

Lab Sample ID: 890-3871-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	44389	01/19/23 16:20	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44514	01/24/23 08:09	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44642	01/24/23 13:50	AJ	EET MID
Total/NA	Analysis	8015 NM		1			44650	01/24/23 14:41	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	44322	01/19/23 11:53	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44517	01/24/23 00:26	AJ	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	44250	01/18/23 12:17	KS	EET MID
Soluble	Analysis	300.0		1			44506	01/22/23 17:03	CH	EET MID

Client Sample ID: SS06

Date Collected: 01/16/23 10:55
Date Received: 01/17/23 08:15

Lab Sample ID: 890-3871-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	44389	01/19/23 16:20	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44514	01/24/23 08:37	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44642	01/24/23 13:50	AJ	EET MID
Total/NA	Analysis	8015 NM		1			44650	01/24/23 14:41	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	44322	01/19/23 11:53	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44517	01/24/23 00:48	AJ	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	44250	01/18/23 12:17	KS	EET MID
Soluble	Analysis	300.0		1			44506	01/22/23 17:10	CH	EET MID

Client Sample ID: SS07

Date Collected: 01/16/23 11:00
Date Received: 01/17/23 08:15

Lab Sample ID: 890-3871-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	44389	01/19/23 16:20	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44514	01/24/23 09:04	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44642	01/24/23 13:50	AJ	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3871-1
SDG: 03C1558152

Client Sample ID: SS07

Date Collected: 01/16/23 11:00
Date Received: 01/17/23 08:15

Lab Sample ID: 890-3871-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			44650	01/24/23 14:41	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	44322	01/19/23 11:53	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44517	01/24/23 01:09	AJ	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	44250	01/18/23 12:17	KS	EET MID
Soluble	Analysis	300.0		1			44506	01/22/23 17:28	CH	EET MID

Client Sample ID: SS08

Date Collected: 01/16/23 15:05
Date Received: 01/17/23 08:15

Lab Sample ID: 890-3871-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	44389	01/19/23 16:20	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44514	01/24/23 09:31	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44642	01/24/23 13:50	AJ	EET MID
Total/NA	Analysis	8015 NM		1			44650	01/24/23 14:41	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	44322	01/19/23 11:53	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44517	01/24/23 01:30	AJ	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	44250	01/18/23 12:17	KS	EET MID
Soluble	Analysis	300.0		1			44506	01/22/23 17:34	CH	EET MID

Client Sample ID: SS09

Date Collected: 01/16/23 15:00
Date Received: 01/17/23 08:15

Lab Sample ID: 890-3871-6

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	44389	01/19/23 16:20	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44514	01/24/23 09:59	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44642	01/24/23 13:50	AJ	EET MID
Total/NA	Analysis	8015 NM		1			44650	01/24/23 14:41	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	44322	01/19/23 11:53	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44517	01/24/23 01:52	AJ	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	44250	01/18/23 12:17	KS	EET MID
Soluble	Analysis	300.0		1			44506	01/22/23 17:53	CH	EET MID

Client Sample ID: SS10

Date Collected: 01/16/23 14:55
Date Received: 01/17/23 08:15

Lab Sample ID: 890-3871-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	44389	01/19/23 16:20	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44514	01/24/23 10:26	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44642	01/24/23 13:50	AJ	EET MID
Total/NA	Analysis	8015 NM		1			44650	01/24/23 14:41	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	44322	01/19/23 11:53	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44517	01/24/23 02:13	AJ	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3871-1
SDG: 03C1558152

Client Sample ID: SS10

Date Collected: 01/16/23 14:55
Date Received: 01/17/23 08:15

Lab Sample ID: 890-3871-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.02 g	50 mL	44250	01/18/23 12:17	KS	EET MID
Soluble	Analysis	300.0		1			44506	01/22/23 17:59	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 4-24-30 CTB

Job ID: 890-3871-1
SDG: 03C1558152

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3871-1
SDG: 03C1558152

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Remuda 4-24-30 CTB

Job ID: 890-3871-1
SDG: 03C1558152

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3871-1	SS04	Solid	01/16/23 10:45	01/17/23 08:15	0.5
890-3871-2	SS05	Solid	01/16/23 10:50	01/17/23 08:15	0.5
890-3871-3	SS06	Solid	01/16/23 10:55	01/17/23 08:15	0.5
890-3871-4	SS07	Solid	01/16/23 11:00	01/17/23 08:15	0.5
890-3871-5	SS08	Solid	01/16/23 15:05	01/17/23 08:15	0.5
890-3871-6	SS09	Solid	01/16/23 15:00	01/17/23 08:15	0.5
890-3871-7	SS10	Solid	01/16/23 14:55	01/17/23 08:15	0.5

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Ben Belill	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy
Address:	3122 Nat'l Parks Hwy	Address:	3104 E Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	989-854-0852	Email:	bbelill@ensolum.com

Work Order Comments

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

Project Name:	Remuda 4-24-30 CTB	Turn Around	
Project Number:	03C1558152	☑ Routine ☐ Rush	
Project Location:	32.25359, -103.88134	Due Date:	
Sampler's Name:	Meredith Roberts	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	IR#007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	2.6
Total Containers:		Corrected Temperature:	2.4

890-3871 Chain of Custody

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	BTEX	Chlorides	TPH	Sample Comments
SS04	S	1/16/23	1045	0.5'	G	1	X	X	X	Incident #: nAPP2233351770
SS05			1050							
SS06			1055							
SS07			1100							Cost Center: 2124871001
SS08			1505							
SS09			1500							
SS10			1455						→ MR	

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			1-17-23 815	2		
3				4		
5				6		

Revised Date 08/25/2020 Rev. 2020.2

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Received by OCD: 3/25/2025 7:59:01 AM

Released to Imaging: 3/26/2025 8:37:43 AM

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3871-1
SDG Number: 03C1558152

Login Number: 3871
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.	N/A	Refer to Job Narrative for details.
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3871-1
SDG Number: 03C1558152

Login Number: 3871
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 01/18/23 10:51 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	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 2/2/2023 3:05:39 PM Revision 1

JOB DESCRIPTION

Remuda 4.24.30 CTB
SDG NUMBER 03C1558152

JOB NUMBER

890-3870-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Released to Imaging: 3/26/2025 8:37:45 AM

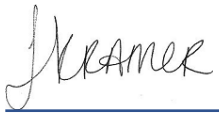
my EOL

Eurofins Carlsbad

Job Notes

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

Authorization



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2/2/2023 3:05:39 PM
Revision 1

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

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Laboratory Job ID: 890-3870-1
SDG: 03C1558152

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-3870-1
SDG: 03C1558152

Qualifiers

GC 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.

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-3870-1
SDG: 03C1558152

Job ID: 890-3870-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3870-1

Comments
No additional comments.

Revision
The report being provided is a revision of the original report sent on 2/1/2023. The report (revision 1) is being revised due to: Per client email, job narrative section missing in final report.

Receipt
The samples were received on 1/17/2023 8:15 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 was 2.4º C.

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: PH01 (890-3870-1), PH01A (890-3870-2), PH01B (890-3870-3), PH01C (890-3870-4), PH02A (890-3870-5), PH02 (890-3870-6), PH02B (890-3870-7), PH02C (890-3870-8), PH03 (890-3870-9), PH03A (890-3870-10), PH03B (890-3870-11) and PH03C (890-3870-12).

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-44392 and analytical batch 880-44509 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: PH01 (890-3870-1), PH01A (890-3870-2), PH02 (890-3870-6) and PH02B (890-3870-7). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

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

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

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

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

Client Sample Results

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-3870-1
SDG: 03C1558152

Client Sample ID: PH01

Date Collected: 01/16/23 13:55
Date Received: 01/17/23 08:15
Sample Depth: 1'

Lab Sample ID: 890-3870-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		01/19/23 16:32	01/23/23 13:20	1
Toluene	**0.00967**		0.00201		mg/Kg		01/19/23 16:32	01/23/23 13:20	1
Ethylbenzene	**0.0184**		0.00201		mg/Kg		01/19/23 16:32	01/23/23 13:20	1
m-Xylene & p-Xylene	**0.0689**	**F1**	0.00402		mg/Kg		01/19/23 16:32	01/23/23 13:20	1
o-Xylene	**0.0330**	**F1**	0.00201		mg/Kg		01/19/23 16:32	01/23/23 13:20	1
Xylenes, Total	**0.102**	**F1**	0.00402		mg/Kg		01/19/23 16:32	01/23/23 13:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*58*	*S1-*	*70 - 130*	*01/19/23 16:32*	*01/23/23 13:20*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*01/19/23 16:32*	*01/23/23 13:20*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.130**		0.00402		mg/Kg			01/23/23 16:53	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			01/24/23 14:41	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 *1	49.9		mg/Kg		01/19/23 11:50	01/23/23 18:28	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		01/19/23 11:50	01/23/23 18:28	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/19/23 11:50	01/23/23 18:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*87*		*70 - 130*	*01/19/23 11:50*	*01/23/23 18:28*	*1*
o-Terphenyl	*76*		*70 - 130*	*01/19/23 11:50*	*01/23/23 18:28*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8.86**		5.04		mg/Kg			01/20/23 23:02	1

Client Sample ID: PH01A

Date Collected: 01/16/23 14:00
Date Received: 01/17/23 08:15
Sample Depth: 2'

Lab Sample ID: 890-3870-2
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		01/19/23 16:32	01/23/23 13:41	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/19/23 16:32	01/23/23 13:41	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/19/23 16:32	01/23/23 13:41	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/19/23 16:32	01/23/23 13:41	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/19/23 16:32	01/23/23 13:41	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/19/23 16:32	01/23/23 13:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*51*	*S1-*	*70 - 130*	*01/19/23 16:32*	*01/23/23 13:41*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-3870-1
SDG: 03C1558152

Client Sample ID: PH01A
Date Collected: 01/16/23 14:00
Date Received: 01/17/23 08:15
Sample Depth: 2'

Lab Sample ID: 890-3870-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*80*		*70 - 130*	*01/19/23 16:32*	*01/23/23 13:41*	*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			01/23/23 16:53	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			01/24/23 14:41	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 *1	50.0	mg/Kg		01/19/23 11:50	01/23/23 18:51	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/19/23 11:50	01/23/23 18:51	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/19/23 11:50	01/23/23 18:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*74*		*70 - 130*	*01/19/23 11:50*	*01/23/23 18:51*	*1*
o-Terphenyl	*62*	*S1-*	*70 - 130*	*01/19/23 11:50*	*01/23/23 18:51*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.97	U	4.97	mg/Kg			01/20/23 23:08	1

Client Sample ID: PH01B
Date Collected: 01/16/23 14:10
Date Received: 01/17/23 08:15
Sample Depth: 4'

Lab Sample ID: 890-3870-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/19/23 16:32	01/23/23 14:02	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/19/23 16:32	01/23/23 14:02	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/19/23 16:32	01/23/23 14:02	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/19/23 16:32	01/23/23 14:02	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/19/23 16:32	01/23/23 14:02	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/19/23 16:32	01/23/23 14:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*01/19/23 16:32*	*01/23/23 14:02*	*1*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*01/19/23 16:32*	*01/23/23 14:02*	*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			01/23/23 16:53	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			01/24/23 14:41	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-3870-1
SDG: 03C1558152

Client Sample ID: PH01B

Date Collected: 01/16/23 14:10
Date Received: 01/17/23 08:15
Sample Depth: 4'

Lab Sample ID: 890-3870-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9		mg/Kg		01/19/23 11:50	01/23/23 19:14	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		01/19/23 11:50	01/23/23 19:14	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/19/23 11:50	01/23/23 19:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*82*		*70 - 130*	*01/19/23 11:50*	*01/23/23 19:14*	*1*
o-Terphenyl	*74*		*70 - 130*	*01/19/23 11:50*	*01/23/23 19:14*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.03	U	5.03		mg/Kg			01/20/23 23:26	1

Client Sample ID: PH02A

Date Collected: 01/16/23 12:50
Date Received: 01/17/23 08:15
Sample Depth: 2'

Lab Sample ID: 890-3870-5
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		01/19/23 16:32	01/23/23 14:23	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:32	01/23/23 14:23	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:32	01/23/23 14:23	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		01/19/23 16:32	01/23/23 14:23	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:32	01/23/23 14:23	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		01/19/23 16:32	01/23/23 14:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*01/19/23 16:32*	*01/23/23 14:23*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*01/19/23 16:32*	*01/23/23 14:23*	*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			01/23/23 16:53	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			01/24/23 14:41	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 *1	49.9		mg/Kg		01/19/23 11:50	01/23/23 19:38	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		01/19/23 11:50	01/23/23 19:38	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/19/23 11:50	01/23/23 19:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*66*	*S1-*	*70 - 130*	*01/19/23 11:50*	*01/23/23 19:38*	*1*
o-Terphenyl	*57*	*S1-*	*70 - 130*	*01/19/23 11:50*	*01/23/23 19:38*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-3870-1
SDG: 03C1558152

Client Sample ID: PH02A

Lab Sample ID: 890-3870-5
Matrix: Solid
Date Collected: 01/16/23 12:50
Date Received: 01/17/23 08:15
Sample Depth: 2'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11.1		5.00		mg/Kg			01/20/23 23:33	1

Client Sample ID: PH02

Lab Sample ID: 890-3870-6
Matrix: Solid
Date Collected: 01/16/23 12:45
Date Received: 01/17/23 08:15
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		01/19/23 16:32	01/23/23 14:44	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/19/23 16:32	01/23/23 14:44	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/19/23 16:32	01/23/23 14:44	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/19/23 16:32	01/23/23 14:44	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/19/23 16:32	01/23/23 14:44	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/19/23 16:32	01/23/23 14:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*40*	*S1-*	*70 - 130*	*01/19/23 16:32*	*01/23/23 14:44*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*01/19/23 16:32*	*01/23/23 14:44*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			01/23/23 16:53	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			01/24/23 14:41	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 *1	50.0		mg/Kg		01/19/23 11:50	01/23/23 20:03	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/19/23 11:50	01/23/23 20:03	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/19/23 11:50	01/23/23 20:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*34*	*S1-*	*70 - 130*	*01/19/23 11:50*	*01/23/23 20:03*	*1*
o-Terphenyl	*25*	*S1-*	*70 - 130*	*01/19/23 11:50*	*01/23/23 20:03*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10.7		4.98		mg/Kg			01/20/23 23:39	1

Client Sample Results

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-3870-1
SDG: 03C1558152

Client Sample ID: PH02B

Date Collected: 01/16/23 13:00
Date Received: 01/17/23 08:15
Sample Depth: 4'

Lab Sample ID: 890-3870-7
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		01/19/23 16:32	01/23/23 15:05	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/19/23 16:32	01/23/23 15:05	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/19/23 16:32	01/23/23 15:05	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/19/23 16:32	01/23/23 15:05	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/19/23 16:32	01/23/23 15:05	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/19/23 16:32	01/23/23 15:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*43*	*S1-*	*70 - 130*	*01/19/23 16:32*	*01/23/23 15:05*	*1*
1,4-Difluorobenzene (Surr)	*85*		*70 - 130*	*01/19/23 16:32*	*01/23/23 15:05*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			01/23/23 16:53	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 *1	50.0		mg/Kg		01/19/23 11:50	01/23/23 20:25	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/19/23 11:50	01/23/23 20:25	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/19/23 11:50	01/23/23 20:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*01/19/23 11:50*	*01/23/23 20:25*	*1*
o-Terphenyl	*82*		*70 - 130*	*01/19/23 11:50*	*01/23/23 20:25*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**15.0**		4.97		mg/Kg			01/20/23 23:45	1

Client Sample ID: PH03

Date Collected: 01/16/23 13:20
Date Received: 01/17/23 08:15
Sample Depth: 1'

Lab Sample ID: 890-3870-9
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		01/19/23 16:32	01/23/23 15:26	1
Toluene	**0.00867**		0.00201		mg/Kg		01/19/23 16:32	01/23/23 15:26	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		01/19/23 16:32	01/23/23 15:26	1
m-Xylene & p-Xylene	**0.0126**		0.00402		mg/Kg		01/19/23 16:32	01/23/23 15:26	1
o-Xylene	**0.00989**		0.00201		mg/Kg		01/19/23 16:32	01/23/23 15:26	1
Xylenes, Total	**0.0225**		0.00402		mg/Kg		01/19/23 16:32	01/23/23 15:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*01/19/23 16:32*	*01/23/23 15:26*	*1*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*01/19/23 16:32*	*01/23/23 15:26*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-3870-1
SDG: 03C1558152

Client Sample ID: PH03

Date Collected: 01/16/23 13:20
Date Received: 01/17/23 08:15
Sample Depth: 1'

Lab Sample ID: 890-3870-9
Matrix: Solid

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0312**		0.00402		mg/Kg			01/23/23 16:53	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 *1	49.9		mg/Kg		01/19/23 11:50	01/23/23 20:48	1
Diesel Range Organics (Over C10-C28)	**82.3**		49.9		mg/Kg		01/19/23 11:50	01/23/23 20:48	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/19/23 11:50	01/23/23 20:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*84*		*70 - 130*	*01/19/23 11:50*	*01/23/23 20:48*	*1*
o-Terphenyl	*78*		*70 - 130*	*01/19/23 11:50*	*01/23/23 20:48*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**31.8**		5.02		mg/Kg			01/20/23 23:51	1

Client Sample ID: PH03A

Date Collected: 01/16/23 13:25
Date Received: 01/17/23 08:15
Sample Depth: 2'

Lab Sample ID: 890-3870-10
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		01/19/23 16:32	01/23/23 15:47	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/19/23 16:32	01/23/23 15:47	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/19/23 16:32	01/23/23 15:47	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/19/23 16:32	01/23/23 15:47	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/19/23 16:32	01/23/23 15:47	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/19/23 16:32	01/23/23 15:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*01/19/23 16:32*	*01/23/23 15:47*	*1*
1,4-Difluorobenzene (Surr)	*76*		*70 - 130*	*01/19/23 16:32*	*01/23/23 15:47*	*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			01/23/23 16:53	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 *1	49.9		mg/Kg		01/19/23 11:50	01/23/23 21:10	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		01/19/23 11:50	01/23/23 21:10	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/19/23 11:50	01/23/23 21:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*01/19/23 11:50*	*01/23/23 21:10*	*1*
o-Terphenyl	*89*		*70 - 130*	*01/19/23 11:50*	*01/23/23 21:10*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-3870-1
SDG: 03C1558152

Client Sample ID: PH03A
Lab Sample ID: 890-3870-10
Date Collected: 01/16/23 13:25
Matrix: Solid
Date Received: 01/17/23 08:15
Sample Depth: 2'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24.3		5.01		mg/Kg			01/20/23 23:57	1

Client Sample ID: PH03B
Lab Sample ID: 890-3870-11
Date Collected: 01/16/23 13:35
Matrix: Solid
Date Received: 01/17/23 08:15
Sample Depth: 4'

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		01/19/23 16:32	01/23/23 16:07	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/19/23 16:32	01/23/23 16:07	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/19/23 16:32	01/23/23 16:07	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/19/23 16:32	01/23/23 16:07	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/19/23 16:32	01/23/23 16:07	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/19/23 16:32	01/23/23 16:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*01/19/23 16:32*	*01/23/23 16:07*	*1*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*	*01/19/23 16:32*	*01/23/23 16:07*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			01/23/23 16:53	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 *1	50.0		mg/Kg		01/19/23 11:50	01/23/23 21:32	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/19/23 11:50	01/23/23 21:32	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/19/23 11:50	01/23/23 21:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*103*		*70 - 130*	*01/19/23 11:50*	*01/23/23 21:32*	*1*
o-Terphenyl	*90*		*70 - 130*	*01/19/23 11:50*	*01/23/23 21:32*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13.5		4.98		mg/Kg			01/21/23 00:03	1

Surrogate Summary

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-3870-1
SDG: 03C1558152

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-3870-1	PH01	58 S1-	93
890-3870-1 MS	PH01	82	105
890-3870-1 MSD	PH01	91	102
890-3870-2	PH01A	51 S1-	80
890-3870-3	PH01B	108	111
890-3870-5	PH02A	108	106
890-3870-6	PH02	40 S1-	91
890-3870-7	PH02B	43 S1-	85
890-3870-9	PH03	100	111
890-3870-10	PH03A	110	76
890-3870-11	PH03B	105	115
LCS 880-44392/1-A	Lab Control Sample	83	106
LCSD 880-44392/2-A	Lab Control Sample Dup	86	104
MB 880-44392/5-A	Method Blank	87	103

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-3866-A-1-C MS	Matrix Spike	123	84
890-3866-A-1-D MSD	Matrix Spike Duplicate	123	87
890-3870-1	PH01	87	76
890-3870-2	PH01A	74	62 S1-
890-3870-3	PH01B	82	74
890-3870-5	PH02A	66 S1-	57 S1-
890-3870-6	PH02	34 S1-	25 S1-
890-3870-7	PH02B	95	82
890-3870-9	PH03	84	78
890-3870-10	PH03A	102	89
890-3870-11	PH03B	103	90
LCS 880-44321/2-A	Lab Control Sample	106	98
LCSD 880-44321/3-A	Lab Control Sample Dup	98	92
MB 880-44321/1-A	Method Blank	109	104

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-3870-1
SDG: 03C1558152

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-44392/5-A
Matrix: Solid
Analysis Batch: 44509

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 44392

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:32	01/23/23 12:59	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:32	01/23/23 12:59	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:32	01/23/23 12:59	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/19/23 16:32	01/23/23 12:59	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:32	01/23/23 12:59	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/19/23 16:32	01/23/23 12:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*	*01/19/23 16:32*	*01/23/23 12:59*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*01/19/23 16:32*	*01/23/23 12:59*	*1*

Lab Sample ID: LCS 880-44392/1-A
Matrix: Solid
Analysis Batch: 44509

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 44392

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1159		mg/Kg		116	70 - 130		
Toluene			0.100	0.1006		mg/Kg		101	70 - 130		
Ethylbenzene			0.100	0.1024		mg/Kg		102	70 - 130		
m-Xylene & p-Xylene			0.200	0.1769		mg/Kg		88	70 - 130		
o-Xylene			0.100	0.08972		mg/Kg		90	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: LCSD 880-44392/2-A
Matrix: Solid
Analysis Batch: 44509

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 44392

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1196		mg/Kg		120	70 - 130	3	35
Toluene			0.100	0.1044		mg/Kg		104	70 - 130	4	35
Ethylbenzene			0.100	0.1068		mg/Kg		107	70 - 130	4	35
m-Xylene & p-Xylene			0.200	0.1851		mg/Kg		93	70 - 130	5	35
o-Xylene			0.100	0.09395		mg/Kg		94	70 - 130	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: 890-3870-1 MS
Matrix: Solid
Analysis Batch: 44509

Client Sample ID: PH01
Prep Type: Total/NA
Prep Batch: 44392

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U	0.0998	0.1040		mg/Kg		104	70 - 130		
Toluene	0.00967		0.0998	0.09206		mg/Kg		83	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-3870-1
SDG: 03C1558152

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

Lab Sample ID: 890-3870-1 MS
Matrix: Solid
Analysis Batch: 44509

Client Sample ID: PH01
Prep Type: Total/NA
Prep Batch: 44392

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	0.0184		0.0998	0.09024		mg/Kg		72	70 - 130
m-Xylene & p-Xylene	0.0689	F1	0.200	0.1594	F1	mg/Kg		45	70 - 130
o-Xylene	0.0330	F1	0.0998	0.08160	F1	mg/Kg		49	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*82*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: 890-3870-1 MSD
Matrix: Solid
Analysis Batch: 44509

Client Sample ID: PH01
Prep Type: Total/NA
Prep Batch: 44392

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.100	0.1125		mg/Kg		112	70 - 130	8	35
Toluene	0.00967		0.100	0.1061		mg/Kg		96	70 - 130	14	35
Ethylbenzene	0.0184		0.100	0.1197		mg/Kg		101	70 - 130	28	35
m-Xylene & p-Xylene	0.0689	F1	0.200	0.2173		mg/Kg		74	70 - 130	31	35
o-Xylene	0.0330	F1	0.100	0.1035		mg/Kg		70	70 - 130	24	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

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

Lab Sample ID: MB 880-44321/1-A
Matrix: Solid
Analysis Batch: 44517

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 44321

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/19/23 11:50	01/23/23 10:22	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/19/23 11:50	01/23/23 10:22	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/19/23 11:50	01/23/23 10:22	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*01/19/23 11:50*	*01/23/23 10:22*	*1*
o-Terphenyl	*104*		*70 - 130*	*01/19/23 11:50*	*01/23/23 10:22*	*1*

Lab Sample ID: LCS 880-44321/2-A
Matrix: Solid
Analysis Batch: 44517

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 44321

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	936.4		mg/Kg		94	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1113		mg/Kg		111	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-3870-1
SDG: 03C1558152

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

Lab Sample ID: LCS 880-44321/2-A
Matrix: Solid
Analysis Batch: 44517

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 44321

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	106		70 - 130
o-Terphenyl	98		70 - 130

Lab Sample ID: LCSD 880-44321/3-A
Matrix: Solid
Analysis Batch: 44517

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 44321

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	717.4	*1	mg/Kg		72	70 - 130	26	20
Diesel Range Organics (Over C10-C28)			1000	1061		mg/Kg		106	70 - 130	5	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	98		70 - 130
o-Terphenyl	92		70 - 130

Lab Sample ID: 890-3866-A-1-C MS
Matrix: Solid
Analysis Batch: 44517

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 44321

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics (Over C10-C28)	75.5		998	917.4		mg/Kg		84	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	123		70 - 130
o-Terphenyl	84		70 - 130

Lab Sample ID: 890-3866-A-1-D MSD
Matrix: Solid
Analysis Batch: 44517

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 44321

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Diesel Range Organics (Over C10-C28)	75.5		997	923.3		mg/Kg		85	70 - 130	1	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	123		70 - 130
o-Terphenyl	87		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-44244/1-A
Matrix: Solid
Analysis Batch: 44497

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			01/20/23 20:59	1

QC Sample Results

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-3870-1
SDG: 03C1558152

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: LCS 880-44244/2-A
Matrix: Solid
Analysis Batch: 44497

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	267.2		mg/Kg		107	90 - 110		

Lab Sample ID: LCSD 880-44244/3-A
Matrix: Solid
Analysis Batch: 44497

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	268.6		mg/Kg		107	90 - 110	1	20

Lab Sample ID: 880-23720-A-71-B MS
Matrix: Solid
Analysis Batch: 44497

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	154		248	384.5		mg/Kg		93	90 - 110		

Lab Sample ID: 880-23720-A-71-C MSD
Matrix: Solid
Analysis Batch: 44497

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	154		248	385.1		mg/Kg		93	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-3870-1
SDG: 03C1558152

GC VOA

Prep Batch: 44392

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3870-1	PH01	Total/NA	Solid	5035	
890-3870-2	PH01A	Total/NA	Solid	5035	
890-3870-3	PH01B	Total/NA	Solid	5035	
890-3870-5	PH02A	Total/NA	Solid	5035	
890-3870-6	PH02	Total/NA	Solid	5035	
890-3870-7	PH02B	Total/NA	Solid	5035	
890-3870-9	PH03	Total/NA	Solid	5035	
890-3870-10	PH03A	Total/NA	Solid	5035	
890-3870-11	PH03B	Total/NA	Solid	5035	
MB 880-44392/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-44392/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-44392/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3870-1 MS	PH01	Total/NA	Solid	5035	
890-3870-1 MSD	PH01	Total/NA	Solid	5035	

Analysis Batch: 44509

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3870-1	PH01	Total/NA	Solid	8021B	44392
890-3870-2	PH01A	Total/NA	Solid	8021B	44392
890-3870-3	PH01B	Total/NA	Solid	8021B	44392
890-3870-5	PH02A	Total/NA	Solid	8021B	44392
890-3870-6	PH02	Total/NA	Solid	8021B	44392
890-3870-7	PH02B	Total/NA	Solid	8021B	44392
890-3870-9	PH03	Total/NA	Solid	8021B	44392
890-3870-10	PH03A	Total/NA	Solid	8021B	44392
890-3870-11	PH03B	Total/NA	Solid	8021B	44392
MB 880-44392/5-A	Method Blank	Total/NA	Solid	8021B	44392
LCS 880-44392/1-A	Lab Control Sample	Total/NA	Solid	8021B	44392
LCSD 880-44392/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	44392
890-3870-1 MS	PH01	Total/NA	Solid	8021B	44392
890-3870-1 MSD	PH01	Total/NA	Solid	8021B	44392

Analysis Batch: 44595

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3870-1	PH01	Total/NA	Solid	Total BTEX	
890-3870-2	PH01A	Total/NA	Solid	Total BTEX	
890-3870-3	PH01B	Total/NA	Solid	Total BTEX	
890-3870-5	PH02A	Total/NA	Solid	Total BTEX	
890-3870-6	PH02	Total/NA	Solid	Total BTEX	
890-3870-7	PH02B	Total/NA	Solid	Total BTEX	
890-3870-9	PH03	Total/NA	Solid	Total BTEX	
890-3870-10	PH03A	Total/NA	Solid	Total BTEX	
890-3870-11	PH03B	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 44321

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3870-1	PH01	Total/NA	Solid	8015NM Prep	
890-3870-2	PH01A	Total/NA	Solid	8015NM Prep	
890-3870-3	PH01B	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-3870-1
SDG: 03C1558152

GC Semi VOA (Continued)

Prep Batch: 44321 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3870-5	PH02A	Total/NA	Solid	8015NM Prep	
890-3870-6	PH02	Total/NA	Solid	8015NM Prep	
890-3870-7	PH02B	Total/NA	Solid	8015NM Prep	
890-3870-9	PH03	Total/NA	Solid	8015NM Prep	
890-3870-10	PH03A	Total/NA	Solid	8015NM Prep	
890-3870-11	PH03B	Total/NA	Solid	8015NM Prep	
MB 880-44321/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-44321/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-44321/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3866-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3866-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 44517

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3870-1	PH01	Total/NA	Solid	8015B NM	44321
890-3870-2	PH01A	Total/NA	Solid	8015B NM	44321
890-3870-3	PH01B	Total/NA	Solid	8015B NM	44321
890-3870-5	PH02A	Total/NA	Solid	8015B NM	44321
890-3870-6	PH02	Total/NA	Solid	8015B NM	44321
890-3870-7	PH02B	Total/NA	Solid	8015B NM	44321
890-3870-9	PH03	Total/NA	Solid	8015B NM	44321
890-3870-10	PH03A	Total/NA	Solid	8015B NM	44321
890-3870-11	PH03B	Total/NA	Solid	8015B NM	44321
MB 880-44321/1-A	Method Blank	Total/NA	Solid	8015B NM	44321
LCS 880-44321/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	44321
LCSD 880-44321/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	44321
890-3866-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	44321
890-3866-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	44321

Analysis Batch: 44649

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3870-1	PH01	Total/NA	Solid	8015 NM	
890-3870-2	PH01A	Total/NA	Solid	8015 NM	
890-3870-3	PH01B	Total/NA	Solid	8015 NM	
890-3870-5	PH02A	Total/NA	Solid	8015 NM	
890-3870-6	PH02	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 44244

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3870-1	PH01	Soluble	Solid	DI Leach	
890-3870-2	PH01A	Soluble	Solid	DI Leach	
890-3870-3	PH01B	Soluble	Solid	DI Leach	
890-3870-5	PH02A	Soluble	Solid	DI Leach	
890-3870-6	PH02	Soluble	Solid	DI Leach	
890-3870-7	PH02B	Soluble	Solid	DI Leach	
890-3870-9	PH03	Soluble	Solid	DI Leach	
890-3870-10	PH03A	Soluble	Solid	DI Leach	
890-3870-11	PH03B	Soluble	Solid	DI Leach	
MB 880-44244/1-A	Method Blank	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-3870-1
SDG: 03C1558152

HPLC/IC (Continued)

Leach Batch: 44244 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-44244/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-44244/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-23720-A-71-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-23720-A-71-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 44497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3870-1	PH01	Soluble	Solid	300.0	44244
890-3870-2	PH01A	Soluble	Solid	300.0	44244
890-3870-3	PH01B	Soluble	Solid	300.0	44244
890-3870-5	PH02A	Soluble	Solid	300.0	44244
890-3870-6	PH02	Soluble	Solid	300.0	44244
890-3870-7	PH02B	Soluble	Solid	300.0	44244
890-3870-9	PH03	Soluble	Solid	300.0	44244
890-3870-10	PH03A	Soluble	Solid	300.0	44244
890-3870-11	PH03B	Soluble	Solid	300.0	44244
MB 880-44244/1-A	Method Blank	Soluble	Solid	300.0	44244
LCS 880-44244/2-A	Lab Control Sample	Soluble	Solid	300.0	44244
LCSD 880-44244/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	44244
880-23720-A-71-B MS	Matrix Spike	Soluble	Solid	300.0	44244
880-23720-A-71-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	44244

Lab Chronicle

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-3870-1
SDG: 03C1558152

Client Sample ID: PH01
Date Collected: 01/16/23 13:55
Date Received: 01/17/23 08:15

Lab Sample ID: 890-3870-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	44392	01/19/23 16:32	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44509	01/23/23 13:20	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44595	01/23/23 16:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			44649	01/24/23 14:41	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	44321	01/19/23 11:50	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44517	01/23/23 18:28	AJ	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	44244	01/18/23 11:48	KS	EET MID
Soluble	Analysis	300.0		1			44497	01/20/23 23:02	CH	EET MID

Client Sample ID: PH01A
Date Collected: 01/16/23 14:00
Date Received: 01/17/23 08:15

Lab Sample ID: 890-3870-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	44392	01/19/23 16:32	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44509	01/23/23 13:41	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44595	01/23/23 16:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			44649	01/24/23 14:41	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	44321	01/19/23 11:50	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44517	01/23/23 18:51	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	44244	01/18/23 11:48	KS	EET MID
Soluble	Analysis	300.0		1			44497	01/20/23 23:08	CH	EET MID

Client Sample ID: PH01B
Date Collected: 01/16/23 14:10
Date Received: 01/17/23 08:15

Lab Sample ID: 890-3870-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	44392	01/19/23 16:32	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44509	01/23/23 14:02	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44595	01/23/23 16:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			44649	01/24/23 14:41	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	44321	01/19/23 11:50	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44517	01/23/23 19:14	AJ	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	44244	01/18/23 11:48	KS	EET MID
Soluble	Analysis	300.0		1			44497	01/20/23 23:26	CH	EET MID

Client Sample ID: PH02A
Date Collected: 01/16/23 12:50
Date Received: 01/17/23 08:15

Lab Sample ID: 890-3870-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	44392	01/19/23 16:32	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44509	01/23/23 14:23	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44595	01/23/23 16:53	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-3870-1
SDG: 03C1558152

Client Sample ID: PH02A
Date Collected: 01/16/23 12:50
Date Received: 01/17/23 08:15

Lab Sample ID: 890-3870-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			44649	01/24/23 14:41	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	44321	01/19/23 11:50	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44517	01/23/23 19:38	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	44244	01/18/23 11:48	KS	EET MID
Soluble	Analysis	300.0		1			44497	01/20/23 23:33	CH	EET MID

Client Sample ID: PH02
Date Collected: 01/16/23 12:45
Date Received: 01/17/23 08:15

Lab Sample ID: 890-3870-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	44392	01/19/23 16:32	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44509	01/23/23 14:44	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44595	01/23/23 16:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			44649	01/24/23 14:41	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	44321	01/19/23 11:50	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44517	01/23/23 20:03	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	44244	01/18/23 11:48	KS	EET MID
Soluble	Analysis	300.0		1			44497	01/20/23 23:39	CH	EET MID

Client Sample ID: PH02B
Date Collected: 01/16/23 13:00
Date Received: 01/17/23 08:15

Lab Sample ID: 890-3870-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	44392	01/19/23 16:32	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44509	01/23/23 15:05	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44595	01/23/23 16:53	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	44321	01/19/23 11:50	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44517	01/23/23 20:25	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	44244	01/18/23 11:48	KS	EET MID
Soluble	Analysis	300.0		1			44497	01/20/23 23:45	CH	EET MID

Client Sample ID: PH03
Date Collected: 01/16/23 13:20
Date Received: 01/17/23 08:15

Lab Sample ID: 890-3870-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	44392	01/19/23 16:32	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44509	01/23/23 15:26	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44595	01/23/23 16:53	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	44321	01/19/23 11:50	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44517	01/23/23 20:48	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	44244	01/18/23 11:48	KS	EET MID
Soluble	Analysis	300.0		1			44497	01/20/23 23:51	CH	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-3870-1
SDG: 03C1558152

Client Sample ID: PH03A

Date Collected: 01/16/23 13:25
Date Received: 01/17/23 08:15

Lab Sample ID: 890-3870-10

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	44392	01/19/23 16:32	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44509	01/23/23 15:47	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44595	01/23/23 16:53	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	44321	01/19/23 11:50	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44517	01/23/23 21:10	AJ	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	44244	01/18/23 11:48	KS	EET MID
Soluble	Analysis	300.0		1			44497	01/20/23 23:57	CH	EET MID

Client Sample ID: PH03B

Date Collected: 01/16/23 13:35
Date Received: 01/17/23 08:15

Lab Sample ID: 890-3870-11

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	44392	01/19/23 16:32	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44509	01/23/23 16:07	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44595	01/23/23 16:53	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	44321	01/19/23 11:50	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44517	01/23/23 21:32	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	44244	01/18/23 11:48	KS	EET MID
Soluble	Analysis	300.0		1			44497	01/21/23 00:03	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 4.24.30 CTB

Job ID: 890-3870-1
SDG: 03C1558152

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-3870-1
SDG: 03C1558152

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 4.24.30 CTB

Job ID: 890-3870-1
SDG: 03C1558152

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3870-1	PH01	Solid	01/16/23 13:55	01/17/23 08:15	1'
890-3870-2	PH01A	Solid	01/16/23 14:00	01/17/23 08:15	2'
890-3870-3	PH01B	Solid	01/16/23 14:10	01/17/23 08:15	4'
890-3870-5	PH02A	Solid	01/16/23 12:50	01/17/23 08:15	2'
890-3870-6	PH02	Solid	01/16/23 12:45	01/17/23 08:15	1'
890-3870-7	PH02B	Solid	01/16/23 13:00	01/17/23 08:15	4'
890-3870-9	PH03	Solid	01/16/23 13:20	01/17/23 08:15	1'
890-3870-10	PH03A	Solid	01/16/23 13:25	01/17/23 08:15	2'
890-3870-11	PH03B	Solid	01/16/23 13:35	01/17/23 08:15	4'

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Ben Belill	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy
Address:	3122 Nat'l Parks Hwy	Address:	3104 E Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	989-854-0852	Email:	bbelill@ensolum.com

Work Order Comments

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

Project Name:	Remuda 4-24-30 CTB	Turn Around	☑ Routine ☐ Rush
Project Number:	03C1558152	Due Date:	
Project Location:	32.25559, -103.88134	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Meredith Roberts		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	TNM-007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	2.6
Total Containers:		Corrected Temperature:	2.4

Preservative Codes

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

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	BTEX	Chlorides	TPH		Sample Comments
PH01	S	1/16/23	1355	1'	G	1		X	X	X		Incident #: nAPP2233351770
PH01A			1400	2'								
PH01B			1410	4'								
PH01C			1420	6'							HOLD	Cost Center: 212467101001
PH02A			1250	2'								
PH02			1245	1'								
PH02B			1300	4'								
PH02C			1310	6'							HOLD	
PH03			1320	1'								
PH03A			1325	2'								

890-3870 Chain of Custody

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		1-17-23 0815	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Received by OCD: 3/25/2025 7:59:01 AM
Released to Imaging: 3/26/2025 8:37:43 AM
2/2/2023 (Rev. 1)
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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 2 of 2

Project Manager:	Ben Belill	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy
Address:	3122 Nat'l Parks Hwy	Address:	3104 E Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	989-854-0852 Email:		bbelill@ensolum.com

Work Order Comments

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

Project Name:	Remuda 4 24 30 CTB	Turn Around	
Project Number:	03C1558152	☑ Routine ☐ Rush	
Project Location:	32.25359, -103.88134	Due Date:	
Sampler's Name:	Meredith Roberts	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

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

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: BTEX	Chlorides	TPH		Sample Comments
PH03B	S	1/16/23	1335	4'	G	1		X	X	X		Incident #: nAPP2233351770
PH03C	S	1/16/23	1345	6'	G	1		X	X	X	HOLD	Cost Center: 212487100 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 SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		Amanda Stuff	1-17-23 0815	2		
3				4		
5				6		

Revised Date 08/25/2020 Rev. 2020.2

Received by OCD: 3/25/2025 7:59:01 AM
Released to Imaging: 3/26/2025 8:37:43 AM
2/2/2023 (Rev. 1)
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Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3870-1
SDG Number: 03C1558152

Login Number: 3870
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3870-1
SDG Number: 03C1558152

Login Number: 3870
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 01/18/23 10:51 AM

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

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 1/24/2023 12:47:48 PM

JOB DESCRIPTION

REMUDA 4-24-30 CTB
SDG NUMBER 03C1558152

JOB NUMBER

890-3872-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Released to Imaging: 3/26/2025 8:37:45 AM

my EOL

Eurofins Carlsbad

Job Notes

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

Authorization

Generated
1/24/2023 12:47:48 PM

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

Client: Ensolum
Project/Site: REMUDA 4-24-30 CTB

Laboratory Job ID: 890-3872-1
SDG: 03C1558152

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: REMUDA 4-24-30 CTB

Job ID: 890-3872-1
SDG: 03C1558152

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
F2	MS/MSD RPD exceeds control limits
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: REMUDA 4-24-30 CTB

Job ID: 890-3872-1
SDG: 03C1558152

Job ID: 890-3872-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3872-1

Receipt
The samples were received on 1/17/2023 8:15 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 2.4°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: BH01 (890-3872-1), BH01A (890-3872-2) and BH01B (890-3872-3).

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

GC Semi VOA
Method 8015MOD_NM: The method blank for preparation batch 880-44256 and analytical batch 880-44309 contained Diesel Range Organics (Over C10-C28) above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 880-44256 and analytical batch 880-44309 was outside control limits. Sample 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
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-44245 and analytical batch 880-44498 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Released to Imaging: 3/26/2025 8:37:43 AM

Client Sample Results

Client: Ensolum
Project/Site: REMUDA 4-24-30 CTB

Job ID: 890-3872-1
SDG: 03C1558152

Client Sample ID: BH01

Date Collected: 01/16/23 10:05
Date Received: 01/17/23 08:15
Sample Depth: 0.5

Lab Sample ID: 890-3872-1

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:32	01/23/23 17:54	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:32	01/23/23 17:54	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:32	01/23/23 17:54	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		01/19/23 16:32	01/23/23 17:54	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:32	01/23/23 17:54	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		01/19/23 16:32	01/23/23 17:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*	*01/19/23 16:32*	*01/23/23 17:54*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*01/19/23 16:32*	*01/23/23 17:54*	*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			01/24/23 13:39	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**186**		49.9		mg/Kg			01/20/23 12:34	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		01/18/23 13:58	01/19/23 18:19	1
Diesel Range Organics (Over C10-C28)	**186**		49.9		mg/Kg		01/18/23 13:58	01/19/23 18:19	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/18/23 13:58	01/19/23 18:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*01/18/23 13:58*	*01/19/23 18:19*	*1*
o-Terphenyl	*103*		*70 - 130*	*01/18/23 13:58*	*01/19/23 18:19*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**470**		4.99		mg/Kg			01/20/23 20:15	1

Client Sample ID: BH01A

Date Collected: 01/16/23 10:10
Date Received: 01/17/23 08:15
Sample Depth: 1

Lab Sample ID: 890-3872-2

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		01/19/23 16:32	01/23/23 18:15	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/19/23 16:32	01/23/23 18:15	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/19/23 16:32	01/23/23 18:15	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/19/23 16:32	01/23/23 18:15	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/19/23 16:32	01/23/23 18:15	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/19/23 16:32	01/23/23 18:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*01/19/23 16:32*	*01/23/23 18:15*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: REMUDA 4-24-30 CTB

Job ID: 890-3872-1
SDG: 03C1558152

Client Sample ID: BH01A

Lab Sample ID: 890-3872-2
Matrix: Solid
Date Collected: 01/16/23 10:10
Date Received: 01/17/23 08:15
Sample Depth: 1

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*119*		*70 - 130*	*01/19/23 16:32*	*01/23/23 18:15*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			01/24/23 13:39	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			01/20/23 12:34	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		01/18/23 13:58	01/19/23 18:41	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		01/18/23 13:58	01/19/23 18:41	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/18/23 13:58	01/19/23 18:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*01/18/23 13:58*	*01/19/23 18:41*	*1*
o-Terphenyl	*94*		*70 - 130*	*01/18/23 13:58*	*01/19/23 18:41*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**337**		4.95	mg/Kg			01/20/23 20:21	1

Client Sample ID: BH01B

Lab Sample ID: 890-3872-3
Matrix: Solid
Date Collected: 01/16/23 10:15
Date Received: 01/17/23 08:15
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		01/19/23 16:32	01/23/23 18:36	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/19/23 16:32	01/23/23 18:36	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/19/23 16:32	01/23/23 18:36	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/19/23 16:32	01/23/23 18:36	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/19/23 16:32	01/23/23 18:36	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/19/23 16:32	01/23/23 18:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*01/19/23 16:32*	*01/23/23 18:36*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*01/19/23 16:32*	*01/23/23 18:36*	*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			01/24/23 13:39	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			01/20/23 12:34	1

Client Sample Results

Client: Ensolum
Project/Site: REMUDA 4-24-30 CTB

Job ID: 890-3872-1
SDG: 03C1558152

Client Sample ID: BH01B

Date Collected: 01/16/23 10:15
Date Received: 01/17/23 08:15
Sample Depth: 2

Lab Sample ID: 890-3872-3

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/18/23 13:58	01/19/23 19:02	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/18/23 13:58	01/19/23 19:02	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/18/23 13:58	01/19/23 19:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*91*		*70 - 130*	*01/18/23 13:58*	*01/19/23 19:02*	*1*
o-Terphenyl	*89*		*70 - 130*	*01/18/23 13:58*	*01/19/23 19:02*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**59.5**		4.96		mg/Kg			01/20/23 20:27	1

Surrogate Summary

Client: Ensolum
Project/Site: REMUDA 4-24-30 CTB

Job ID: 890-3872-1
SDG: 03C1558152

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-3870-A-1-C MS	Matrix Spike	82	105
890-3870-A-1-D MSD	Matrix Spike Duplicate	91	102
890-3872-1	BH01	88	106
890-3872-2	BH01A	114	119
890-3872-3	BH01B	118	96
LCS 880-44392/1-A	Lab Control Sample	83	106
LCSD 880-44392/2-A	Lab Control Sample Dup	86	104
MB 880-44392/5-A	Method Blank	87	103

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-3822-A-1-F MS	Matrix Spike	110	104
890-3822-A-1-G MSD	Matrix Spike Duplicate	105	98
890-3872-1	BH01	102	103
890-3872-2	BH01A	97	94
890-3872-3	BH01B	91	89
LCS 880-44256/2-A	Lab Control Sample	121	120
LCSD 880-44256/3-A	Lab Control Sample Dup	126	129
MB 880-44256/1-A	Method Blank	111	110

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: REMUDA 4-24-30 CTB

Job ID: 890-3872-1
SDG: 03C1558152

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-44392/5-A
Matrix: Solid
Analysis Batch: 44509

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 44392

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:32	01/23/23 12:59	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:32	01/23/23 12:59	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:32	01/23/23 12:59	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/19/23 16:32	01/23/23 12:59	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:32	01/23/23 12:59	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/19/23 16:32	01/23/23 12:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*	*01/19/23 16:32*	*01/23/23 12:59*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*01/19/23 16:32*	*01/23/23 12:59*	*1*

Lab Sample ID: LCS 880-44392/1-A
Matrix: Solid
Analysis Batch: 44509

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 44392

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1159		mg/Kg		116	70 - 130		
Toluene			0.100	0.1006		mg/Kg		101	70 - 130		
Ethylbenzene			0.100	0.1024		mg/Kg		102	70 - 130		
m-Xylene & p-Xylene			0.200	0.1769		mg/Kg		88	70 - 130		
o-Xylene			0.100	0.08972		mg/Kg		90	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: LCSD 880-44392/2-A
Matrix: Solid
Analysis Batch: 44509

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 44392

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1196		mg/Kg		120	70 - 130	3	35
Toluene			0.100	0.1044		mg/Kg		104	70 - 130	4	35
Ethylbenzene			0.100	0.1068		mg/Kg		107	70 - 130	4	35
m-Xylene & p-Xylene			0.200	0.1851		mg/Kg		93	70 - 130	5	35
o-Xylene			0.100	0.09395		mg/Kg		94	70 - 130	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: 890-3870-A-1-C MS
Matrix: Solid
Analysis Batch: 44509

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 44392

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U	0.0998	0.1040		mg/Kg		104	70 - 130		
Toluene	0.00967		0.0998	0.09206		mg/Kg		83	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: REMUDA 4-24-30 CTB

Job ID: 890-3872-1
SDG: 03C1558152

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

Lab Sample ID: 890-3870-A-1-C MS
Matrix: Solid
Analysis Batch: 44509

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 44392

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	0.0184		0.0998	0.09024		mg/Kg		72	70 - 130
m-Xylene & p-Xylene	0.0689	F1	0.200	0.1594	F1	mg/Kg		45	70 - 130
o-Xylene	0.0330	F1	0.0998	0.08160	F1	mg/Kg		49	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*82*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: 890-3870-A-1-D MSD
Matrix: Solid
Analysis Batch: 44509

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 44392

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.100	0.1125		mg/Kg		112	70 - 130	8	35
Toluene	0.00967		0.100	0.1061		mg/Kg		96	70 - 130	14	35
Ethylbenzene	0.0184		0.100	0.1197		mg/Kg		101	70 - 130	28	35
m-Xylene & p-Xylene	0.0689	F1	0.200	0.2173		mg/Kg		74	70 - 130	31	35
o-Xylene	0.0330	F1	0.100	0.1035		mg/Kg		70	70 - 130	24	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

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

Lab Sample ID: MB 880-44256/1-A
Matrix: Solid
Analysis Batch: 44309

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 44256

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/18/23 13:58	01/19/23 08:23	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/18/23 13:58	01/19/23 08:23	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/18/23 13:58	01/19/23 08:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*01/18/23 13:58*	*01/19/23 08:23*	*1*
o-Terphenyl	*110*		*70 - 130*	*01/18/23 13:58*	*01/19/23 08:23*	*1*

Lab Sample ID: LCS 880-44256/2-A
Matrix: Solid
Analysis Batch: 44309

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 44256

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1031		mg/Kg		103	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1001		mg/Kg		100	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: REMUDA 4-24-30 CTB

Job ID: 890-3872-1
SDG: 03C1558152

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

Lab Sample ID: LCS 880-44256/2-A
Matrix: Solid
Analysis Batch: 44309

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 44256

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	121		70 - 130
o-Terphenyl	120		70 - 130

Lab Sample ID: LCSD 880-44256/3-A
Matrix: Solid
Analysis Batch: 44309

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 44256

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1062		mg/Kg		106	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	1080		mg/Kg		108	70 - 130	8	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	126		70 - 130
o-Terphenyl	129		70 - 130

Lab Sample ID: 890-3822-A-1-F MS
Matrix: Solid
Analysis Batch: 44309

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 44256

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 F2	998	928.6		mg/Kg		90	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	998	1039		mg/Kg		102	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	110		70 - 130
o-Terphenyl	104		70 - 130

Lab Sample ID: 890-3822-A-1-G MSD
Matrix: Solid
Analysis Batch: 44309

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 44256

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 F2	997	1204	F2	mg/Kg		117	70 - 130	26	20
Diesel Range Organics (Over C10-C28)	<49.9	U	997	1011		mg/Kg		100	70 - 130	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	105		70 - 130
o-Terphenyl	98		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: REMUDA 4-24-30 CTB

Job ID: 890-3872-1
SDG: 03C1558152

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-44245/1-A
Matrix: Solid
Analysis Batch: 44498

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			01/20/23 17:31	1

Lab Sample ID: LCS 880-44245/2-A
Matrix: Solid
Analysis Batch: 44498

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	255.6		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-44245/3-A
Matrix: Solid
Analysis Batch: 44498

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	254.7		mg/Kg		102	90 - 110	0	20

Lab Sample ID: 890-3866-A-2-B MS
Matrix: Solid
Analysis Batch: 44498

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	45.3	F1	252	338.4	F1	mg/Kg		116	90 - 110		

Lab Sample ID: 890-3866-A-2-C MSD
Matrix: Solid
Analysis Batch: 44498

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	45.3	F1	252	339.5	F1	mg/Kg		117	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: REMUDA 4-24-30 CTB

Job ID: 890-3872-1
SDG: 03C1558152

GC VOA

Prep Batch: 44392

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3872-1	BH01	Total/NA	Solid	5035	
890-3872-2	BH01A	Total/NA	Solid	5035	
890-3872-3	BH01B	Total/NA	Solid	5035	
MB 880-44392/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-44392/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-44392/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3870-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-3870-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 44509

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3872-1	BH01	Total/NA	Solid	8021B	44392
890-3872-2	BH01A	Total/NA	Solid	8021B	44392
890-3872-3	BH01B	Total/NA	Solid	8021B	44392
MB 880-44392/5-A	Method Blank	Total/NA	Solid	8021B	44392
LCS 880-44392/1-A	Lab Control Sample	Total/NA	Solid	8021B	44392
LCSD 880-44392/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	44392
890-3870-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	44392
890-3870-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	44392

Analysis Batch: 44633

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3872-1	BH01	Total/NA	Solid	Total BTEX	
890-3872-2	BH01A	Total/NA	Solid	Total BTEX	
890-3872-3	BH01B	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 44256

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3872-1	BH01	Total/NA	Solid	8015NM Prep	
890-3872-2	BH01A	Total/NA	Solid	8015NM Prep	
890-3872-3	BH01B	Total/NA	Solid	8015NM Prep	
MB 880-44256/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-44256/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-44256/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3822-A-1-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3822-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 44309

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3872-1	BH01	Total/NA	Solid	8015B NM	44256
890-3872-2	BH01A	Total/NA	Solid	8015B NM	44256
890-3872-3	BH01B	Total/NA	Solid	8015B NM	44256
MB 880-44256/1-A	Method Blank	Total/NA	Solid	8015B NM	44256
LCS 880-44256/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	44256
LCSD 880-44256/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	44256
890-3822-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B NM	44256
890-3822-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	44256

QC Association Summary

Client: Ensolum
Project/Site: REMUDA 4-24-30 CTB

Job ID: 890-3872-1
SDG: 03C1558152

GC Semi VOA

Analysis Batch: 44451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3872-1	BH01	Total/NA	Solid	8015 NM	
890-3872-2	BH01A	Total/NA	Solid	8015 NM	
890-3872-3	BH01B	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 44245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3872-1	BH01	Soluble	Solid	DI Leach	
890-3872-2	BH01A	Soluble	Solid	DI Leach	
890-3872-3	BH01B	Soluble	Solid	DI Leach	
MB 880-44245/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-44245/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-44245/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3866-A-2-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3866-A-2-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 44498

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3872-1	BH01	Soluble	Solid	300.0	44245
890-3872-2	BH01A	Soluble	Solid	300.0	44245
890-3872-3	BH01B	Soluble	Solid	300.0	44245
MB 880-44245/1-A	Method Blank	Soluble	Solid	300.0	44245
LCS 880-44245/2-A	Lab Control Sample	Soluble	Solid	300.0	44245
LCSD 880-44245/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	44245
890-3866-A-2-B MS	Matrix Spike	Soluble	Solid	300.0	44245
890-3866-A-2-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	44245

Lab Chronicle

Client: Ensolum
Project/Site: REMUDA 4-24-30 CTB

Job ID: 890-3872-1
SDG: 03C1558152

Client Sample ID: BH01

Date Collected: 01/16/23 10:05
Date Received: 01/17/23 08:15

Lab Sample ID: 890-3872-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	44392	01/19/23 16:32	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44509	01/23/23 17:54	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44633	01/24/23 13:39	AJ	EET MID
Total/NA	Analysis	8015 NM		1			44451	01/20/23 12:34	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	44256	01/18/23 13:58	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44309	01/19/23 18:19	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	44245	01/18/23 11:49	KS	EET MID
Soluble	Analysis	300.0		1			44498	01/20/23 20:15	CH	EET MID

Client Sample ID: BH01A

Date Collected: 01/16/23 10:10
Date Received: 01/17/23 08:15

Lab Sample ID: 890-3872-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	44392	01/19/23 16:32	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44509	01/23/23 18:15	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44633	01/24/23 13:39	AJ	EET MID
Total/NA	Analysis	8015 NM		1			44451	01/20/23 12:34	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	44256	01/18/23 13:58	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44309	01/19/23 18:41	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	44245	01/18/23 11:49	KS	EET MID
Soluble	Analysis	300.0		1			44498	01/20/23 20:21	CH	EET MID

Client Sample ID: BH01B

Date Collected: 01/16/23 10:15
Date Received: 01/17/23 08:15

Lab Sample ID: 890-3872-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	44392	01/19/23 16:32	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44509	01/23/23 18:36	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44633	01/24/23 13:39	AJ	EET MID
Total/NA	Analysis	8015 NM		1			44451	01/20/23 12:34	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	44256	01/18/23 13:58	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44309	01/19/23 19:02	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	44245	01/18/23 11:49	KS	EET MID
Soluble	Analysis	300.0		1			44498	01/20/23 20:27	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 4-24-30 CTB

Job ID: 890-3872-1
SDG: 03C1558152

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: REMUDA 4-24-30 CTB

Job ID: 890-3872-1
SDG: 03C1558152

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: REMUDA 4-24-30 CTB

Job ID: 890-3872-1
SDG: 03C1558152

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3872-1	BH01	Solid	01/16/23 10:05	01/17/23 08:15	0.5
890-3872-2	BH01A	Solid	01/16/23 10:10	01/17/23 08:15	1
890-3872-3	BH01B	Solid	01/16/23 10:15	01/17/23 08:15	2

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Ben Belill	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy
Address:	3122 Nat'l Parks Hwy	Address:	3104 E Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	989-854-0852	Email:	bbelill@ensolum.com

Work Order Comments

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

Project Name:	Remuda 4-24-30 CTB	Turn Around	☑ Routine ☐ Rush
Project Number:	03C1558152	Due Date:	
Project Location:	32.253159, -103.88134	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Meredith Roberts		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	IR#007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.0
Sample Custody Seals:	Yes No N/A	Temperature Reading:	2.6
Total Containers:		Corrected Temperature:	2.4

Preservative Codes

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

890-3872 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	BTEX	Chlorides	TPH
BH01	S	1/16/23	1005	0.5'	G	1		X	X	X
BH01A	↓	↓	1010	1'	↓	↓		↓	↓	↓
BH01B	↓	↓	1015	2'	↓	↓		↓	↓	↓

Parameters

Sample Comments

Incident #:
nAPP2233351770

Cost Center:
2124871001

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			1-17-23 815	2		
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

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Received by OCD: 3/25/2025 7:59:01 AM

Released to Imaging: 3/26/2025 8:37:43 AM

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3872-1
SDG Number: 03C1558152

Login Number: 3872
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3872-1
SDG Number: 03C1558152

Login Number: 3872
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 01/18/23 10:51 AM

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

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 3/3/2023 1:08:44 PM

JOB DESCRIPTION

Remuda 4.24.30 CTB
SDG NUMBER 03C1558152

JOB NUMBER

890-4167-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Released to Imaging: 3/26/2025 8:37:45 AM

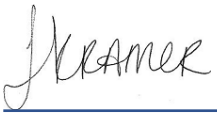
my EOL

Eurofins Carlsbad

Job Notes

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

Authorization



Generated
3/3/2023 1:08:44 PM

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

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Laboratory Job ID: 890-4167-1
SDG: 03C1558152

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-4167-1
SDG: 03C1558152

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
F2	MS/MSD RPD exceeds control limits
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-4167-1
SDG: 03C1558152

Job ID: 890-4167-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4167-1

Receipt
The samples were received on 2/21/2023 2:21 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 2.2°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: FS01 (890-4167-1), FS02 (890-4167-2), FS03 (890-4167-3), FS04 (890-4167-4), FS05 (890-4167-5), FS06 (890-4167-6), FS07 (890-4167-7), FS08 (890-4167-8), FS09 (890-4167-9), FS10 (890-4167-10), SW01 (890-4167-11), SW02 (890-4167-12), SW03 (890-4167-13) and SW04 (890-4167-14).

GC VOA
Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-47353 and analytical batch 880-47603 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

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

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-47228 and analytical batch 880-47221 was outside the upper control limits.

Method 8015MOD_NM: The method blank for preparation batch 880-47228 and analytical batch 880-47221 contained Gasoline Range Organics (GRO)-C6-C10 above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 880-47228 and analytical batch 880-47221 was outside control limits. Sample 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
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-47101 and analytical batch 880-47257 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-4167-1
SDG: 03C1558152

Client Sample ID: FS01

Lab Sample ID: 890-4167-1
Matrix: Solid
Date Collected: 02/21/23 09:30
Date Received: 02/21/23 14:21
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		02/27/23 16:25	03/03/23 01:25	1
Toluene	<0.00201	U	0.00201		mg/Kg		02/27/23 16:25	03/03/23 01:25	1
Ethylbenzene	<0.00201	U *+	0.00201		mg/Kg		02/27/23 16:25	03/03/23 01:25	1
m-Xylene & p-Xylene	<0.00402	U *+	0.00402		mg/Kg		02/27/23 16:25	03/03/23 01:25	1
o-Xylene	<0.00201	U *+	0.00201		mg/Kg		02/27/23 16:25	03/03/23 01:25	1
Xylenes, Total	<0.00402	U *+	0.00402		mg/Kg		02/27/23 16:25	03/03/23 01:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*02/27/23 16:25*	*03/03/23 01:25*	*1*
1,4-Difluorobenzene (Surr)	*85*		*70 - 130*	*02/27/23 16:25*	*03/03/23 01:25*	*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			03/03/23 13:41	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			02/27/23 12:30	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/25/23 08:55	02/25/23 23:49	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/25/23 08:55	02/25/23 23:49	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/25/23 08:55	02/25/23 23:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*108*		*70 - 130*	*02/25/23 08:55*	*02/25/23 23:49*	*1*
o-Terphenyl	*119*		*70 - 130*	*02/25/23 08:55*	*02/25/23 23:49*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**86.9**		5.00		mg/Kg			02/27/23 01:07	1

Client Sample ID: FS02

Lab Sample ID: 890-4167-2
Matrix: Solid
Date Collected: 02/21/23 09:35
Date Received: 02/21/23 14:21
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		02/27/23 16:25	03/03/23 01:46	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/27/23 16:25	03/03/23 01:46	1
Ethylbenzene	<0.00200	U *+	0.00200		mg/Kg		02/27/23 16:25	03/03/23 01:46	1
m-Xylene & p-Xylene	<0.00401	U *+	0.00401		mg/Kg		02/27/23 16:25	03/03/23 01:46	1
o-Xylene	<0.00200	U *+	0.00200		mg/Kg		02/27/23 16:25	03/03/23 01:46	1
Xylenes, Total	<0.00401	U *+	0.00401		mg/Kg		02/27/23 16:25	03/03/23 01:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*02/27/23 16:25*	*03/03/23 01:46*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-4167-1
SDG: 03C1558152

Client Sample ID: FS02

Lab Sample ID: 890-4167-2
Matrix: Solid
Date Collected: 02/21/23 09:35
Date Received: 02/21/23 14:21
Sample Depth: 1

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*02/27/23 16:25*	*03/03/23 01:46*	*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			03/03/23 13:41	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			02/27/23 12:30	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/25/23 08:55	02/26/23 00:11	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/25/23 08:55	02/26/23 00:11	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/25/23 08:55	02/26/23 00:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*119*		*70 - 130*	*02/25/23 08:55*	*02/26/23 00:11*	*1*
o-Terphenyl	*123*		*70 - 130*	*02/25/23 08:55*	*02/26/23 00:11*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**22.6**	**F1**	4.97		mg/Kg			02/27/23 01:12	1

Client Sample ID: FS03

Lab Sample ID: 890-4167-3
Matrix: Solid
Date Collected: 02/21/23 09:40
Date Received: 02/21/23 14:21
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		02/27/23 16:25	03/03/23 02:06	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/27/23 16:25	03/03/23 02:06	1
Ethylbenzene	<0.00200	U *+	0.00200		mg/Kg		02/27/23 16:25	03/03/23 02:06	1
m-Xylene & p-Xylene	<0.00399	U *+	0.00399		mg/Kg		02/27/23 16:25	03/03/23 02:06	1
o-Xylene	<0.00200	U *+	0.00200		mg/Kg		02/27/23 16:25	03/03/23 02:06	1
Xylenes, Total	<0.00399	U *+	0.00399		mg/Kg		02/27/23 16:25	03/03/23 02:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*02/27/23 16:25*	*03/03/23 02:06*	*1*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*	*02/27/23 16:25*	*03/03/23 02:06*	*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			03/03/23 13:41	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			02/27/23 12:30	1

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Client Sample Results

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-4167-1
SDG: 03C1558152

Client Sample ID: FS03

Lab Sample ID: 890-4167-3
Matrix: Solid
Date Collected: 02/21/23 09:40
Date Received: 02/21/23 14:21
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		02/25/23 08:55	02/26/23 00:32	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/25/23 08:55	02/26/23 00:32	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/25/23 08:55	02/26/23 00:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*02/25/23 08:55*	*02/26/23 00:32*	*1*
o-Terphenyl	*117*		*70 - 130*	*02/25/23 08:55*	*02/26/23 00:32*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**11.9**		5.05		mg/Kg			02/27/23 01:29	1

Client Sample ID: FS04

Lab Sample ID: 890-4167-4
Matrix: Solid
Date Collected: 02/21/23 10:40
Date Received: 02/21/23 14:21
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		02/27/23 16:25	03/03/23 02:27	1
Toluene	<0.00201	U	0.00201		mg/Kg		02/27/23 16:25	03/03/23 02:27	1
Ethylbenzene	<0.00201	U *+	0.00201		mg/Kg		02/27/23 16:25	03/03/23 02:27	1
m-Xylene & p-Xylene	<0.00402	U *+	0.00402		mg/Kg		02/27/23 16:25	03/03/23 02:27	1
o-Xylene	<0.00201	U *+	0.00201		mg/Kg		02/27/23 16:25	03/03/23 02:27	1
Xylenes, Total	<0.00402	U *+	0.00402		mg/Kg		02/27/23 16:25	03/03/23 02:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*130*		*70 - 130*	*02/27/23 16:25*	*03/03/23 02:27*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*02/27/23 16:25*	*03/03/23 02:27*	*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			03/03/23 13:41	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			02/27/23 12:30	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/25/23 08:55	02/26/23 00:54	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/25/23 08:55	02/26/23 00:54	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/25/23 08:55	02/26/23 00:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*02/25/23 08:55*	*02/26/23 00:54*	*1*
o-Terphenyl	*114*		*70 - 130*	*02/25/23 08:55*	*02/26/23 00:54*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-4167-1
SDG: 03C1558152

Client Sample ID: FS04

Lab Sample ID: 890-4167-4
Matrix: Solid
Date Collected: 02/21/23 10:40
Date Received: 02/21/23 14:21
Sample Depth: 2

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	18.7		5.00		mg/Kg			02/27/23 01:35	1

Client Sample ID: FS05

Lab Sample ID: 890-4167-5
Matrix: Solid
Date Collected: 02/21/23 10:45
Date Received: 02/21/23 14:21
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		02/27/23 16:25	03/03/23 03:50	1
Toluene	<0.00198	U	0.00198		mg/Kg		02/27/23 16:25	03/03/23 03:50	1
Ethylbenzene	<0.00198	U *+	0.00198		mg/Kg		02/27/23 16:25	03/03/23 03:50	1
m-Xylene & p-Xylene	<0.00396	U *+	0.00396		mg/Kg		02/27/23 16:25	03/03/23 03:50	1
o-Xylene	<0.00198	U *+	0.00198		mg/Kg		02/27/23 16:25	03/03/23 03:50	1
Xylenes, Total	<0.00396	U *+	0.00396		mg/Kg		02/27/23 16:25	03/03/23 03:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*	*02/27/23 16:25*	*03/03/23 03:50*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*02/27/23 16:25*	*03/03/23 03:50*	*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			03/03/23 13:41	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			02/27/23 12:30	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/25/23 08:55	02/26/23 01:15	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/25/23 08:55	02/26/23 01:15	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/25/23 08:55	02/26/23 01:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*121*		*70 - 130*	*02/25/23 08:55*	*02/26/23 01:15*	*1*
o-Terphenyl	*119*		*70 - 130*	*02/25/23 08:55*	*02/26/23 01:15*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	30.1		4.98		mg/Kg			02/27/23 01:52	1

Client Sample Results

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-4167-1
SDG: 03C1558152

Client Sample ID: FS06

Lab Sample ID: 890-4167-6
Matrix: Solid
Date Collected: 02/21/23 10:50
Date Received: 02/21/23 14:21
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		02/27/23 16:25	03/03/23 04:10	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/27/23 16:25	03/03/23 04:10	1
Ethylbenzene	<0.00199	U *+	0.00199		mg/Kg		02/27/23 16:25	03/03/23 04:10	1
m-Xylene & p-Xylene	<0.00398	U *+	0.00398		mg/Kg		02/27/23 16:25	03/03/23 04:10	1
o-Xylene	<0.00199	U *+	0.00199		mg/Kg		02/27/23 16:25	03/03/23 04:10	1
Xylenes, Total	<0.00398	U *+	0.00398		mg/Kg		02/27/23 16:25	03/03/23 04:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*02/27/23 16:25*	*03/03/23 04:10*	*1*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*	*02/27/23 16:25*	*03/03/23 04:10*	*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			03/03/23 13:41	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			02/27/23 12:30	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/25/23 08:55	02/26/23 01:58	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/25/23 08:55	02/26/23 01:58	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/25/23 08:55	02/26/23 01:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*119*		*70 - 130*	*02/25/23 08:55*	*02/26/23 01:58*	*1*
o-Terphenyl	*120*		*70 - 130*	*02/25/23 08:55*	*02/26/23 01:58*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**44.9**		5.02		mg/Kg			02/27/23 01:57	1

Client Sample ID: FS07

Lab Sample ID: 890-4167-7
Matrix: Solid
Date Collected: 02/21/23 10:55
Date Received: 02/21/23 14:21
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		02/27/23 16:25	03/03/23 04:31	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/27/23 16:25	03/03/23 04:31	1
Ethylbenzene	<0.00199	U *+	0.00199		mg/Kg		02/27/23 16:25	03/03/23 04:31	1
m-Xylene & p-Xylene	<0.00398	U *+	0.00398		mg/Kg		02/27/23 16:25	03/03/23 04:31	1
o-Xylene	<0.00199	U *+	0.00199		mg/Kg		02/27/23 16:25	03/03/23 04:31	1
Xylenes, Total	<0.00398	U *+	0.00398		mg/Kg		02/27/23 16:25	03/03/23 04:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*02/27/23 16:25*	*03/03/23 04:31*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-4167-1
SDG: 03C1558152

Client Sample ID: FS07

Lab Sample ID: 890-4167-7
Matrix: Solid
Date Collected: 02/21/23 10:55
Date Received: 02/21/23 14:21
Sample Depth: 2

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*02/27/23 16:25*	*03/03/23 04:31*	*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			03/03/23 13:41	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			02/27/23 12:30	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		02/25/23 08:55	02/26/23 02:20	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		02/25/23 08:55	02/26/23 02:20	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/25/23 08:55	02/26/23 02:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*125*		*70 - 130*	*02/25/23 08:55*	*02/26/23 02:20*	*1*
o-Terphenyl	*123*		*70 - 130*	*02/25/23 08:55*	*02/26/23 02:20*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**20.0**		4.98	mg/Kg			02/27/23 02:03	1

Client Sample ID: FS08

Lab Sample ID: 890-4167-8
Matrix: Solid
Date Collected: 02/21/23 11:00
Date Received: 02/21/23 14:21
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		02/27/23 16:25	03/03/23 04:51	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/27/23 16:25	03/03/23 04:51	1
Ethylbenzene	<0.00200	U *+	0.00200	mg/Kg		02/27/23 16:25	03/03/23 04:51	1
m-Xylene & p-Xylene	<0.00399	U *+	0.00399	mg/Kg		02/27/23 16:25	03/03/23 04:51	1
o-Xylene	<0.00200	U *+	0.00200	mg/Kg		02/27/23 16:25	03/03/23 04:51	1
Xylenes, Total	<0.00399	U *+	0.00399	mg/Kg		02/27/23 16:25	03/03/23 04:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*02/27/23 16:25*	*03/03/23 04:51*	*1*
1,4-Difluorobenzene (Surr)	*79*		*70 - 130*	*02/27/23 16:25*	*03/03/23 04:51*	*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			03/03/23 13:41	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			02/27/23 12:30	1

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Client Sample Results

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-4167-1
SDG: 03C1558152

Client Sample ID: FS08

Lab Sample ID: 890-4167-8
Matrix: Solid
Date Collected: 02/21/23 11:00
Date Received: 02/21/23 14:21
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	<50.0	U	50.0		mg/Kg		02/25/23 08:55	02/26/23 02:42	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/25/23 08:55	02/26/23 02:42	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/25/23 08:55	02/26/23 02:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*120*		*70 - 130*	*02/25/23 08:55*	*02/26/23 02:42*	*1*
o-Terphenyl	*115*		*70 - 130*	*02/25/23 08:55*	*02/26/23 02:42*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**13.0**		4.96		mg/Kg			02/27/23 02:09	1

Client Sample ID: FS09

Lab Sample ID: 890-4167-9
Matrix: Solid
Date Collected: 02/21/23 11:05
Date Received: 02/21/23 14:21
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		02/27/23 16:25	03/03/23 05:12	1
Toluene	<0.00201	U	0.00201		mg/Kg		02/27/23 16:25	03/03/23 05:12	1
Ethylbenzene	<0.00201	U *+	0.00201		mg/Kg		02/27/23 16:25	03/03/23 05:12	1
m-Xylene & p-Xylene	<0.00402	U *+	0.00402		mg/Kg		02/27/23 16:25	03/03/23 05:12	1
o-Xylene	<0.00201	U *+	0.00201		mg/Kg		02/27/23 16:25	03/03/23 05:12	1
Xylenes, Total	<0.00402	U *+	0.00402		mg/Kg		02/27/23 16:25	03/03/23 05:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*02/27/23 16:25*	*03/03/23 05:12*	*1*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*02/27/23 16:25*	*03/03/23 05:12*	*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			03/03/23 13:41	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			02/27/23 12:30	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/25/23 08:55	02/26/23 03:03	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/25/23 08:55	02/26/23 03:03	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/25/23 08:55	02/26/23 03:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*02/25/23 08:55*	*02/26/23 03:03*	*1*
o-Terphenyl	*106*		*70 - 130*	*02/25/23 08:55*	*02/26/23 03:03*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-4167-1
SDG: 03C1558152

Client Sample ID: FS09

Lab Sample ID: 890-4167-9
Matrix: Solid
Date Collected: 02/21/23 11:05
Date Received: 02/21/23 14:21
Sample Depth: 2

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12.1		4.98		mg/Kg			02/27/23 02:14	1

Client Sample ID: FS10

Lab Sample ID: 890-4167-10
Matrix: Solid
Date Collected: 02/21/23 11:10
Date Received: 02/21/23 14:21
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		02/27/23 16:25	03/03/23 05:32	1
Toluene	<0.00202	U	0.00202		mg/Kg		02/27/23 16:25	03/03/23 05:32	1
Ethylbenzene	<0.00202	U *+	0.00202		mg/Kg		02/27/23 16:25	03/03/23 05:32	1
m-Xylene & p-Xylene	<0.00404	U *+	0.00404		mg/Kg		02/27/23 16:25	03/03/23 05:32	1
o-Xylene	<0.00202	U *+	0.00202		mg/Kg		02/27/23 16:25	03/03/23 05:32	1
Xylenes, Total	<0.00404	U *+	0.00404		mg/Kg		02/27/23 16:25	03/03/23 05:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*02/27/23 16:25*	*03/03/23 05:32*	*1*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*	*02/27/23 16:25*	*03/03/23 05:32*	*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			03/03/23 13:41	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			02/27/23 12:30	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/25/23 08:55	02/26/23 03:25	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/25/23 08:55	02/26/23 03:25	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/25/23 08:55	02/26/23 03:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*99*		*70 - 130*	*02/25/23 08:55*	*02/26/23 03:25*	*1*
o-Terphenyl	*99*		*70 - 130*	*02/25/23 08:55*	*02/26/23 03:25*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	20.1		4.99		mg/Kg			02/27/23 02:20	1

Client Sample Results

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-4167-1
SDG: 03C1558152

Client Sample ID: SW01

Lab Sample ID: 890-4167-11
Matrix: Solid
Date Collected: 02/21/23 11:15
Date Received: 02/21/23 14:21
Sample Depth: 0 - 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		02/27/23 16:25	03/03/23 05:53	1
Toluene	<0.00198	U	0.00198		mg/Kg		02/27/23 16:25	03/03/23 05:53	1
Ethylbenzene	<0.00198	U *+	0.00198		mg/Kg		02/27/23 16:25	03/03/23 05:53	1
m-Xylene & p-Xylene	<0.00396	U *+	0.00396		mg/Kg		02/27/23 16:25	03/03/23 05:53	1
o-Xylene	<0.00198	U *+	0.00198		mg/Kg		02/27/23 16:25	03/03/23 05:53	1
Xylenes, Total	<0.00396	U *+	0.00396		mg/Kg		02/27/23 16:25	03/03/23 05:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*02/27/23 16:25*	*03/03/23 05:53*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*02/27/23 16:25*	*03/03/23 05:53*	*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			03/03/23 13:41	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			02/27/23 12:30	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/25/23 08:55	02/26/23 03:47	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/25/23 08:55	02/26/23 03:47	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/25/23 08:55	02/26/23 03:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*02/25/23 08:55*	*02/26/23 03:47*	*1*
o-Terphenyl	*108*		*70 - 130*	*02/25/23 08:55*	*02/26/23 03:47*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**27.3**		4.97		mg/Kg			02/27/23 02:26	1

Client Sample ID: SW02

Lab Sample ID: 890-4167-12
Matrix: Solid
Date Collected: 02/21/23 11:20
Date Received: 02/21/23 14:21
Sample Depth: 0 - 2

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		02/27/23 16:25	03/03/23 06:13	1
Toluene	<0.00201	U	0.00201		mg/Kg		02/27/23 16:25	03/03/23 06:13	1
Ethylbenzene	<0.00201	U *+	0.00201		mg/Kg		02/27/23 16:25	03/03/23 06:13	1
m-Xylene & p-Xylene	<0.00402	U *+	0.00402		mg/Kg		02/27/23 16:25	03/03/23 06:13	1
o-Xylene	<0.00201	U *+	0.00201		mg/Kg		02/27/23 16:25	03/03/23 06:13	1
Xylenes, Total	<0.00402	U *+	0.00402		mg/Kg		02/27/23 16:25	03/03/23 06:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*	*02/27/23 16:25*	*03/03/23 06:13*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-4167-1
SDG: 03C1558152

Client Sample ID: SW02

Lab Sample ID: 890-4167-12
Matrix: Solid
Date Collected: 02/21/23 11:20
Date Received: 02/21/23 14:21
Sample Depth: 0 - 2

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*74*		*70 - 130*	*02/27/23 16:25*	*03/03/23 06:13*	*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			03/03/23 13:41	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			02/27/23 12:30	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		02/25/23 08:55	02/26/23 04:08	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		02/25/23 08:55	02/26/23 04:08	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/25/23 08:55	02/26/23 04:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*119*		*70 - 130*	*02/25/23 08:55*	*02/26/23 04:08*	*1*
o-Terphenyl	*116*		*70 - 130*	*02/25/23 08:55*	*02/26/23 04:08*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7.04**		4.95	mg/Kg			02/27/23 05:21	1

Client Sample ID: SW03

Lab Sample ID: 890-4167-13
Matrix: Solid
Date Collected: 02/21/23 11:25
Date Received: 02/21/23 14:21
Sample Depth: 0 - 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		02/27/23 16:25	03/03/23 06:34	1
Toluene	<0.00202	U	0.00202	mg/Kg		02/27/23 16:25	03/03/23 06:34	1
Ethylbenzene	<0.00202	U *+	0.00202	mg/Kg		02/27/23 16:25	03/03/23 06:34	1
m-Xylene & p-Xylene	<0.00403	U *+	0.00403	mg/Kg		02/27/23 16:25	03/03/23 06:34	1
o-Xylene	<0.00202	U *+	0.00202	mg/Kg		02/27/23 16:25	03/03/23 06:34	1
Xylenes, Total	<0.00403	U *+	0.00403	mg/Kg		02/27/23 16:25	03/03/23 06:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*02/27/23 16:25*	*03/03/23 06:34*	*1*
1,4-Difluorobenzene (Surr)	*79*		*70 - 130*	*02/27/23 16:25*	*03/03/23 06:34*	*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			03/03/23 13:41	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			02/27/23 12:30	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-4167-1
SDG: 03C1558152

Client Sample ID: SW03

Lab Sample ID: 890-4167-13
Matrix: Solid
Date Collected: 02/21/23 11:25
Date Received: 02/21/23 14:21
Sample Depth: 0 - 2

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/25/23 08:55	02/26/23 04:30	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/25/23 08:55	02/26/23 04:30	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/25/23 08:55	02/26/23 04:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*115*		*70 - 130*	*02/25/23 08:55*	*02/26/23 04:30*	*1*
o-Terphenyl	*109*		*70 - 130*	*02/25/23 08:55*	*02/26/23 04:30*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**25.1**		5.04		mg/Kg			02/27/23 05:26	1

Client Sample ID: SW04

Lab Sample ID: 890-4167-14
Matrix: Solid
Date Collected: 02/21/23 11:30
Date Received: 02/21/23 14:21
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		02/27/23 16:25	03/03/23 06:54	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/27/23 16:25	03/03/23 06:54	1
Ethylbenzene	<0.00199	U *+	0.00199		mg/Kg		02/27/23 16:25	03/03/23 06:54	1
m-Xylene & p-Xylene	<0.00398	U *+	0.00398		mg/Kg		02/27/23 16:25	03/03/23 06:54	1
o-Xylene	<0.00199	U *+	0.00199		mg/Kg		02/27/23 16:25	03/03/23 06:54	1
Xylenes, Total	<0.00398	U *+	0.00398		mg/Kg		02/27/23 16:25	03/03/23 06:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*02/27/23 16:25*	*03/03/23 06:54*	*1*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*02/27/23 16:25*	*03/03/23 06:54*	*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			03/03/23 13:41	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			02/27/23 12:30	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/25/23 08:55	02/26/23 04:52	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/25/23 08:55	02/26/23 04:52	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/25/23 08:55	02/26/23 04:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*02/25/23 08:55*	*02/26/23 04:52*	*1*
o-Terphenyl	*108*		*70 - 130*	*02/25/23 08:55*	*02/26/23 04:52*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-4167-1
SDG: 03C1558152

Client Sample ID: SW04
Date Collected: 02/21/23 11:30
Date Received: 02/21/23 14:21
Sample Depth: 0 - 2

Lab Sample ID: 890-4167-14
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	22.7		5.00		mg/Kg			02/27/23 05:32	1

Surrogate Summary

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-4167-1
SDG: 03C1558152

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-25040-A-1-C MS	Matrix Spike	122	97
880-25040-A-1-D MSD	Matrix Spike Duplicate	124	100
890-4167-1	FS01	113	85
890-4167-2	FS02	115	83
890-4167-3	FS03	101	82
890-4167-4	FS04	130	89
890-4167-5	FS05	87	91
890-4167-6	FS06	111	77
890-4167-7	FS07	96	90
890-4167-8	FS08	107	79
890-4167-9	FS09	116	83
890-4167-10	FS10	107	81
890-4167-11	SW01	110	84
890-4167-12	SW02	84	74
890-4167-13	SW03	106	79
890-4167-14	SW04	98	83
LCS 880-47353/1-A	Lab Control Sample	121	112
LCSD 880-47353/2-A	Lab Control Sample Dup	132 S1+	87
MB 880-47353/5-A	Method Blank	76	87
MB 880-47616/5-A	Method Blank	83	83

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-25168-A-21-B MS	Matrix Spike	114	113
880-25168-A-21-C MSD	Matrix Spike Duplicate	112	103
890-4167-1	FS01	108	119
890-4167-2	FS02	119	123
890-4167-3	FS03	109	117
890-4167-4	FS04	106	114
890-4167-5	FS05	121	119
890-4167-6	FS06	119	120
890-4167-7	FS07	125	123
890-4167-8	FS08	120	115
890-4167-9	FS09	102	106
890-4167-10	FS10	99	99
890-4167-11	SW01	113	108
890-4167-12	SW02	119	116
890-4167-13	SW03	115	109
890-4167-14	SW04	113	108
LCS 880-47228/2-A	Lab Control Sample	106	120
LCSD 880-47228/3-A	Lab Control Sample Dup	105	107
MB 880-47228/1-A	Method Blank	147 S1+	163 S1+

Surrogate Summary

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-4167-1
SDG: 03C1558152

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-4167-1
SDG: 03C1558152

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-47353/5-A
Matrix: Solid
Analysis Batch: 47603

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 47353

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/27/23 16:25	03/02/23 23:01	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/27/23 16:25	03/02/23 23:01	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/27/23 16:25	03/02/23 23:01	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/27/23 16:25	03/02/23 23:01	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/27/23 16:25	03/02/23 23:01	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/27/23 16:25	03/02/23 23:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*76*		*70 - 130*	*02/27/23 16:25*	*03/02/23 23:01*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*02/27/23 16:25*	*03/02/23 23:01*	*1*

Lab Sample ID: LCS 880-47353/1-A
Matrix: Solid
Analysis Batch: 47603

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 47353

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1187		mg/Kg		119	70 - 130		
Toluene			0.100	0.1090		mg/Kg		109	70 - 130		
Ethylbenzene			0.100	0.1165		mg/Kg		117	70 - 130		
m-Xylene & p-Xylene			0.200	0.2501		mg/Kg		125	70 - 130		
o-Xylene			0.100	0.1280		mg/Kg		128	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

Lab Sample ID: LCSD 880-47353/2-A
Matrix: Solid
Analysis Batch: 47603

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 47353

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1225		mg/Kg		122	70 - 130	3	35
Toluene			0.100	0.1144		mg/Kg		114	70 - 130	5	35
Ethylbenzene			0.100	0.1309	*+	mg/Kg		131	70 - 130	12	35
m-Xylene & p-Xylene			0.200	0.2797	*+	mg/Kg		140	70 - 130	11	35
o-Xylene			0.100	0.1406	*+	mg/Kg		141	70 - 130	9	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*132*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*

Lab Sample ID: 880-25040-A-1-C MS
Matrix: Solid
Analysis Batch: 47603

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 47353

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U	0.100	0.09836		mg/Kg		98	70 - 130		
Toluene	<0.00202	U	0.100	0.08243		mg/Kg		82	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-4167-1
SDG: 03C1558152

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

Lab Sample ID: 880-25040-A-1-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 47603 — **Prep Batch: 47353**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U *+	0.100	0.07838		mg/Kg		78	70 - 130
m-Xylene & p-Xylene	<0.00403	U *+	0.201	0.1665		mg/Kg		83	70 - 130
o-Xylene	<0.00202	U *+	0.100	0.08466		mg/Kg		84	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: 880-25040-A-1-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 47603 — **Prep Batch: 47353**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.0990	0.08508		mg/Kg		86	70 - 130	14	35
Toluene	<0.00202	U	0.0990	0.07814		mg/Kg		79	70 - 130	5	35
Ethylbenzene	<0.00202	U *+	0.0990	0.07154		mg/Kg		72	70 - 130	9	35
m-Xylene & p-Xylene	<0.00403	U *+	0.198	0.1487		mg/Kg		75	70 - 130	11	35
o-Xylene	<0.00202	U *+	0.0990	0.07733		mg/Kg		77	70 - 130	9	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*124*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: MB 880-47616/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 47603 — **Prep Batch: 47616**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		03/02/23 09:28	03/02/23 11:08	1
Toluene	<0.00200	U	0.00200	mg/Kg		03/02/23 09:28	03/02/23 11:08	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		03/02/23 09:28	03/02/23 11:08	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		03/02/23 09:28	03/02/23 11:08	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		03/02/23 09:28	03/02/23 11:08	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		03/02/23 09:28	03/02/23 11:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*	*03/02/23 09:28*	*03/02/23 11:08*	*1*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*03/02/23 09:28*	*03/02/23 11:08*	*1*

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

Lab Sample ID: MB 880-47228/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 47221 — **Prep Batch: 47228**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		02/25/23 08:55	02/25/23 20:13	1

QC Sample Results

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-4167-1
SDG: 03C1558152

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

Lab Sample ID: MB 880-47228/1-A
Matrix: Solid
Analysis Batch: 47221

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 47228

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/25/23 08:55	02/25/23 20:13	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/25/23 08:55	02/25/23 20:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*147*	*S1+*	*70 - 130*	*02/25/23 08:55*	*02/25/23 20:13*	*1*
o-Terphenyl	*163*	*S1+*	*70 - 130*	*02/25/23 08:55*	*02/25/23 20:13*	*1*

Lab Sample ID: LCS 880-47228/2-A
Matrix: Solid
Analysis Batch: 47221

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 47228

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	969.7		mg/Kg		97	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1086		mg/Kg		109	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*106*		*70 - 130*
o-Terphenyl	*120*		*70 - 130*

Lab Sample ID: LCSD 880-47228/3-A
Matrix: Solid
Analysis Batch: 47221

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 47228

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	968.1		mg/Kg		97	70 - 130	0	20
Diesel Range Organics (Over C10-C28)			1000	951.5		mg/Kg		95	70 - 130	13	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*105*		*70 - 130*
o-Terphenyl	*107*		*70 - 130*

Lab Sample ID: 880-25168-A-21-B MS
Matrix: Solid
Analysis Batch: 47221

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 47228

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 F2	998	1095		mg/Kg		107	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	998	1035		mg/Kg		104	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*114*		*70 - 130*
o-Terphenyl	*113*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-4167-1
SDG: 03C1558152

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

Lab Sample ID: 880-25168-A-21-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 47221 — **Prep Batch: 47228**

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 F2	999	836.1	F2	mg/Kg		81	70 - 130	27	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	926.5		mg/Kg		93	70 - 130	11	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*112*		*70 - 130*
o-Terphenyl	*103*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-47101/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 47257

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/26/23 23:36	1

Lab Sample ID: LCS 880-47101/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 47257

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	253.6		mg/Kg		101	90 - 110		

Lab Sample ID: LCSD 880-47101/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 47257

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	257.0		mg/Kg		103	90 - 110	1	20

Lab Sample ID: 890-4167-2 MS — **Client Sample ID: FS02**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 47257

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	22.6	F1	249	331.3	F1	mg/Kg		124	90 - 110		

Lab Sample ID: 890-4167-2 MSD — **Client Sample ID: FS02**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 47257

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	22.6	F1	249	318.5	F1	mg/Kg		119	90 - 110	4	20

QC Sample Results

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-4167-1
SDG: 03C1558152

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 880-47148/1-A
Matrix: Solid
Analysis Batch: 47261

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			02/27/23 02:54	1

Lab Sample ID: LCS 880-47148/2-A
Matrix: Solid
Analysis Batch: 47261

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	258.3		mg/Kg		103	90 - 110		

Lab Sample ID: LCSD 880-47148/3-A
Matrix: Solid
Analysis Batch: 47261

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	254.7		mg/Kg		102	90 - 110	1	20

Lab Sample ID: 890-4164-A-5-B MS
Matrix: Solid
Analysis Batch: 47261

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	16.3		249	273.0		mg/Kg		103	90 - 110		

Lab Sample ID: 890-4164-A-5-C MSD
Matrix: Solid
Analysis Batch: 47261

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	16.3		249	270.1		mg/Kg		102	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-4167-1
SDG: 03C1558152

GC VOA

Prep Batch: 47353

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4167-1	FS01	Total/NA	Solid	5035	
890-4167-2	FS02	Total/NA	Solid	5035	
890-4167-3	FS03	Total/NA	Solid	5035	
890-4167-4	FS04	Total/NA	Solid	5035	
890-4167-5	FS05	Total/NA	Solid	5035	
890-4167-6	FS06	Total/NA	Solid	5035	
890-4167-7	FS07	Total/NA	Solid	5035	
890-4167-8	FS08	Total/NA	Solid	5035	
890-4167-9	FS09	Total/NA	Solid	5035	
890-4167-10	FS10	Total/NA	Solid	5035	
890-4167-11	SW01	Total/NA	Solid	5035	
890-4167-12	SW02	Total/NA	Solid	5035	
890-4167-13	SW03	Total/NA	Solid	5035	
890-4167-14	SW04	Total/NA	Solid	5035	
MB 880-47353/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-47353/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-47353/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-25040-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
880-25040-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 47603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4167-1	FS01	Total/NA	Solid	8021B	47353
890-4167-2	FS02	Total/NA	Solid	8021B	47353
890-4167-3	FS03	Total/NA	Solid	8021B	47353
890-4167-4	FS04	Total/NA	Solid	8021B	47353
890-4167-5	FS05	Total/NA	Solid	8021B	47353
890-4167-6	FS06	Total/NA	Solid	8021B	47353
890-4167-7	FS07	Total/NA	Solid	8021B	47353
890-4167-8	FS08	Total/NA	Solid	8021B	47353
890-4167-9	FS09	Total/NA	Solid	8021B	47353
890-4167-10	FS10	Total/NA	Solid	8021B	47353
890-4167-11	SW01	Total/NA	Solid	8021B	47353
890-4167-12	SW02	Total/NA	Solid	8021B	47353
890-4167-13	SW03	Total/NA	Solid	8021B	47353
890-4167-14	SW04	Total/NA	Solid	8021B	47353
MB 880-47353/5-A	Method Blank	Total/NA	Solid	8021B	47353
MB 880-47616/5-A	Method Blank	Total/NA	Solid	8021B	47616
LCS 880-47353/1-A	Lab Control Sample	Total/NA	Solid	8021B	47353
LCSD 880-47353/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	47353
880-25040-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	47353
880-25040-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	47353

Prep Batch: 47616

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-47616/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 47757

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4167-1	FS01	Total/NA	Solid	Total BTEX	
890-4167-2	FS02	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-4167-1
SDG: 03C1558152

GC VOA (Continued)

Analysis Batch: 47757 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4167-3	FS03	Total/NA	Solid	Total BTEX	
890-4167-4	FS04	Total/NA	Solid	Total BTEX	
890-4167-5	FS05	Total/NA	Solid	Total BTEX	
890-4167-6	FS06	Total/NA	Solid	Total BTEX	
890-4167-7	FS07	Total/NA	Solid	Total BTEX	
890-4167-8	FS08	Total/NA	Solid	Total BTEX	
890-4167-9	FS09	Total/NA	Solid	Total BTEX	
890-4167-10	FS10	Total/NA	Solid	Total BTEX	
890-4167-11	SW01	Total/NA	Solid	Total BTEX	
890-4167-12	SW02	Total/NA	Solid	Total BTEX	
890-4167-13	SW03	Total/NA	Solid	Total BTEX	
890-4167-14	SW04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 47221

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4167-1	FS01	Total/NA	Solid	8015B NM	47228
890-4167-2	FS02	Total/NA	Solid	8015B NM	47228
890-4167-3	FS03	Total/NA	Solid	8015B NM	47228
890-4167-4	FS04	Total/NA	Solid	8015B NM	47228
890-4167-5	FS05	Total/NA	Solid	8015B NM	47228
890-4167-6	FS06	Total/NA	Solid	8015B NM	47228
890-4167-7	FS07	Total/NA	Solid	8015B NM	47228
890-4167-8	FS08	Total/NA	Solid	8015B NM	47228
890-4167-9	FS09	Total/NA	Solid	8015B NM	47228
890-4167-10	FS10	Total/NA	Solid	8015B NM	47228
890-4167-11	SW01	Total/NA	Solid	8015B NM	47228
890-4167-12	SW02	Total/NA	Solid	8015B NM	47228
890-4167-13	SW03	Total/NA	Solid	8015B NM	47228
890-4167-14	SW04	Total/NA	Solid	8015B NM	47228
MB 880-47228/1-A	Method Blank	Total/NA	Solid	8015B NM	47228
LCS 880-47228/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	47228
LCSD 880-47228/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	47228
880-25168-A-21-B MS	Matrix Spike	Total/NA	Solid	8015B NM	47228
880-25168-A-21-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	47228

Prep Batch: 47228

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4167-1	FS01	Total/NA	Solid	8015NM Prep	
890-4167-2	FS02	Total/NA	Solid	8015NM Prep	
890-4167-3	FS03	Total/NA	Solid	8015NM Prep	
890-4167-4	FS04	Total/NA	Solid	8015NM Prep	
890-4167-5	FS05	Total/NA	Solid	8015NM Prep	
890-4167-6	FS06	Total/NA	Solid	8015NM Prep	
890-4167-7	FS07	Total/NA	Solid	8015NM Prep	
890-4167-8	FS08	Total/NA	Solid	8015NM Prep	
890-4167-9	FS09	Total/NA	Solid	8015NM Prep	
890-4167-10	FS10	Total/NA	Solid	8015NM Prep	
890-4167-11	SW01	Total/NA	Solid	8015NM Prep	
890-4167-12	SW02	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-4167-1
SDG: 03C1558152

GC Semi VOA (Continued)

Prep Batch: 47228 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4167-13	SW03	Total/NA	Solid	8015NM Prep	
890-4167-14	SW04	Total/NA	Solid	8015NM Prep	
MB 880-47228/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-47228/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-47228/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-25168-A-21-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-25168-A-21-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 47326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4167-1	FS01	Total/NA	Solid	8015 NM	
890-4167-2	FS02	Total/NA	Solid	8015 NM	
890-4167-3	FS03	Total/NA	Solid	8015 NM	
890-4167-4	FS04	Total/NA	Solid	8015 NM	
890-4167-5	FS05	Total/NA	Solid	8015 NM	
890-4167-6	FS06	Total/NA	Solid	8015 NM	
890-4167-7	FS07	Total/NA	Solid	8015 NM	
890-4167-8	FS08	Total/NA	Solid	8015 NM	
890-4167-9	FS09	Total/NA	Solid	8015 NM	
890-4167-10	FS10	Total/NA	Solid	8015 NM	
890-4167-11	SW01	Total/NA	Solid	8015 NM	
890-4167-12	SW02	Total/NA	Solid	8015 NM	
890-4167-13	SW03	Total/NA	Solid	8015 NM	
890-4167-14	SW04	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 47101

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4167-1	FS01	Soluble	Solid	DI Leach	
890-4167-2	FS02	Soluble	Solid	DI Leach	
890-4167-3	FS03	Soluble	Solid	DI Leach	
890-4167-4	FS04	Soluble	Solid	DI Leach	
890-4167-5	FS05	Soluble	Solid	DI Leach	
890-4167-6	FS06	Soluble	Solid	DI Leach	
890-4167-7	FS07	Soluble	Solid	DI Leach	
890-4167-8	FS08	Soluble	Solid	DI Leach	
890-4167-9	FS09	Soluble	Solid	DI Leach	
890-4167-10	FS10	Soluble	Solid	DI Leach	
890-4167-11	SW01	Soluble	Solid	DI Leach	
MB 880-47101/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-47101/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-47101/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4167-2 MS	FS02	Soluble	Solid	DI Leach	
890-4167-2 MSD	FS02	Soluble	Solid	DI Leach	

Leach Batch: 47148

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4167-12	SW02	Soluble	Solid	DI Leach	
890-4167-13	SW03	Soluble	Solid	DI Leach	
890-4167-14	SW04	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-4167-1
SDG: 03C1558152

HPLC/IC (Continued)

Leach Batch: 47148 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-47148/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-47148/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-47148/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4164-A-5-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-4164-A-5-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 47257

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4167-1	FS01	Soluble	Solid	300.0	47101
890-4167-2	FS02	Soluble	Solid	300.0	47101
890-4167-3	FS03	Soluble	Solid	300.0	47101
890-4167-4	FS04	Soluble	Solid	300.0	47101
890-4167-5	FS05	Soluble	Solid	300.0	47101
890-4167-6	FS06	Soluble	Solid	300.0	47101
890-4167-7	FS07	Soluble	Solid	300.0	47101
890-4167-8	FS08	Soluble	Solid	300.0	47101
890-4167-9	FS09	Soluble	Solid	300.0	47101
890-4167-10	FS10	Soluble	Solid	300.0	47101
890-4167-11	SW01	Soluble	Solid	300.0	47101
MB 880-47101/1-A	Method Blank	Soluble	Solid	300.0	47101
LCS 880-47101/2-A	Lab Control Sample	Soluble	Solid	300.0	47101
LCSD 880-47101/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	47101
890-4167-2 MS	FS02	Soluble	Solid	300.0	47101
890-4167-2 MSD	FS02	Soluble	Solid	300.0	47101

Analysis Batch: 47261

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4167-12	SW02	Soluble	Solid	300.0	47148
890-4167-13	SW03	Soluble	Solid	300.0	47148
890-4167-14	SW04	Soluble	Solid	300.0	47148
MB 880-47148/1-A	Method Blank	Soluble	Solid	300.0	47148
LCS 880-47148/2-A	Lab Control Sample	Soluble	Solid	300.0	47148
LCSD 880-47148/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	47148
890-4164-A-5-B MS	Matrix Spike	Soluble	Solid	300.0	47148
890-4164-A-5-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	47148

Lab Chronicle

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-4167-1
SDG: 03C1558152

Client Sample ID: FS01
Date Collected: 02/21/23 09:30
Date Received: 02/21/23 14:21

Lab Sample ID: 890-4167-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	47353	02/27/23 16:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47603	03/03/23 01:25	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47757	03/03/23 13:41	SM	EET MID
Total/NA	Analysis	8015 NM		1			47326	02/27/23 12:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	47228	02/25/23 08:55	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	47221	02/25/23 23:49	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	47101	02/23/23 15:20	KS	EET MID
Soluble	Analysis	300.0		1			47257	02/27/23 01:07	CH	EET MID

Client Sample ID: FS02
Date Collected: 02/21/23 09:35
Date Received: 02/21/23 14:21

Lab Sample ID: 890-4167-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	47353	02/27/23 16:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47603	03/03/23 01:46	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47757	03/03/23 13:41	SM	EET MID
Total/NA	Analysis	8015 NM		1			47326	02/27/23 12:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	47228	02/25/23 08:55	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	47221	02/26/23 00:11	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	47101	02/23/23 15:20	KS	EET MID
Soluble	Analysis	300.0		1			47257	02/27/23 01:12	CH	EET MID

Client Sample ID: FS03
Date Collected: 02/21/23 09:40
Date Received: 02/21/23 14:21

Lab Sample ID: 890-4167-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	47353	02/27/23 16:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47603	03/03/23 02:06	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47757	03/03/23 13:41	SM	EET MID
Total/NA	Analysis	8015 NM		1			47326	02/27/23 12:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	47228	02/25/23 08:55	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	47221	02/26/23 00:32	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	47101	02/23/23 15:20	KS	EET MID
Soluble	Analysis	300.0		1			47257	02/27/23 01:29	CH	EET MID

Client Sample ID: FS04
Date Collected: 02/21/23 10:40
Date Received: 02/21/23 14:21

Lab Sample ID: 890-4167-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	47353	02/27/23 16:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47603	03/03/23 02:27	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47757	03/03/23 13:41	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-4167-1
SDG: 03C1558152

Client Sample ID: FS04

Date Collected: 02/21/23 10:40
Date Received: 02/21/23 14:21

Lab Sample ID: 890-4167-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			47326	02/27/23 12:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	47228	02/25/23 08:55	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	47221	02/26/23 00:54	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	47101	02/23/23 15:20	KS	EET MID
Soluble	Analysis	300.0		1			47257	02/27/23 01:35	CH	EET MID

Client Sample ID: FS05

Date Collected: 02/21/23 10:45
Date Received: 02/21/23 14:21

Lab Sample ID: 890-4167-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	47353	02/27/23 16:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47603	03/03/23 03:50	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47757	03/03/23 13:41	SM	EET MID
Total/NA	Analysis	8015 NM		1			47326	02/27/23 12:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	47228	02/25/23 08:55	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	47221	02/26/23 01:15	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	47101	02/23/23 15:20	KS	EET MID
Soluble	Analysis	300.0		1			47257	02/27/23 01:52	CH	EET MID

Client Sample ID: FS06

Date Collected: 02/21/23 10:50
Date Received: 02/21/23 14:21

Lab Sample ID: 890-4167-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	47353	02/27/23 16:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47603	03/03/23 04:10	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47757	03/03/23 13:41	SM	EET MID
Total/NA	Analysis	8015 NM		1			47326	02/27/23 12:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	47228	02/25/23 08:55	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	47221	02/26/23 01:58	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	47101	02/23/23 15:20	KS	EET MID
Soluble	Analysis	300.0		1			47257	02/27/23 01:57	CH	EET MID

Client Sample ID: FS07

Date Collected: 02/21/23 10:55
Date Received: 02/21/23 14:21

Lab Sample ID: 890-4167-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	47353	02/27/23 16:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47603	03/03/23 04:31	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47757	03/03/23 13:41	SM	EET MID
Total/NA	Analysis	8015 NM		1			47326	02/27/23 12:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	47228	02/25/23 08:55	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	47221	02/26/23 02:20	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-4167-1
SDG: 03C1558152

Client Sample ID: FS07

Date Collected: 02/21/23 10:55
Date Received: 02/21/23 14:21

Lab Sample ID: 890-4167-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.02 g	50 mL	47101	02/23/23 15:20	KS	EET MID
Soluble	Analysis	300.0		1			47257	02/27/23 02:03	CH	EET MID

Client Sample ID: FS08

Date Collected: 02/21/23 11:00
Date Received: 02/21/23 14:21

Lab Sample ID: 890-4167-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	47353	02/27/23 16:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47603	03/03/23 04:51	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47757	03/03/23 13:41	SM	EET MID
Total/NA	Analysis	8015 NM		1			47326	02/27/23 12:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10 g	10 mL	47228	02/25/23 08:55	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	47221	02/26/23 02:42	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	47101	02/23/23 15:20	KS	EET MID
Soluble	Analysis	300.0		1			47257	02/27/23 02:09	CH	EET MID

Client Sample ID: FS09

Date Collected: 02/21/23 11:05
Date Received: 02/21/23 14:21

Lab Sample ID: 890-4167-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	47353	02/27/23 16:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47603	03/03/23 05:12	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47757	03/03/23 13:41	SM	EET MID
Total/NA	Analysis	8015 NM		1			47326	02/27/23 12:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	47228	02/25/23 08:55	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	47221	02/26/23 03:03	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	47101	02/23/23 15:20	KS	EET MID
Soluble	Analysis	300.0		1			47257	02/27/23 02:14	CH	EET MID

Client Sample ID: FS10

Date Collected: 02/21/23 11:10
Date Received: 02/21/23 14:21

Lab Sample ID: 890-4167-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	47353	02/27/23 16:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47603	03/03/23 05:32	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47757	03/03/23 13:41	SM	EET MID
Total/NA	Analysis	8015 NM		1			47326	02/27/23 12:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	47228	02/25/23 08:55	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	47221	02/26/23 03:25	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	47101	02/23/23 15:20	KS	EET MID
Soluble	Analysis	300.0		1			47257	02/27/23 02:20	CH	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-4167-1
SDG: 03C1558152

Client Sample ID: SW01

Lab Sample ID: 890-4167-11
Matrix: Solid
Date Collected: 02/21/23 11:15
Date Received: 02/21/23 14:21

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	47353	02/27/23 16:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47603	03/03/23 05:53	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47757	03/03/23 13:41	SM	EET MID
Total/NA	Analysis	8015 NM		1			47326	02/27/23 12:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	47228	02/25/23 08:55	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	47221	02/26/23 03:47	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	47101	02/23/23 15:20	KS	EET MID
Soluble	Analysis	300.0		1			47257	02/27/23 02:26	CH	EET MID

Client Sample ID: SW02

Lab Sample ID: 890-4167-12
Matrix: Solid
Date Collected: 02/21/23 11:20
Date Received: 02/21/23 14:21

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	47353	02/27/23 16:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47603	03/03/23 06:13	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47757	03/03/23 13:41	SM	EET MID
Total/NA	Analysis	8015 NM		1			47326	02/27/23 12:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	47228	02/25/23 08:55	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	47221	02/26/23 04:08	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	47148	02/24/23 10:27	KS	EET MID
Soluble	Analysis	300.0		1			47261	02/27/23 05:21	CH	EET MID

Client Sample ID: SW03

Lab Sample ID: 890-4167-13
Matrix: Solid
Date Collected: 02/21/23 11:25
Date Received: 02/21/23 14:21

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	47353	02/27/23 16:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47603	03/03/23 06:34	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47757	03/03/23 13:41	SM	EET MID
Total/NA	Analysis	8015 NM		1			47326	02/27/23 12:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	47228	02/25/23 08:55	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	47221	02/26/23 04:30	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	47148	02/24/23 10:27	KS	EET MID
Soluble	Analysis	300.0		1			47261	02/27/23 05:26	CH	EET MID

Client Sample ID: SW04

Lab Sample ID: 890-4167-14
Matrix: Solid
Date Collected: 02/21/23 11:30
Date Received: 02/21/23 14:21

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	47353	02/27/23 16:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47603	03/03/23 06:54	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47757	03/03/23 13:41	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-4167-1
SDG: 03C1558152

Client Sample ID: SW04

Date Collected: 02/21/23 11:30
Date Received: 02/21/23 14:21

Lab Sample ID: 890-4167-14

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			47326	02/27/23 12:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	47228	02/25/23 08:55	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	47221	02/26/23 04:52	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	47148	02/24/23 10:27	KS	EET MID
Soluble	Analysis	300.0		1			47261	02/27/23 05:32	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 4.24.30 CTB

Job ID: 890-4167-1
SDG: 03C1558152

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: Remuda 4.24.30 CTB

Job ID: 890-4167-1
SDG: 03C1558152

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 4.24.30 CTB

Job ID: 890-4167-1
SDG: 03C1558152

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4167-1	FS01	Solid	02/21/23 09:30	02/21/23 14:21	1
890-4167-2	FS02	Solid	02/21/23 09:35	02/21/23 14:21	1
890-4167-3	FS03	Solid	02/21/23 09:40	02/21/23 14:21	1
890-4167-4	FS04	Solid	02/21/23 10:40	02/21/23 14:21	2
890-4167-5	FS05	Solid	02/21/23 10:45	02/21/23 14:21	2
890-4167-6	FS06	Solid	02/21/23 10:50	02/21/23 14:21	2
890-4167-7	FS07	Solid	02/21/23 10:55	02/21/23 14:21	2
890-4167-8	FS08	Solid	02/21/23 11:00	02/21/23 14:21	2
890-4167-9	FS09	Solid	02/21/23 11:05	02/21/23 14:21	2
890-4167-10	FS10	Solid	02/21/23 11:10	02/21/23 14:21	2
890-4167-11	SW01	Solid	02/21/23 11:15	02/21/23 14:21	0 - 2
890-4167-12	SW02	Solid	02/21/23 11:20	02/21/23 14:21	0 - 2
890-4167-13	SW03	Solid	02/21/23 11:25	02/21/23 14:21	0 - 2
890-4167-14	SW04	Solid	02/21/23 11:30	02/21/23 14:21	0 - 2

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3/3/2023

eurofins | Environment Testing Xenco

Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 2

Project Manager:	Ben Belill	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy
Address:	3122 Nat'l Parks Hwy	Address:	3104 E Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	989-854-0852	Email:	bbelill@ensolum.com

Work Order Comments

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

Project Name:	Remuda 4.24.30 CTB	Turn Around	
Project Number:	03C1558152	☑ Routine ☐ Rush	
Project Location:	32.25359, -103.88134	Due Date:	
Sampler's Name:	Meredith Roberts	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	TWM007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	2.4
Total Containers:		Corrected Temperature:	2.2

Preservative Codes

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

ANALYSIS REQUEST

Pres. Code / Parameters: BTEX; Chlorides; TPH

890-4167 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	BTEX	Chlorides	TPH
FS01	S	2/21/23	0930	1'	C	1	X	X	X
FS02			0935						
FS03			0940	↓					
FS04			1040	2'					
FS05			1045						
FS06			1050						
FS07			1055						
FS08			1100						
FS09			1105						
FS10	↓	↓	1110	↓	↓	↓	↓	↓	↓

Sample Comments

Incident #:
NAPP2233351770

Cost Center:
2124871001

mroberts@ensolum.com

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
[signature]	[signature]	2-21-23 1423			
3			4		
5			6		

Revised Date: 08/25/2020 Rev 2020.2

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Received by OCD: 3/25/2025 7:59:01 AM

Released to Imaging: 3/26/2025 8:37:43 AM

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 2 of 2

Project Manager:	Ben Belill	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy
Address:	3122 Nat'l Parks Hwy	Address:	3104 E Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	989-854-0852	Email:	

Work Order Comments

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

Project Name:	Remuda 4-24 30 CTB	Turn Around	
Project Number:	03C1558152	☑ Routine ☐ Rush	
Project Location:	32.25359, -103.88134	Due Date:	
Sampler's Name:	Meredith Roberts	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

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

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	BTEX	Chlorides	TPH	Sample Comments
SW01	S	2/21/23	1115	0-2'	C	1		X	X	X	Incident #:
SW02			1120								NAPP2233351770
SW03			1125								
SW04			1130								Cost Center:
										NVC	212487001
											mroberts@ensolum.com

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			2.21.23 1421			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

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Received by OCD: 3/25/2025 7:59:01 AM

Released to Imaging: 3/26/2025 8:37:43 AM

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

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 890-1144 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Jessica Kramer@et.eurofinsus com	State of Origin: New Mexico	Page: Page 1 of 2
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-4167-1
Address: 1211 W Florida Ave	Due Date Requested: 2/27/2023			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: Remuda 4 24 30 CTB	Project #: 89000093			
Site	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	8015MOD_Calc	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc (MOD) BTEX	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
FS01 (890-4167-1)	2/21/23	09 30 Mountain		Solid			X	X	X	X	X	1	
FS02 (890-4167-2)	2/21/23	09 35 Mountain		Solid			X	X	X	X	X	1	
FS03 (890-4167-3)	2/21/23	09 40 Mountain		Solid			X	X	X	X	X	1	
FS04 (890-4167-4)	2/21/23	10 40 Mountain		Solid			X	X	X	X	X	1	
FS05 (890-4167-5)	2/21/23	10 45 Mountain		Solid			X	X	X	X	X	1	
FS06 (890-4167-6)	2/21/23	10 50 Mountain		Solid			X	X	X	X	X	1	
FS07 (890-4167-7)	2/21/23	10 55 Mountain		Solid			X	X	X	X	X	1	
FS08 (890-4167-8)	2/21/23	11 00 Mountain		Solid			X	X	X	X	X	1	
FS09 (890-4167-9)	2/21/23	11 05 Mountain		Solid			X	X	X	X	X	1	

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

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

Empty Kit Relinquished by:	Date	Time:	Method of Shipment:		
Relinquished by: Cloe	Date/Time:	Company	Received by:	Date/Time	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 06/08/2021

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Received by OCD: 3/25/2025 7:59:01 AM
3/3/2023
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Released to Imaging: 3/26/2025 8:37:43 AM

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4167-1
SDG Number: 03C1558152

Login Number: 4167
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4167-1
SDG Number: 03C1558152

Login Number: 4167
List Number: 2
Creator: Teel, Brianna

List Source: Eurofins Midland
List Creation: 02/23/23 11:07 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	

ENSOLUM

APPENDIX E

NMOCD Notifications

From: Hamlet, Robert, EMNRD
To: Collins, Melanie
Cc: DelawareSpills /SM; Tacoma Morrissey; Ashley Ager; Green, Garrett J; Bratcher, Michael, EMNRD; Nobui, Jennifer, EMNRD; Harimon, Jocelyn, EMNRD
Subject: (Extension Approval) XTO - Remuda 4-24-30 CTB nAPP2233351770
Date: Friday, February 17, 2023 2:19:06 PM
Attachments: image003.png

[**EXTERNAL EMAIL**]

RE: Incident #**NAPP2233351770**

Melanie,

Your request for an extension to **May 19, 2023** is approved. Please include this e-mail correspondence in the remediation and/or closure report.

Robert Hamlet ● Environmental Specialist - Advanced
Environmental Bureau
EMNRD - Oil Conservation Division
506 W. Texas Ave.| Artesia, NM 88210
575.909.0302 | robert.hamlet@state.nm.us
http://www.emnrd.state.nm.us/OCD/

From: Collins, Melanie <melanie.collins@exxonmobil.com>
Sent: Friday, February 17, 2023 11:56 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>
Cc: DelawareSpills /SM <DelawareSpills@exxonmobil.com>; Tacoma Morrissey <tmorrissey@ensolum.com>; Ashley Ager <aager@ensolum.com>; Green, Garrett J <garrett.green@exxonmobil.com>
Subject: [EXTERNAL] XTO Extension Request - Remuda 4-24-30 CTB nAPP2233351770

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

All,

XTO is requesting an extension for the current deadline of February 18, 2023 for submitting a remediation work plan or closure report required in 19.15.29.12.B.(1) NMAC at the Remuda Basin 4-24-30 CTB (Incident Number NAPP2233351770). The release occurred on November 20, 2022, and initial site assessment activities have been completed. Excavation activities are currently ongoing

and expected to be finalized the week of February 20, 2023. In order to complete remediation efforts, review the laboratory analytical results, and submit a remediation work plan or closure report, XTO requests an extension until May 19, 2023.

Thank you,

Melanie Collins

Environmental Technician
melanie.collins@exxonmobil.com
432-556-3756

From: Harimon, Jocelyn, EMNRD
To: Green, Garrett J; Enviro, OCD, EMNRD; Bratcher, Michael, EMNRD; Hamlet, Robert, EMNRD
Cc: Tacoma Morrissey; Ben Belill
Subject: RE: [EXTERNAL] XTO - Sampling Notification (Week of 1/16/23 - 1/20/23)
Date: Friday, January 13, 2023 12:23:50 PM

[**EXTERNAL EMAIL**]

Garrett,

Thank you for the notification. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

JH

Jocelyn Harimon ● Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
1220 South St. Francis Drive | Santa Fe, NM 87505
(505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov
http:// **www.emnrd.nm.gov**

From: Green, Garrett J <garrett.green@exxonmobil.com>
Sent: Friday, January 13, 2023 10:20 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@emnrd.nm.gov>; Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>
Cc: Tacoma Morrissey <tmorrissey@ensolum.com>; Ben Belill <bbelill@ensolum.com>
Subject: [EXTERNAL] XTO - Sampling Notification (Week of 1/16/23 - 1/20/23)

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

All,

XTO plans to complete final sampling activities at the following sites the week of Jan 16, 2023.

- Remuda 4-24-30 / nAPP2233351770
- Big Sinks 2-24-30 / NAB1913729531
- Pickett Draw / NAB1919955454
- PLU PC 28 / nAPP2233349315
- Golden Child SWD / nAPP2232250506

Thank you,

Garrett Green
Environmental Coordinator
Delaware Business Unit
(575) 200-0729
Garrett.Green@ExxonMobil.com

XTO Energy, Inc.
3104 E. Greene Street | Carlsbad, NM 88220 | M: (575)200-0729

Tacoma Morrissey

From: Green, Garrett J <garrett.green@exxonmobil.com>
Sent: Thursday, February 16, 2023 11:19 AM
To: Enviro, OCD, EMNRD; Bratcher, Michael, EMNRD; Harimon, Jocelyn, EMNRD; Hamlet, Robert, EMNRD
Cc: DelawareSpills /SM; Tacoma Morrissey
Subject: XTO - Sampling Notification (Week of 2/20/23 - 2/24/23)

[**EXTERNAL EMAIL**]

All,

XTO plans to complete final sampling activities at the following sites the week of Feb 20, 2023.

- ADU 641 / nAPP2302355577
- Remuda 4-24-30 CTB / nAPP2233351770
- PLU C1 Frac / NAPP2304147175
- Row 2 / NAPP2304148392

Thank you,

Garrett Green
Environmental Coordinator
Delaware Business Unit
(575) 200-0729
Garrett.Green@ExxonMobil.com

XTO Energy, Inc.
3104 E. Greene Street | Carlsbad, NM 88220 | M: (575)200-0729

From: Enviro, OCD, EMNRD [mailto:OCD.Enviro@emnrd.nm.gov]
Sent: Friday, January 6, 2023 8:13 AM
To: Green, Garrett J <garrett.green@exxonmobil.com>
Cc: Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>
Subject: RE: [EXTERNAL] XTO 48 Hour Liner Inspection Notification - Remuda Basin 4-24-30 nAPP2233351770 - Released on 11/20/2022

External Email – Think Before You Click

Garrett,

Please be aware that notification requirements are **two business days**, per rule. Please proceed on your schedule. Also, please include this, and all correspondence, in the closure report to insure inclusion in the project file.

JH

Jocelyn Harimon ● Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
1220 South St. Francis Drive | Santa Fe, NM 87505
(505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov
http:// **www.emnrd.nm.gov**

From: Green, Garrett J <garrett.green@exxonmobil.com>
Sent: Thursday, January 5, 2023 3:32 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>;

Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@emnrd.nm.gov>
Cc: Tacoma Morrissey <tmorrissey@ensolum.com>; DelawareSpills /SM <DelawareSpills@exxonmobil.com>
Subject: [EXTERNAL] XTO 48 Hour Liner Inspection Notification - Remuda Basin 4-24-30 nAPP2233351770 - Released on 11/20/2022

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Good afternoon,

This is sent as a 48-hour notification, XTO is scheduled to inspect the lined containment at Remuda Basin 4-24-30 CTB released on (11/20/2022), on Monday, January 9, 2023, at 3:30pm MST. A 24 hour release notification was not sent out since the release was less than 25 barrels in volume. Please call us with any questions or concerns.

GPS Coordinates: (32.25345,-103.88173)

Thank you,

Garrett Green
Environmental Coordinator
Delaware Business Unit
(575) 200-0729
Garrett.Green@ExxonMobil.com

XTO Energy, Inc.
3104 E. Greene Street | Carlsbad, NM 88220 | M: (575)200-0729

ENSOLUM

APPENDIX B

Photographic Log

ENSOLUM

Photographic Log
XTO Energy, Inc.
Remuda Basin 4-24-30 CTB
Incident Number NAPP2233351770

Photograph: 1 Date: 12/12/2024
Description: One call marking activities
View: Southeast

Photograph: 2 Date: 12/12/2024
Description: One call marking activities
View: East

Photograph: 3 Date: 12/19/2024
Description: Hand auger composite sampling activities
View: Southeast

Photograph: 4 Date: 12/19/2024
Description: Hand auger composite sampling activities
View: Southeast

ENSOLUM

APPENDIX C

Laboratory Analytical Reports & Chain of Custody Documentation

CARDINAL Laboratories

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

December 27, 2024

HADLIE GREEN

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: REMUDA 4-24-30 CTB

Enclosed are the results of analyses for samples received by the laboratory on 12/19/24 15:24.

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 accreditated 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,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
HADLIE GREEN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	12/19/2024	Sampling Date:	12/19/2024
Reported:	12/27/2024	Sampling Type:	Soil
Project Name:	REMUDA 4-24-30 CTB	Sampling Condition:	Cool & Intact
Project Number:	03C1558152	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.25359-103.88134		

Sample ID: SW 05 (H247700-01)

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	12/25/2024	ND	1.74	86.9	2.00	0.837	
Toluene*	<0.050	0.050	12/25/2024	ND	1.81	90.6	2.00	0.666	
Ethylbenzene*	<0.050	0.050	12/25/2024	ND	1.76	88.2	2.00	0.460	
Total Xylenes*	<0.150	0.150	12/25/2024	ND	5.15	85.9	6.00	0.392	
Total BTEX	<0.300	0.300	12/25/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.9 %* *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	**64.0**	16.0	12/26/2024	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	12/24/2024	ND	182	90.9	200	0.240	
DRO >C10-C28*	<10.0	10.0	12/24/2024	ND	186	92.9	200	0.953	
EXT DRO >C28-C36	<10.0	10.0	12/24/2024	ND					

Surrogate: 1-Chlorooctane *105 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *119 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
HADLIE GREEN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	12/19/2024	Sampling Date:	12/19/2024
Reported:	12/27/2024	Sampling Type:	Soil
Project Name:	REMUDA 4-24-30 CTB	Sampling Condition:	Cool & Intact
Project Number:	03C1558152	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.25359-103.88134		

Sample ID: SW 06 (H247700-02)

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	12/25/2024	ND	1.74	86.9	2.00	0.837	
Toluene*	<0.050	0.050	12/25/2024	ND	1.81	90.6	2.00	0.666	
Ethylbenzene*	<0.050	0.050	12/25/2024	ND	1.76	88.2	2.00	0.460	
Total Xylenes*	<0.150	0.150	12/25/2024	ND	5.15	85.9	6.00	0.392	
Total BTEX	<0.300	0.300	12/25/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.0 %* *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	**80.0**	16.0	12/26/2024	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	12/26/2024	ND	195	97.5	200	3.40	
DRO >C10-C28*	<10.0	10.0	12/26/2024	ND	183	91.4	200	13.8	
EXT DRO >C28-C36	<10.0	10.0	12/26/2024	ND					

Surrogate: 1-Chlorooctane *112 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *97.3 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
HADLIE GREEN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	12/19/2024	Sampling Date:	12/19/2024
Reported:	12/27/2024	Sampling Type:	Soil
Project Name:	REMUDA 4-24-30 CTB	Sampling Condition:	Cool & Intact
Project Number:	03C1558152	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.25359-103.88134		

Sample ID: SW 07 (H247700-03)

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	12/24/2024	ND	1.64	82.2	2.00	9.84	
Toluene*	<0.050	0.050	12/24/2024	ND	1.71	85.7	2.00	10.0	
Ethylbenzene*	<0.050	0.050	12/24/2024	ND	1.67	83.7	2.00	9.95	
Total Xylenes*	<0.150	0.150	12/24/2024	ND	4.91	81.8	6.00	9.91	
Total BTEX	<0.300	0.300	12/24/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.7 %* *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	12/26/2024	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	12/26/2024	ND	195	97.5	200	3.40	
DRO >C10-C28*	<10.0	10.0	12/26/2024	ND	183	91.4	200	13.8	
EXT DRO >C28-C36	<10.0	10.0	12/26/2024	ND					

Surrogate: 1-Chlorooctane *110 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *95.0 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Notes and Definitions

BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
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

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Enerlum LLC
Project Manager: Hollie Greene
Address:
City: State: Zip:
Phone #: 432-557-8895 Fax #:
Project #: 03C1558152 Project Owner: XTO
Project Name: Remuda 4-24-30 CTB
Project Location: ~~03C1558152~~ 32.25359,-103.88134
Sampler Name: Hollie Greene

BILL TO

P.O. #:
Company: XTO Energy
Attn: Colton Brown
Address: 3104 E. Greene
City: Carlsbad
State: NM Zip: 88220
Phone #:
Fax #:

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING DATE	SAMPLING TIME	BTEX	TPH	Chloride
H247700																	
1	SW05	C				✓					✓		12/19/24	1105	1	1	1
2	SW06	C				✓					✓		12/19/24	1335	-	-	-
3	SW07	C				✓					✓		12/19/24	1245			

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Relinquished By: Date: 12/19/24 Time: 1524 Received By:
Relinquished By: Date: Time: Received By:

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

Observed Temp. °C 5.4 Corrected Temp. °C 4.8

Sample Condition: Cool ☑ Yes ☐ No Intact ☐ Yes ☐ No

CHECKED BY: (Initials) AP

Verbal Result: ☐ Yes ☐ No Add'l Phone #:
All Results are emailed. Please provide Email address:

REMARKS:

Turnaround Time: Standard ☑ Rush ☐

Thermometer ID #113 #140
Correction Factor -0.5°C -0.6

Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No
Observed Temp. °C
Corrected Temp. °C

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

FORM-006 R 3.2 10/07/21

Received by OCD: 3/25/2025 7:59:01 AM

Released to Imaging: 3/26/2025 8:37:43 AM

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 445236

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 445236
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2233351770**
Incident Name	**NAPP2233351770 REMUDA BASIN 4-24-30 CTB @ 0**
Incident Type	**Produced Water Release**
Incident Status	**Remediation Closure Report Received**
Incident Facility	**[fAPP2126352243] PLU REMUDA BASIN 04-24-30 USA BATT**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	REMUDA BASIN 4-24-30 CTB
Date Release Discovered	11/20/2022
Surface Owner	Federal

Incident Details	
Please answer all the questions in this group.	
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	
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.	
Crude Oil Released (bbls) Details	*Not answered.*
Produced Water Released (bbls) Details	Cause: Corrosion | Valve | Produced Water | Released: 10 BBL | Recovered: 8 BBL | Lost: 2 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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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 445236
	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	*Unavailable.*
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	*Not answered.*
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: Robert Woodall Title: Environmental Analyst Email: robert.d.woodall@exxonmobil.com Date: 03/25/2025

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 (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 445236
	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 1 and 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Greater than 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Greater than 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	Greater than 5 (mi.)
A wetland	Between 1 and 5 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Between 1 and 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Greater than 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

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
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.	
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)	470
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	14540
GRO+DRO (EPA SW-846 Method 8015M)	12770
BTEX (EPA SW-846 Method 8021B or 8260B)	96.6
Benzene (EPA SW-846 Method 8021B or 8260B)	4.7
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	01/09/2023
On what date will (or did) the final sampling or liner inspection occur	12/19/2024
On what date will (or was) the remediation complete(d)	12/19/2024
What is the estimated surface area (in square feet) that will be reclaimed	1993
What is the estimated volume (in cubic yards) that will be reclaimed	140
What is the estimated surface area (in square feet) that will be remediated	1993
What is the estimated volume (in cubic yards) that will be remediated	140
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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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 445236
	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	HALFWAY DISPOSAL AND LANDFILL [fEEM0112334510]
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: Robert Woodall Title: Environmental Analyst Email: robert.d.woodall@exxonmobil.com Date: 03/25/2025
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.	

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 (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 445236
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Deferral Requests Only	
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.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
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QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**410800**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**12/20/2024**
What was the (estimated) number of samples that were to be gathered	**3**
What was the sampling surface area in square feet	**580**

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	1993
What was the total volume (cubic yards) remediated	140
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	1993
What was the total volume (in cubic yards) reclaimed	140
Summarize any additional remediation activities not included by answers (above)	Additional soil sampling activities were conducted at the Site to address the November 20, 2022, produced water release and June 26, 2023 NMOCD denial. Laboratory analytical results from all confirmation samples, collected from the final excavation extent, indicated that all COC concentrations were in compliance with the Closure Criteria. Based on soil sample analytical results, no further remediation is required. The excavation was backfilled with material purchased locally and the surface recontoured to match pre-existing Site conditions. Excavation of impacted soil has mitigated impacts at this Site. Depth to groundwater has been deter-mined to be greater than 100 feet bgs and no other sensitive receptors were identified near the release extent. XTO believes these remedial actions are protective of human health, the environment, and groundwater.

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: Robert Woodall Title: Environmental Analyst Email: robert.d.woodall@exxonmobil.com Date: 03/25/2025

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QUESTIONS (continued)

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QUESTIONS

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

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CONDITIONS

Action 445236

CONDITIONS

Operator:	OGRID:
XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	5380
	Action Number: 445236
	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 #NAPP2233351770 REMUDA BASIN 4-24-30 CTB, thank you. This Remediation Closure Report is approved.	3/26/2025