District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NAPP2322645119
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

Latitude 32.33342 Longitude -103.83142
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Hudson 1 Fed Com 9H	Site Type Production Well
Date Release Discovered 07/31/2023	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
J	01	23S	30E	Eddy

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 1.13	Volume Recovered (bbls) 1.02
☒ Produced Water	Volume Released (bbls) 15.46	Volume Recovered (bbls) 13.98
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: External corrosion caused a flowline to release fluids to pad. All free fluids were recovered. A third-party contractor has been retained for remediation purposes.

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2322645119
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Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release? N/A

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
N/A

Initial Response

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

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

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

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

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

Printed Name: Garrett Green
Title: SSHE Coordinator

Signature: 
Date: 8/14/2023

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

OCD Only

Received by: Shelly Wells
Date: 8/14/2023

Location:	**Hudson 1 Fed Com 9H**	
Spill Date:	**7/31/2023**	
Area 1		
Approximate Area =	2336.70	sq. ft.
Average Saturation (or depth) of spill =	1.50	inches
Average Porosity Factor =	0.03	
VOLUME OF LEAK		
Total Crude Oil =	1.13	bbls
Total Produced Water =	15.46	bbls
TOTAL VOLUME OF LEAK		
Total Crude Oil =	**1.13**	**bbls**
Total Produced Water =	**15.46**	**bbls**
TOTAL VOLUME RECOVERED		
Total Crude Oil =	**1.02**	**bbls**
Total Produced Water =	**13.98**	**bbls**

Incident ID	NAPP2322645119
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2322645119
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I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Garrett Green Title: SSHE Coordinator

Signature: Date: Oct 27 2023

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

OCD Only

Received by: Shelly Wells Date: 10/27/2023

Incident ID	NAPP2322645119
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Closure

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 (electronic submittals in .pdf format are preferred) 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.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

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.

Printed Name: Garrett Green Title: SSHE Coordinator

Signature: Garrett Green Date: Oct 27 2023

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

OCD Only

Received by: Shelly Wells Date: 10/27/2023

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Ashley Maxwell Date: 11/28/2023

Printed Name: Ashley Maxwell Title: Environmental Specialist

ENSOLUM

October 27, 2023

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

Re: Closure Request
Hudson 1 Fed Com 9H
Incident Number NAPP2322645119
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, excavation, and soil sampling activities performed at the Hudson 1 Fed Com 9H (Site). The purpose of the Site assessment, excavation, and soil sampling activities was to address impacts to soil following a release of crude oil and produced water at the Site. Based on the excavation activities and soil sample laboratory analytical results, XTO is submitting this Closure Request, describing remediation that has occurred and requesting closure for Incident Number NAPP2322645119.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit J, Section 01, Township 23 South, Range 30 East, in Eddy County, New Mexico (32.33342°, -103.83142°) and is associated with oil and gas exploration and production operations on federal land managed by the Bureau of Land Management (BLM).

On July 31, 2023, external corrosion on a flowline resulted in the release of approximately 1.13 barrels (bbls) of crude oil and 15.46 bbls of produced water onto the surface of the well pad. A vacuum truck was immediately dispatched to the Site and recovered approximately 1.02 bbls of crude oil and 13.98 bbls of produced water. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on August 14, 2023. The release was assigned Incident Number nAPP2322645119.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess 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 recent soil boring drilled for determination of regional groundwater depth. On June 4, 2019, soil boring C-04325, permitted by New Mexico Office of the State Engineer (NMOSE), was drilled approximately 0.25 miles northeast of the Site. Soil boring C-04325 was drilled to a depth of 150 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 150 feet bgs. The borehole was properly abandoned with drill cuttings and hydrated bentonite chips. Soil borings C-03559 POD-1 through POD-4 were drilled approximately 830 feet northwest of the Site during 2012. The deepest soil boring, C-03559 POD-1, was drilled to 50 feet bgs and no groundwater was encountered. The soil borings were subsequently plugged. All wells used to determine depth to groundwater are depicted on Figure 1 and the referenced well records are included in Appendix A.

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

Based on high potential karst underlying the Site, the following NMOCD Table I Closure Criteria (Closure Criteria) apply:

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

SITE ASSESSMENT ACTIVITIES

On August 17, 2023, Ensolum personnel were at the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. Assessment soil samples SS01 through SS03 were collected within the visible release extent at a depth of 0.5 feet bgs to assess surficial soil within the release. Assessment soil samples SS04 through SS07 were collected around the visible release extent at a depth of 0.5 feet bgs to confirm the lateral extent of the release. The soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was completed during the Site visit and a photographic log is included as Appendix B.

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

Laboratory analytical results for assessment soil samples SS01 through SS03, collected within the release extent, indicated TPH and chloride concentrations exceeded the Site Closure Criteria. Laboratory analytical results for assessment soil samples SS04 through SS07, collected around the release extent, indicated all COC concentrations were compliant with the Site Closure Criteria and

successfully defined the lateral extent of the release. Based on the laboratory analytical results, additional assessment activities were warranted to delineate the vertical extent of the release. The laboratory analytical results are summarized on the attached Table 1.

DELINEATION ACTIVITIES

On September 7, 2023, Ensolum personnel returned to the Site to delineate the vertical extent of impacted soil within the release extent. Potholes PH01 through PH03 were advanced via backhoe at the location of assessment samples SS01 through SS03. The potholes were advanced to a depth of 2 feet bgs. Soil from the potholes was field screened at 1-foot intervals for VOCs and chloride. Field screening results and observations for the potholes were logged on lithologic/soil sampling logs, which are included in Appendix C. Discrete delineation soil samples were collected from each pothole at a depth of 2 feet bgs. The delineation soil samples were collected, handled, and analyzed following the same procedures described above. The delineation soil sample locations were mapped utilizing a handheld GPS unit and are depicted on Figure 2.

Laboratory analytical results for the delineation soil sample collected from pothole PH01 indicated that chloride concentrations exceeded the Site Closure Criteria at a depth of 2 feet bgs. Laboratory analytical results for the delineation soil samples collected from potholes PH02 and PH03 indicated that all COC concentrations were compliant with the Site Closure Criteria at a depth of 2 feet bgs. Laboratory analytical results are summarized in Table 1 and the complete analytical reports are included as Appendix D. Based on visible staining in the release area and laboratory analytical results for the assessment and delineation soil samples, excavation activities were warranted.

EXCAVATION ACTIVITIES

Between September 8, 2023, and September 15, 2023, Ensolum personnel were at the Site to oversee excavation of impacted soil as indicated by laboratory analytical results for assessment samples SS01 through SS03 and delineation samples from potholes PH01 through PH03. Excavation activities were completed utilizing a hydrovac, backhoe, and transport vehicles. To direct excavation activities, soil was field screened for VOCs and chloride. The excavation was completed to depths ranging from 2 feet to 2.5 feet bgs.

Following removal of the impacted soil, 5-point composite soil samples were collected at least every 200 square feet from the floor and sidewalls of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples FS01 through FS13, and FS01A were collected from the floor of the excavation at depths ranging from 2 feet to 2.5 feet bgs. Composite soil samples SW01 through SW04 were collected from the sidewalls of the excavation at depths ranging from the ground surface to 2.5 feet bgs. The excavation soil samples were handled and analyzed following the same procedures described above. The excavation extent and excavation soil sample locations are presented on Figure 3. Photographic documentation was completed during the excavation activities and a photographic log is included in Appendix B.

Laboratory analytical results for excavation floor samples FS01A, FS02 through FS13 and excavation sidewall samples SW01 through SW04, collected from the final excavation extent, indicated all COC concentrations were compliant with the Site Closure Criteria. Laboratory analytical results for excavation floor sample FS01 initially exceeded the Site Closure Criteria for chloride; additional soil was removed from the area around floor sample FS01 and subsequent floor sample FS01A was compliant. The laboratory analytical results are summarized on Table 1 and the complete laboratory analytical reports are included in Appendix D.

The final excavation measured approximately 2,525 square feet. A total of approximately 240 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was properly disposed on at the R360 Landfill Facility in Hobbs, New Mexico.

CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the July 31, 2023, release of crude oil and produced water. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated all COC concentrations were compliant with the Site Closure Criteria. Additionally, the release was laterally and vertically delineated to below the most stringent Table I Closure Criteria. Based on the soil sample analytical results, no further remediation is required. XTO backfilled the excavation with material purchased locally and recontoured the Site to match pre-existing Site conditions.

Initial response efforts and excavation of impacted soil have mitigated impacts at this Site. Depth to groundwater is greater than 100 feet bgs and no sensitive receptors were identified near the release extent. XTO believes the remedial actions completed at the Site are protective of human health, the environment, and groundwater. As such, XTO respectfully requests closure for Incident Number nAPP2322645119. NMOCD notifications are included in Appendix E.

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

Sincerely,
Ensolum, LLC

Meredith Roberts
Staff Geologist

Ashley L. Ager, M.S., P.G.
Program Director

cc: Garrett Green, XTO
Tommee Lambert, XTO
Bureau of Land Management

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	Photographic Log
Appendix C	Lithologic / Soil Sampling Logs
Appendix D	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix E	NMOCD Sample Notification

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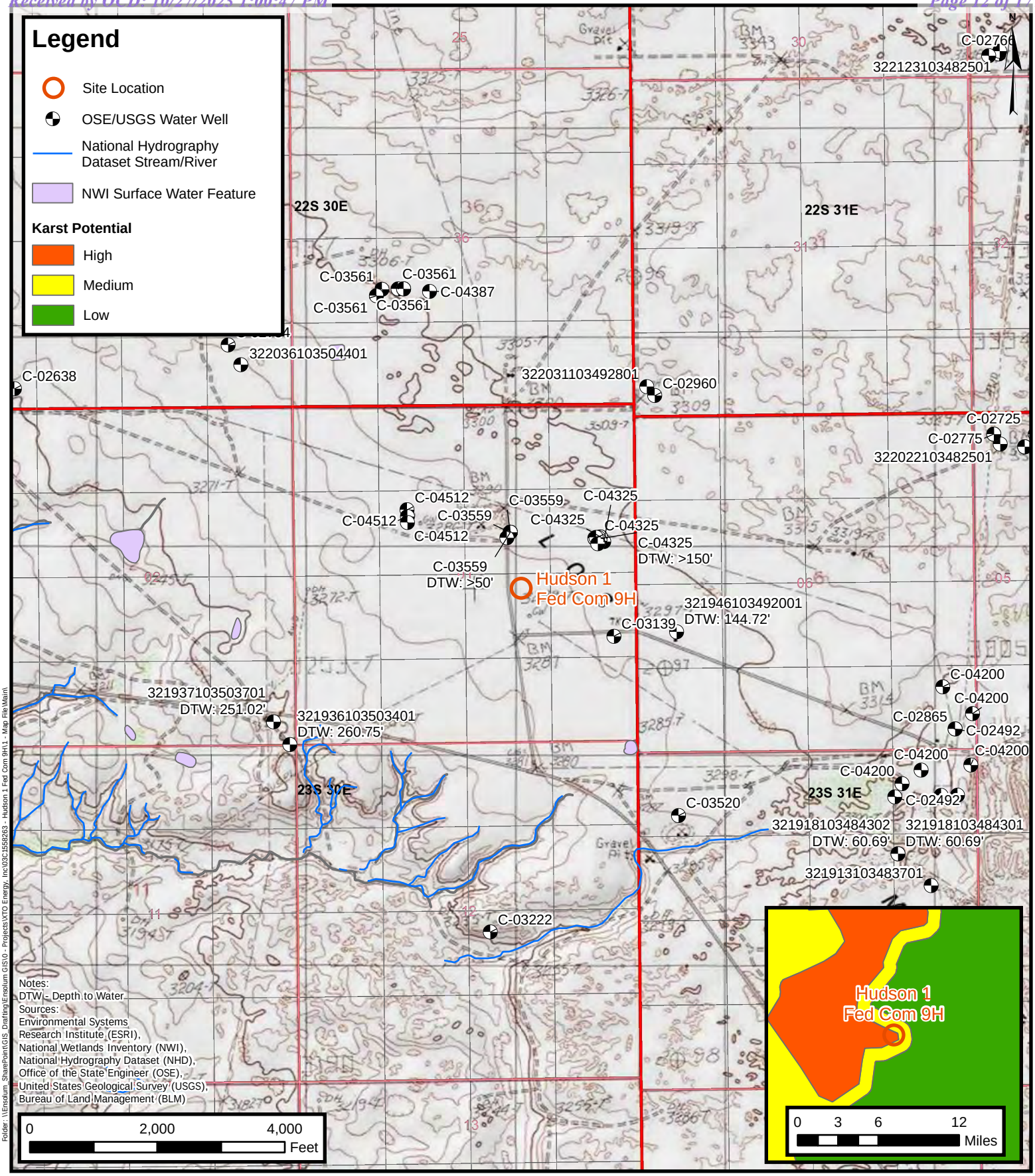
FIGURES



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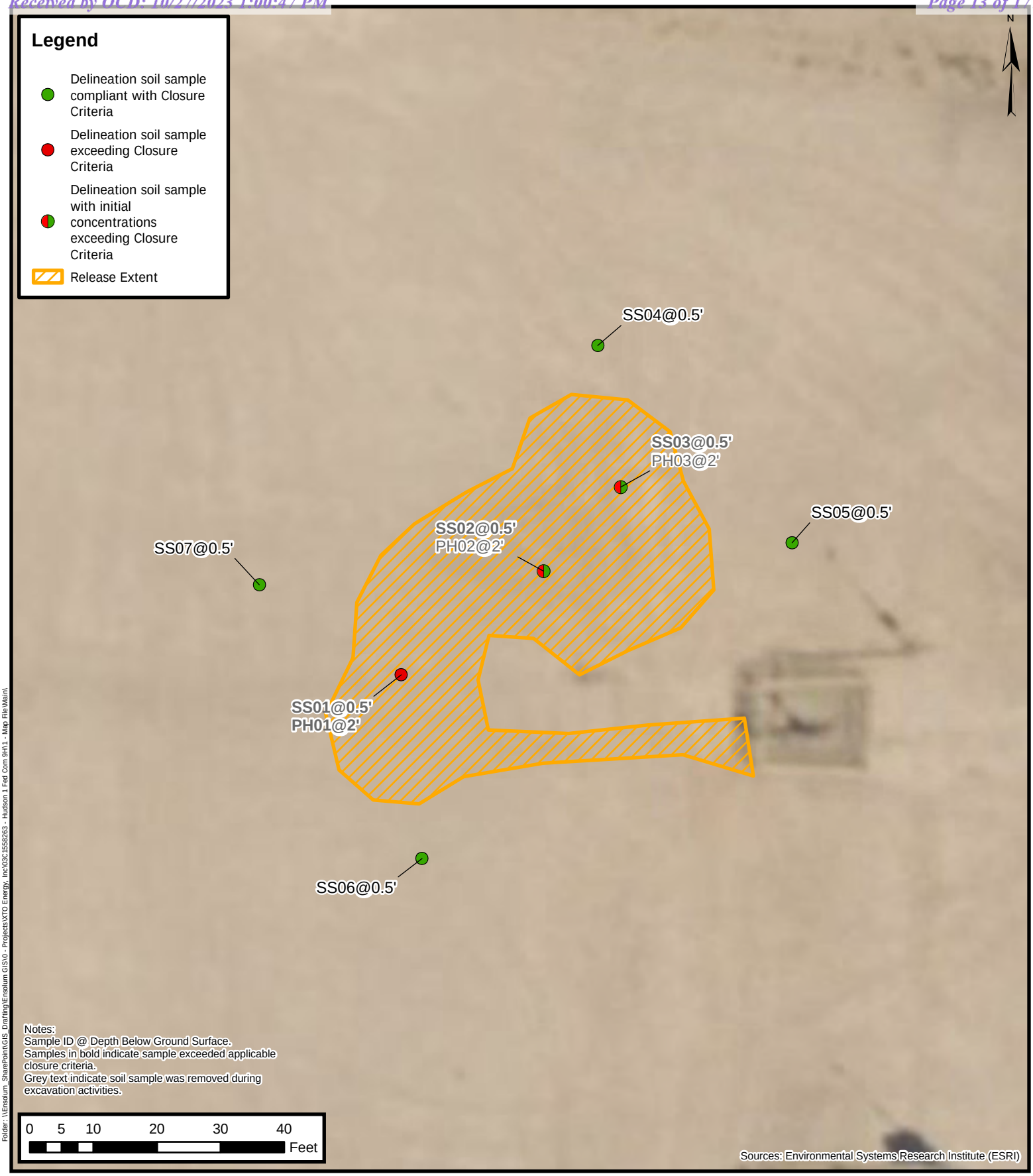
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

XTO Energy, Inc
Hudson 1 Fed Com 9H
Incident Number: nAPP2322645119
Unit J Section 01 Township 23 South Range 30 East
Eddy County, New Mexico

FIGURE 1



Folder: \\Ensolum_SharePoint\GIS_Drafting\Ensolum GIS\0 - Projects\XTO Energy, Inc\03C1558263 - Hudson 1 Fed Com 9H\1 - Map File\Main\

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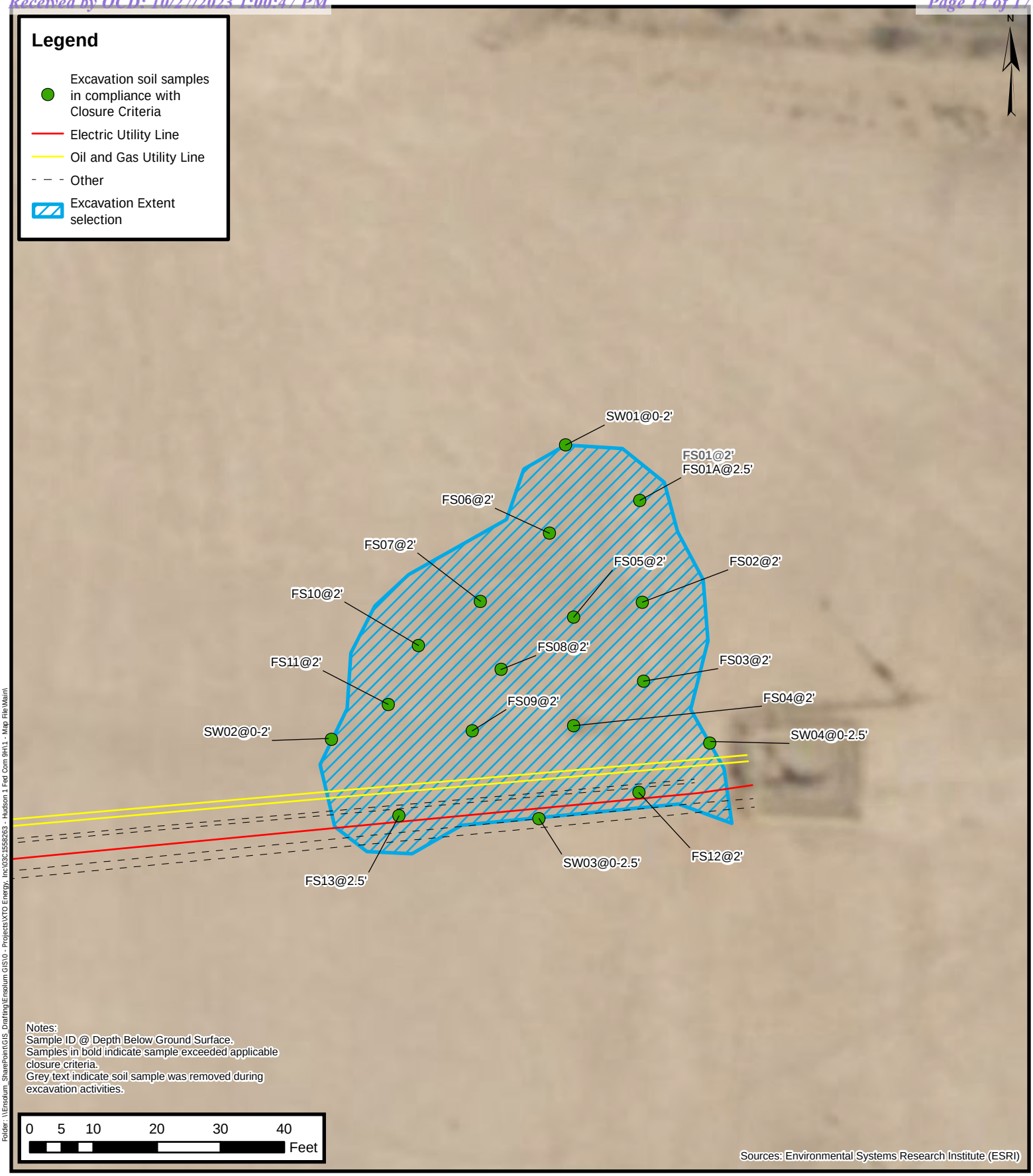
Delineation Soil Sample Locations

XTO Energy, Inc
Hudson 1 Fed Com 9H
Incident Number: nAPP2322645119
Unit J Section 01 Township 23 South Range 30 East
Eddy County, New Mexico

FIGURE 2



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Excavation Soil Sample Locations

XTO Energy, Inc
Hudson 1 Fed Com 9H
Incident Number: nAPP2322645119
Unit J Section 01 Township 23 South Range 30 East
Eddy County, New Mexico

FIGURE 3

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Hudson 1 Fed Com 9H
XTO Energy, Inc.
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
Assessment and Delineation Soil Samples										
~~SS01~~	~~08/17/2023~~	~~0.5~~	~~<0.00202~~	~~<0.00404~~	~~<50.1~~	~~2,290~~	~~<50.1~~	~~2,290~~	~~**2,290**~~	~~**49,400**~~
~~PH01~~	~~09/07/2023~~	~~2~~	~~<0.00201~~	~~<0.00402~~	~~<50.5~~	~~<50.5~~	~~0<50.5~~	~~<50.5~~	~~<50.5~~	~~**713**~~
~~SS02~~	~~08/17/2023~~	~~0.5~~	~~<0.00199~~	~~<0.00398~~	~~<50.2~~	~~512~~	~~<50.2~~	~~512~~	~~**512**~~	~~**64,700**~~
~~PH02~~	~~09/07/2023~~	~~2~~	~~<0.00202~~	~~<0.00404~~	~~<50.1~~	~~<50.1~~	~~<50.1~~	~~<50.1~~	~~<50.1~~	~~57.9~~
~~SS03~~	~~08/17/2023~~	~~0.5~~	~~<0.00199~~	~~<0.00398~~	~~<49.8~~	~~3,880~~	~~<49.8~~	~~3,880~~	~~**3,880**~~	~~**40,400**~~
~~PH03~~	~~09/07/2023~~	~~2~~	~~<0.00199~~	~~<0.00398~~	~~<50.5~~	~~<50.5~~	~~<50.5~~	~~<50.5~~	~~<50.5~~	~~131~~
SS04	08/17/2023	0.5	<0.00200	<0.00400	<49.6	90.3	<49.6	90.3	90.3	573
SS05	08/17/2023	0.5	<0.00198	<0.00396	<50.5	68.3	<50.5	68.3	68.3	521
SS06	08/17/2023	0.5	<0.00200	<0.00400	<50.5	<50.5	<50.5	<50.5	<50.5	112
SS07	08/17/2023	0.5	<0.00199	<0.00398	<50.2	71.3	<50.2	71.3	71.3	146
Excavation Floor Soil Samples										
~~FS01~~	~~09/08/2023~~	~~2~~	~~<0.00200~~	~~<0.00401~~	~~<50.4~~	~~54.6~~	~~<50.4~~	~~54.6~~	~~54.6~~	~~895~~
FS01A	09/15/2023	2.5	<0.00200	<0.00400	<50.5	<50.5	<50.5	<50.5	<50.5	50.5
FS02	09/08/2023	2	<0.00199	<0.00398	<50.5	<50.5	<50.5	<50.5	<50.5	498
FS03	09/08/2023	2	<0.00199	<0.00398	<49.7	<49.7	<49.7	<49.7	<49.7	212
FS04	09/08/2023	2	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	114
FS05	09/08/2023	2	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	158
FS06	09/08/2023	2	<0.00200	<0.00401	<49.6	<49.6	<49.6	<49.6	<49.6	268
FS07	09/08/2023	2	<0.00199	<0.00398	<49.5	<49.5	<49.5	<49.5	<49.5	354
FS08	09/08/2023	2	<0.00199	<0.00398	<50.3	<50.3	<50.3	<50.3	<50.3	146
FS09	09/08/2023	2	<0.00200	<0.00399	<50.2	<50.2	<50.2	<50.2	<50.2	126
FS10	09/08/2023	2	<0.00201	<0.00402	<50.1	<50.1	<50.1	<50.1	<50.1	184
FS11	09/08/2023	2	<0.00199	<0.00398	<50.5	<50.5	<50.5	<50.5	<50.5	121
FS12	09/15/2023	2	<0.00200	<0.00401	<49.6	<49.6	<49.6	<49.6	<49.6	42.8
FS13	09/15/2023	2.5	<0.00199	<0.00398	<50.3	<50.3	<50.3	<50.3	<50.3	187

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Hudson 1 Fed Com 9H
XTO Energy, Inc.
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			**10**	**50**	**NE**	**NE**	**NE**	**NE**	**100**	**600**
Excavation Sidewall Soil Samples										
SW01	09/08/2023	0 - 2	<0.00199	<0.00398	<50.0	71.1	<50.0	71.1	71.1	245
SW02	09/08/2023	0 - 2	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	208
SW03	09/14/2023	0 - 2.5	<0.00199	<0.00398	<50.1	96.6	<49.6	96.6	96.6	539
SW04	09/15/2023	0 - 2.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	50.4

Notes:

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

ENSOLUM

APPENDIX A

Referenced Well Records

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier:	Date:
MW01/C-04325	5/22/19
Project Name: JRU 10	RP Number: 2RP-3404, 2RP-3464, 2RP-3179
Logged By: BEN BELILL	Method: Soil
Lat/Long: 32.335339, -103.827697	Field Screening: CHLORIDES, TPH, BTEX, GRO, DRO, and MRO
Hole Diameter: 6.15"	Total Depth: 150'

LITHOLOGIC / SOIL SAMPLING LOG

Comment: All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0		(SP-SM)	silty SAND, dry, brn/red, poorly graded, f.-m., some vegetation.
D	<112	0.5	N	MW01	1	1'		
D	<112	0.4	N	MW01A	2	2'		
D	<112	0.1	N	MW01B	3	3'		
D	<112	0.3	N	MW01C	4	4'	CALICHE	CALICHE w/ Sand, dry, lt brn/~~dk brn~~ tan, dry cmtd, some m. red sand, no odor.
D	<112	0.1	N	MW01D	5	5'		
D	<112	0.5	N	MW01E	6	6'		
D	<112	0.4	N	MW01F	7	7'		
D	<112	0.3	N	MW01G	8	8'		
D	403	0.1	N	MW01H	9	9'	SP	SAND w/ caliche, dry, lt brn/brn, f.-m., poorly graded, no odor.
D	345	0.8	N	MW01I	10	10'		SAA
D	345	3.1	N	MW01J	11	11'	(SP-SM)	~~sandy SILT~~ Silty SAND, dry, brn/~~red~~, ~~non plastic~~, no odor, some ~~red silty~~ f.-m. sand, poorly graded, f.-m., no odor.
				~~MW01K~~	12	12'		

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Identifier: MW01	Date: 5/22/19
Project Name: JRU 10	RP Number: 2RP-3464, 2RP-3179, 2RP-3243
Logged By: BEN BELILL	Method:
Hole Diameter: [redacted]	Total Depth:

LITHOLOGIC / SOIL BORING LOG

Lat/Long:

Field Screening: CHLORIDES, TPH, BTEX, GRO, MRO, and DRO.

Comment: All Chloride test include a 60% error factor.

	Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1650	D	<112	1.6	N	MW01K	12	12'	(SP-SM)	STA
	D	<112	3.8	N	MW01L	13	13'		
	D	<112	4.9	N	MW01M	14	14'		
	D	<112	4.8	N	MW01N	15	15'		
	D	<112	1.1	N	MW01O	16	16'		
	D	<112	0	N	MW01P	17	17'		
	D	<112	4.1	N	MW01Q	18	18'	ML	SILT, dry, brn/red, non plastic, no odor
	D	<112	6.5	N	MW01R	19	19'		
	D	<180	1.3	N	MW01S	20	20'		
	D	<180	9.2	N	MW01T	21	21'		
	D	<112	7.4	N	MW01U	22	22'		
1725	D	<112	5.1	N	MW01V	23	23'		
						24	24		

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Identifier: MW01	Date: 5/22/19
Project Name: JRU 10	RP Number: 2RP-3464, 2RP-3179, 2RP-3243
Logged By: BEN BELILL	Method:
Lat/Long:	Field Screening: CHLORIDES, TPH, BTEX, GRO, MRO, and DRO.
Hole Diameter: 6"	Total Depth:

LITHOLOGIC / SOIL BORING LOG

Comment: All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	<112	6.5	N	MW01 W	24	24	ML	SAA
D	<112	4.6	N	MW01 X	25	25'		
D	<112	5.1	N	MW01 Y	26	26'		
D	<112	9.4	N	MW01 Z	27	27'		
D	<112	0.8	N	MW01 AA	28	28		
D	<112	1.2	N	MW01 AB	29	29		
D	<112	3.9	N	MW01 AC	30	30		
D	<112	0.5	N	MW01 AD	31	31		
D	<112	3.0	N	MW01 AE	32	32		
D	<112	3.1	N	MW01 AF	33	33		
D	<112	0.0	N	MW01 AG	34	34		
	<112	0.0	N	MW01 AH	35	35		
					36			

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Identifier: MW01	Date: 5/22/14 - 5/23/14
Project Name: JRU 10	RP Number: 2RP-3464, 2RP-3179, 2RP-3243
Logged By: BEN BELILL	Method:
Lat/Long:	Field Screening: CHLORIDES, TPH, BTEX, GRO, MRO, and DRO.
Hole Diameter: 6.15"	Total Depth:

LITHOLOGIC / SOIL BORING LOG

Comment: All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	4112	1.0	N	MW01 AI	36	36	CL	Silty CLAY, dry, red/brn, low plasticity, no odor.
D	4112	0.0	N	MW01 AJ	37	37		
D	4112	1.5	N	MW01 AK	38	38		
D	4112	0.0	N	MW01 AL	39	39		
D	4112	0.0	N	MW01 AM	40	40		
D	K112	0.0	N	MW01 AN	41	41		
D	K112	1.4	N	MW01 AO	42	42		
D	K112	2.8	N	MW01 AP	43	43		
D	K112	1.8	N	MW01 AQ	44	44		
D	K112	2.5	N	MW01 AR	45	45		
D	K112	1.9	N	MW01 AS	46	46		
D	K112	2.0	N	MW01 AT	47	47		
					48			

1015
0645

LT Environmental, Inc.
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Carlsbad, New Mexico 88220
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Identifier	Date
MW01	5/23/19
Project Name: JRU 10	RP Number: 2RP-3464, 2RP-3179, 2RP-3243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL	Method:
Lat/Long:	Field Screening: CHLORIDES, TPH, BTEX, GRO, MRO, and DRO.
Hole Diameter: 6.15"	Total Depth:

Comment: All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
0730 D	<112	0.3	N	MW01 AU	48	48	CL	silty CLAY, dry, red/brn, low plasticity, no odor
0735 D	<112	1.3	N	MW01 AV	49	49		silty CLAY w/ caliche, dry, red/brn, low plasticity, some poly rnd to caliche gravel, no odor
0740 D	<112	1.2	N	MW01 AW	50	50		silty CLAY, dry, red/brn, low plasticity no odor
0750 D	<112	1.2	N	MW01 AX	51	51		
0800 D	<112	1.3	N	MW01 AY	52	52		
0810 D	<112	1.5	N	MW01 AZ	53	53		
D	<112	0.1	N	MW01 BA	54	54		
D	<112	0.3	N	MW01 BB	55	55		
D	<112	2.0	N	MW01 BC	56	56		
D	<112	2.9	N	MW01 BD	57	57		
D	<112	3.8	N	MW01 BE	58	58		
D	<112	2.3	N	MW01 BF	59	59		
					60			

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Identifier: MW01	Date: 5/23/19
Project Name: JRU 10	RP Number: 2RP-3179, 2RP-3464, 2RP-5243

LITHOLOGIC / SOIL BORING LOG

Lat/Long:	Field Screening: CHLORIDES, TPH, BTEX, GRO, MRO, and DRO.	Logged By: BEN BELILL	Method:
		Hole Diameter:	Total Depth:

Comment: All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	<112	2.8	N	MW01 A	60	60	CL	Silty CLAY, dry, brn/red, low plasticity, no odor.
D	<112	2.9	N	MW01 B	61	61		
0845 D	<112	2.8	N	MW01 C	62	62		
D	<112	3.4	N	MW01 D	63	63		
D	<112	1.6	N	MW01 E	64	64		
D	<112	11.7	N	MW01 F	65	65		
D	<112	4.5	N	MW01 G	66	66		
0900 D	<112	3.7	N	MW01 H	67	67		
D	<112	1.9	N	MW01 I	68	68		
D	<112	1.1	N	MW01 J	69	69		
D	<112	2.3	N	MW01 K	70	70		
D	<112	1.7	N	MW01 L	71	71		
					72			

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Identifier: MW01	Date: 5/23/19
Project Name: JRU 10	RP Number: 2RP-3179, 2RP-3464, 2RP-5243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL	Method:
Lat/Long:	Field Screening: CHLORIDES, TPH, BTEX, GRO, MRO, and DRO
Hole Diameter:	Total Depth:

Comment: All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
0930 P	<112	3.1	N	MW01 S	72	72	CL	SAA
D	<112	1.0	N	MW01 T	73	73		
D	<112	1.1	N	MW01 U	74	74		
D	<112	6.0	N	MW01 V	75	75		
D	<112	5.6	N	MW01 W	76	76		
D	<112	3.4	N	MW01 X	77	77		
D	<112	1.1	N	MW01 Y	78	78		
D	243	1.2	N	MW01 Z	79	79		
D	<112	2.4	N	MW01 A	80	80		
D	<112	4.7	N	MW01 B	81	81		
D	<112	3.7	N	MW01 C	82	82		
D	<112	3.7	N	MW01 D	83	83		
					84			

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Identifier: MW01	Date: 5/23/14
Project Name: JRU 10	RP Number: 2RP-3179, 2RP-3464, 2RP-5243
LITHOLOGIC / SOIL BORING LOG	Logged By: BEN BELILL / Method:
Lat/Long: / Field Screening: CHLORIDES, TPH, BTEX, GRO, MRO, and DRO.	Hole Diameter: / Total Depth:

Comment: All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	<112	4.9	N	MW01CE	84	84	CL	SAA
D	<112	1.5	N	MW01CF	85	85		
D	<112	3.3	N	MW01CG	86	86		
D	<112	2.4	N	MW01CH	87	87		
D	<112	1.6	N	MW01CI	88	88		
D	<112	1.1	N	MW01CJ	89	89		
D	<112	0.9	N	MW01CK	90	90		
D	<112	2.6	N	MW01CL	91	91	CL	~~CLA~~ silty ~~CL~~ CLAY, dry, lt brn/red, low plasticity, no odor.
D	<112	3.8	N	MW01CM	92	92		
D	<112	1.4	N	MW01CN	93	93		
D	<112	1.2	N	MW01CO	94	94		
D	<112	0.8	N	MW01CP	95	95		

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Identifier: MW01	Date: 5/23/19
Project Name: JRU 10	RP Number: 2RP-3179, 2RP-3464, 2RP-5243
Logged By: BEN BELILL	Method:
Hole Diameter:	Total Depth:

LITHOLOGIC / SOIL BORING LOG

Lat/Long:

Field Screening: CHLORIDES, TPH, BTEX, GRO, MRO, and DRO.

Comment: All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	<112	1.4	N	MW01C	Q 96	96	CL	silty CLAY, brn/red, low plasticity, no odor.
D	<112	4.2	N	MW01C	R 97	97'		
D	<112	2.2	N	MW01C	S 98	98'		
D	<112	1.8	N	MW01C	T 99	99'		
D	<112	1.1	N	MW01C	U 100	100'		
D	<112	1.5	N	MW01C	V 101	101		
D	<112	0.4	N	MW01C	W 102	102		
D	<112	1.11	N	MW01C	X 103	103		
D	<112	1.6	N	MW01C	Y 104	104		
D	<112	0.7	N	MW01C	Z 105	105		
	<112	1.3	N	MW01D	A 106	106		
	<112	0.6	N	MW01D	B 107	107		
					108			

1055

LT Environmental, Inc.
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Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier: MW01	Date: 5/23/19 5/24
Project Name: JRU 10	RP Number: 2RP-3179, 2RP-3464, 2RP-5243
Logged By: BEN BELILL	Method:
Field Screening: CHLORIDES, TPH, BTEX, GRO, MRO, and DRO.	Hole Diameter:
Lat/Long:	Total Depth:

LITHOLOGIC / SOIL BORING LOG

Comment: All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	<112	1.3	N	MW01D	C 72 108	108	CL	SAA
D	<112	0.3	N	MW01D	D 73 109	109		
D	<112	0.6	N	MW01D	E 74 110	110		
D	<112	0.6	N	MW01D	F 75 111	111		
D	<112	0.5	N	MW01D	G 76 112	112		
D	<112	3.5	N	MW01D	H 77 113	113		
D	<112	5.3	N	MW01D	I 78 114	114		
D	<112	1.3	N	MW01D	J 79	115		
D	<112	3.3	N	MW01D	K 80	116		
D	<112	2.9	N	MW01D	L 81	117		
D	<112	3.3	N	MW01D	M 82	118		
D	<112	4.8	N	MW01D	N 83	119		

5/24

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LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
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Identifier	Date
MW01	5/29/19 - 6/3/19
Project Name: JRU 10	RP Number: 2RP-3404, 2RP-3464, 2RP-3179

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: BEN BELILL	Method:
Lat/Long:	Field Screening: CHLORIDES, TPH, BTEX, GRO, DRO, and MRO
Hole Diameter: 6.15"	Total Depth:

Comment: All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	<112	3.8	N	MW01DO	120	120	CL	SAA
D	<112	3.1	N	MW01DP	121	121		
D	<112	1.2	N	MW01DQ	122	222		
D	<112	0.4	N	MW01DR	123	123		
D	<112	0.5	N	MW01DS	124	124		
D	<112	0.6	N	MW01DT	125	125		
D	<112	0.8	N	MW01DU	126	126		
D	<112	0.7	N	MW01DV	127	127		
D	<112	1.0	N	MW01DW	128	128		
D	<112	0.4	N	MW01DX	129	129		
D	<112	0.5	N	MW01DY	130	130		
D	<112	1.1	N	MW01DZ	131	131		
					132			

5/29
6/3
1540
1550

LT Environmental, Inc.
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Carlsbad, New Mexico 88220
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Identifier: MW01	Date: 6/3/19 - 6/4/19
Project Name: JRU 10	RP Number: 2RP-3404, 2RP-3464, 2RP-3179
Logged By: BEN BELILL	Method:
Hole Diameter: 6.15"	Total Depth:

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening: CHLORIDES, TPH, BTEX, GRO, DRO, and MRO.

Comment: All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	<112	0.8	N	MW01E A	132	132	CL	SAA
D	<112	0.7	N	MW01E B	133	133		
D	<112	0.8	N	MW01E C	134	134		
D	<112	0.9	N	MW01E D	135	135		
D	<112	0.6	N	MW01E E	136	136		
1700 D	<112	0.7	N	MW01E F	137	137		
6/4 0900 D	<112	1.0	N	MW01E G	138	138	CL	CLAY w/ gravel, dry, lt brn/red, low plasticity, no odor.
0905 D	<112	0.9	N	MW01E H	139	139		
0960 D	<112	3.8	N	MW01E I	140	140	CL	~~CLAY~~ silty CLAY, brown/red, low plasticity, no odor
0915 D	<112	3.5	N	MW01E J	141	141		
0920 D	<112	3.1	N	MW01E K	142	142		
0925 D	<112	1.8	N	MW01E L	143	143		
					144			

LT Environmental, Inc.
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Carlsbad, New Mexico 88220
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Identifier: MW01	Date: 6/4/19
Project Name: JRU 10	RP Number: 2RP-3404, 2RP-3464, 2RP-3179
Logged By: BEN BELILL	Method:
Hole Diameter: 6.15"	Total Depth:
Field Screening: CHLORIDES, TPH, BTEX, GRO, DRO, and MRO.	
Lat/Long:	

LITHOLOGIC / SOIL SAMPLING LOG

Comment: All Chloride test include a 60% error factor.

	Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
0930	D	<112	3.5	N	MW01E	M	144	CL	SM/A
0935	D	<112	3.2	N	MW01E	N	145		
0940	D	<112	2.7	N	MW01E	O	146		
0945	D	<112	3.1	N	MW01E	P	147		
0950	D	<112	3.0	N	MW01E	Q	148		
0955	D	<112	1.8	N	MW01E	R	149		
1000	D	<112	1.5	N	MW01E	S	150		EOB@150'

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO

2012 AUG 13 P 1:13

1. GENERAL AND WELL LOCATION

POD NUMBER (WELL NUMBER): JAMES RANCH UNIT #36 BATTERY SB-1 (POD-1)	OSE FILE NUMBER(S): C-03559
WELL OWNER NAME(S): BOPCO OPERATING CO	PHONE (OPTIONAL):
WELL OWNER MAILING ADDRESS: 6 DESTA DRIVE SUITE 3700, P.O. BOX 2760	CITY: MIDLAND STATE: TX ZIP: 79702

WELL LOCATION (FROM GPS)	DEGREES	MINUTES	SECONDS	
LATITUDE	32	20	9.00	N
LONGITUDE	103	49	55.00	W

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

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS: FROM THE CORNER OF HWY 128 AND WIPP RD GO N FOR 4TH OF MILE TURN L FOLLOW CALICHE RD TO SITE.

2. OPTIONAL

(2.5 ACRE)	(10 ACRE)	(40 ACRE)	(160 ACRE)	SECTION	TOWNSHIP	RANGE
¼	¼	¼	¼	1	23 ☐ NORTH ☑ SOUTH	30 ☑ EAST ☐ WEST

SUBDIVISION NAME	LOT NUMBER	BLOCK NUMBER	UNIT/TRACT
			G

HYDROGRAPHIC SURVEY	MAP NUMBER	TRACT NUMBER

3. DRILLING INFORMATION

LICENSE NUMBER	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD1478	MARTIN STRAUB	STRAUB CORPORATION

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
7-31-12	7-31-12	0	50'	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:

DEPTH (FT) FROM	DEPTH (FT) TO	BORE HOLE DIA. (IN)	CASING MATERIAL	CONNECTION TYPE (CASING)	INSIDE DIA. CASING (IN)	CASING WALL THICKNESS (IN)	SLOT SIZE (IN)
0	50'	5"	N/A	N/A	N/A	N/A	N/A

4. WATER BEARING STRATA

DEPTH (FT) FROM	DEPTH (FT) TO	THICKNESS (FT)	FORMATION DESCRIPTION OF PRINCIPAL WATER-BEARING STRATA (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)	YIELD (GPM)

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA	TOTAL ESTIMATED WELL YIELD (GPM)

FOR OSE INTERNAL USE — WELL RECORD & LOG (Version 6/9/08)

FILE NUMBER	C-3559	POD NUMBER	1	TRN NUMBER	507137
LOCATION	Expl - Boreholes	23E. 30E. 1. 234		PAGE 1 OF 2	

5. SEAL AND PUMP

TYPE OF PUMP: ☐ SUBMERSIBLE ☐ JET ☐ NO PUMP – WELL NOT EQUIPPED ☐ TURBINE ☐ CYLINDER ☐ OTHER – SPECIFY:

ANNULAR SEAL AND GRAVEL PACK	DEPTH (FT) FROM	DEPTH (FT) TO	BORE HOLE DIA. (IN)	MATERIAL TYPE AND SIZE	AMOUNT (CUBIC FT)	METHOD OF PLACEMENT
	0	2'	5"	. 5 BAGS OF CEMENT		TOPLOAD
	2'	50'	5"	11BAGS OF 3/8 HOLE PLUG		TOPLOAD

6. GEOLOGIC LOG OF WELL

DEPTH (FT) FROM	DEPTH (FT) TO	THICKNESS (FT)	COLOR AND TYPE OF MATERIAL ENCOUNTERED (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)	WATER BEARING?
0	2'	2'	TAN FINE SAND - CALICHE	☐ YES ☑ NO
2'	5'	3'	BASIN FINE SAND - CALICHE	☐ YES ☑ NO
5'	8"	3'	TAN FINE SAND - SANDSTONE	☐ YES ☑ NO
8'	13'	5'	RED FINE SAND	☐ YES ☑ NO
13'	15'	2'	TAN FINE SAND	☐ YES ☑ NO
15'	36'	21'	RED FINE SAND (DRK) - SANDSTONE WITH CLAY	☐ YES ☑ NO
36'	50'	14'	RED SILTY SAND - SILTY CLAY	☐ YES ☑ NO
TD	50'			☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO

ATTACH ADDITIONAL PAGES AS NEEDED TO FULLY DESCRIBE THE GEOLOGIC LOG OF THE WELL

7. TEST & ADDITIONAL INFO

WELL TEST — METHOD: ☐ BAILER ☐ PUMP ☐ AIR LIFT ☐ OTHER – SPECIFY:

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

ADDITIONAL STATEMENTS OR EXPLANATIONS:

SOIL BORING WAS PLUGGED AND ABANDONED UPON COMPLETION OF SAMPLING
EDDY COUNTY NM
EDWARD BRYAN (DRILLING SUPERVISOR)

8. 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 20 DAYS AFTER COMPLETION OF WELL DRILLING:

Martin Stroh — SIGNATURE OF DRILLER

8-10-12 — DATE

FOR OSE INTERNAL USE — WELL RECORD & LOG (Version 6/9/08)

FILE NUMBER C-3559	POD NUMBER	TRN NUMBER 507137
LOCATION		PAGE 2 OF 2

ENSOLUM

APPENDIX B

Photographic Log

ENSOLUM

Photographic Log
XTO Energy, Inc
Hudson 1 Fed Com 9H
nAPP2322645119

Photograph 1 Date: 9/7/2023
Description: View of release extent.
View: Northwest

Photograph 2 Date: 9/15/2023
Description: Completed excavation activities.
View: Southwest

Photograph 3 Date: 9/15/2023
Description: Completed excavation activities.
View: East

Photograph 4 Date: 10/6/2023
Description: Completed backfill activities.
View: Northeast

ENSOLUM

APPENDIX C

Lithologic Soil Sampling Logs

ENSOLUM

	Sample Name: PH01	Date: 9/7/2023
	Site Name: Hudson 1 Fed Com 9H	
	Incident Number: nAPP2322645119	
	Job Number: 03C1558263	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: MR	Method: Backhoe
Coordinates: 32.333333, -103.831591	Hole Diameter: NA	Total Depth: 2'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
			Y			0	CCHE	0-2' CALICHE, medium brown, medium to coarse grained, poorly sorted, sub-rounded grains, no stain/ no odor (past 0.5'), moist.
M	>37,705	37.3	Y	SS01	0.5			
M	683	25.2	N			1		
M	828.8	13.3	N	PH01	2	2		2' SAA, red/orange caliche.
						TD		Total Depth @ 2' bgs.

ENSOLUM

	Sample Name: PH02	Date: 9/7/2023
	Site Name: Hudson 1 Fed Com 9H	
	Incident Number: nAPP2322645119	
	Job Number: 03C1558263	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: MR	Method: Backhoe
Coordinates: 32.333376, -103.831519	Hole Diameter: NA	Total Depth: 2'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
			Y			0	CCHE	0-2' CALICHE, medium brown, medium to coarse grained, poorly sorted, sub-rounded grains, no stain/ no odor (past 0.5'), moist.
M	>37,705	50.6	Y	SS02	0.5			
M	392	0.6	N			1		
M	<162.4	0.5	N	PH02	2	2		2' SAA, red/orange caliche.
						TD		Total Depth @ 2' bgs.

ENSOLUM

	Sample Name: PH03	Date: 9/7/2023
	Site Name: Hudson 1 Fed Com 9H	
	Incident Number: nAPP2322645119	
	Job Number: 03C1558263	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: MR	Method: Backhoe
Coordinates: 32.333412, -103.831479	Hole Diameter: NA	Total Depth: 2'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
			Y			0	CCHE	0-2' CALICHE, medium brown, medium to coarse grained, poorly sorted, sub-rounded grains, no stain/ no odor (past 0.5'), moist.
M	>37,705	97.2	Y	SS03	0.5			
M	<162.4	0.7	N			1		
M	<162.4	0.3	N	PH03	2	2		
						TD		Total Depth @ 2' bgs.

ENSOLUM

APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 8/28/2023 9:48:58 PM

JOB DESCRIPTION

Hudson 1 Fed Com 9H
SDG NUMBER 03C1558263

JOB NUMBER

890-5121-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Eurofins Carlsbad

Job Notes

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

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

Authorization

Generated
8/28/2023 9:48:58 PM

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

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Laboratory Job ID: 890-5121-1
SDG: 03C1558263

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5121-1
SDG: 03C1558263

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, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5121-1
SDG: 03C1558263

Job ID: 890-5121-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-5121-1

Receipt
The samples were received on 8/17/2023 1:43 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 1.2°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SS01 (890-5121-1), SS02 (890-5121-2), SS03 (890-5121-3), SS04 (890-5121-4), SS05 (890-5121-5), SS06 (890-5121-6) and SS07 (890-5121-7).

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-61153 and analytical batch 880-61205 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: (CCV 880-61199/33) and (LCS 880-61214/1-A). Evidence of matrix interferences is not obvious.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-61199 recovered above the upper control limit for m-Xylene & p-Xylene and o-Xylene. An acceptable CCV was ran within the 12 hour window, therefore the data has been qualified and reported. The associated sample is impacted: (CCV 880-61199/33).

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

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-61031 and analytical batch 880-61042 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: SS01 (890-5121-1), SS02 (890-5121-2), SS03 (890-5121-3), SS04 (890-5121-4), SS05 (890-5121-5), SS06 (890-5121-6), (890-5113-A-21-B), (890-5113-A-21-C MS) and (890-5113-A-21-D MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: SS07 (890-5121-7). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-61042/31), (CCV 880-61042/47), (CCV 880-61042/58), (LCS 880-61031/2-A) and (LCSD 880-61031/3-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
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: Hudson 1 Fed Com 9H

Job ID: 890-5121-1
SDG: 03C1558263

Client Sample ID: SS01

Lab Sample ID: 890-5121-1
Matrix: Solid
Date Collected: 08/17/23 09:50
Date Received: 08/17/23 13:43
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		08/25/23 15:29	08/28/23 01:11	1
Toluene	<0.00202	U	0.00202		mg/Kg		08/25/23 15:29	08/28/23 01:11	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		08/25/23 15:29	08/28/23 01:11	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		08/25/23 15:29	08/28/23 01:11	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		08/25/23 15:29	08/28/23 01:11	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		08/25/23 15:29	08/28/23 01:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*	*08/25/23 15:29*	*08/28/23 01:11*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*08/25/23 15:29*	*08/28/23 01:11*	*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			08/28/23 10:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**2290**		50.1		mg/Kg			08/28/23 22:20	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	<50.1	U	50.1		mg/Kg		08/24/23 16:34	08/26/23 00:14	1
Diesel Range Organics (Over C10-C28)	**2290**		50.1		mg/Kg		08/24/23 16:34	08/26/23 00:14	1
OII Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		08/24/23 16:34	08/26/23 00:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*162*	*S1+*	*70 - 130*	*08/24/23 16:34*	*08/26/23 00:14*	*1*
o-Terphenyl	*107*		*70 - 130*	*08/24/23 16:34*	*08/26/23 00:14*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**49400**		249		mg/Kg			08/22/23 22:15	50

Client Sample ID: SS02

Lab Sample ID: 890-5121-2
Matrix: Solid
Date Collected: 08/17/23 09:55
Date Received: 08/17/23 13:43
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		08/25/23 15:29	08/28/23 01:31	1
Toluene	<0.00199	U	0.00199		mg/Kg		08/25/23 15:29	08/28/23 01:31	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		08/25/23 15:29	08/28/23 01:31	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		08/25/23 15:29	08/28/23 01:31	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		08/25/23 15:29	08/28/23 01:31	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		08/25/23 15:29	08/28/23 01:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*	*08/25/23 15:29*	*08/28/23 01:31*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5121-1
SDG: 03C1558263

Client Sample ID: SS02

Date Collected: 08/17/23 09:55
Date Received: 08/17/23 13:43
Sample Depth: 0.5

Lab Sample ID: 890-5121-2

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*08/25/23 15:29*	*08/28/23 01:31*	*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			08/28/23 10:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**512**		50.2		mg/Kg			08/28/23 22:20	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	50.2		mg/Kg		08/24/23 16:34	08/26/23 00:35	1
Diesel Range Organics (Over C10-C28)	**512**		50.2		mg/Kg		08/24/23 16:34	08/26/23 00:35	1
OII Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		08/24/23 16:34	08/26/23 00:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*152*	*S1+*	*70 - 130*	*08/24/23 16:34*	*08/26/23 00:35*	*1*
o-Terphenyl	*115*		*70 - 130*	*08/24/23 16:34*	*08/26/23 00:35*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**64700**		251		mg/Kg			08/22/23 22:21	50

Client Sample ID: SS03

Date Collected: 08/17/23 10:00
Date Received: 08/17/23 13:43
Sample Depth: 0.5

Lab Sample ID: 890-5121-3

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		08/25/23 15:29	08/28/23 01:51	1
Toluene	<0.00199	U	0.00199		mg/Kg		08/25/23 15:29	08/28/23 01:51	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		08/25/23 15:29	08/28/23 01:51	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		08/25/23 15:29	08/28/23 01:51	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		08/25/23 15:29	08/28/23 01:51	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		08/25/23 15:29	08/28/23 01:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*	*08/25/23 15:29*	*08/28/23 01:51*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*08/25/23 15:29*	*08/28/23 01:51*	*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			08/28/23 10:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**3880**		49.8		mg/Kg			08/28/23 22:20	1

Client Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5121-1
SDG: 03C1558263

Client Sample ID: SS03

Lab Sample ID: 890-5121-3
Matrix: Solid
Date Collected: 08/17/23 10:00
Date Received: 08/17/23 13:43
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		08/24/23 16:34	08/25/23 23:53	1
Diesel Range Organics (Over C10-C28)	**3880**		49.8		mg/Kg		08/24/23 16:34	08/25/23 23:53	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		08/24/23 16:34	08/25/23 23:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*153*	*S1+*	*70 - 130*	*08/24/23 16:34*	*08/25/23 23:53*	*1*
o-Terphenyl	*102*		*70 - 130*	*08/24/23 16:34*	*08/25/23 23:53*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**40400**		253		mg/Kg			08/22/23 22:26	50

Client Sample ID: SS04

Lab Sample ID: 890-5121-4
Matrix: Solid
Date Collected: 08/17/23 10:05
Date Received: 08/17/23 13:43
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		08/25/23 15:29	08/28/23 02:12	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/25/23 15:29	08/28/23 02:12	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/25/23 15:29	08/28/23 02:12	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/25/23 15:29	08/28/23 02:12	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/25/23 15:29	08/28/23 02:12	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/25/23 15:29	08/28/23 02:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*08/25/23 15:29*	*08/28/23 02:12*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*08/25/23 15:29*	*08/28/23 02:12*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			08/28/23 10:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**90.3**		49.6		mg/Kg			08/28/23 22:20	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6		mg/Kg		08/24/23 16:34	08/26/23 00:56	1
Diesel Range Organics (Over C10-C28)	**90.3**		49.6		mg/Kg		08/24/23 16:34	08/26/23 00:56	1
OII Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		08/24/23 16:34	08/26/23 00:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*155*	*S1+*	*70 - 130*	*08/24/23 16:34*	*08/26/23 00:56*	*1*
o-Terphenyl	*116*		*70 - 130*	*08/24/23 16:34*	*08/26/23 00:56*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5121-1
SDG: 03C1558263

Client Sample ID: SS04

Lab Sample ID: 890-5121-4
Matrix: Solid
Date Collected: 08/17/23 10:05
Date Received: 08/17/23 13:43
Sample Depth: 0.5

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**573**		25.2		mg/Kg			08/22/23 22:32	5

Client Sample ID: SS05

Lab Sample ID: 890-5121-5
Matrix: Solid
Date Collected: 08/17/23 10:10
Date Received: 08/17/23 13:43
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		08/25/23 15:29	08/28/23 02:32	1
Toluene	<0.00198	U	0.00198		mg/Kg		08/25/23 15:29	08/28/23 02:32	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		08/25/23 15:29	08/28/23 02:32	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		08/25/23 15:29	08/28/23 02:32	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		08/25/23 15:29	08/28/23 02:32	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		08/25/23 15:29	08/28/23 02:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*08/25/23 15:29*	*08/28/23 02:32*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*08/25/23 15:29*	*08/28/23 02:32*	*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			08/28/23 10:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**68.3**		50.5		mg/Kg			08/28/23 22:20	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5		mg/Kg		08/24/23 16:34	08/26/23 01:17	1
Diesel Range Organics (Over C10-C28)	**68.3**		50.5		mg/Kg		08/24/23 16:34	08/26/23 01:17	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		08/24/23 16:34	08/26/23 01:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*143*	*S1+*	*70 - 130*	*08/24/23 16:34*	*08/26/23 01:17*	*1*
o-Terphenyl	*108*		*70 - 130*	*08/24/23 16:34*	*08/26/23 01:17*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**521**		24.9		mg/Kg			08/22/23 22:49	5

Client Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5121-1
SDG: 03C1558263

Client Sample ID: SS06

Lab Sample ID: 890-5121-6
Matrix: Solid
Date Collected: 08/17/23 10:20
Date Received: 08/17/23 13:43
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		08/26/23 17:44	08/27/23 20:14	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/26/23 17:44	08/27/23 20:14	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/26/23 17:44	08/27/23 20:14	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/26/23 17:44	08/27/23 20:14	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/26/23 17:44	08/27/23 20:14	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/26/23 17:44	08/27/23 20:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*08/26/23 17:44*	*08/27/23 20:14*	*1*
1,4-Difluorobenzene (Surr)	*79*		*70 - 130*	*08/26/23 17:44*	*08/27/23 20:14*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			08/28/23 11:47	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			08/28/23 22:20	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5		mg/Kg		08/24/23 16:34	08/26/23 01:38	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		08/24/23 16:34	08/26/23 01:38	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		08/24/23 16:34	08/26/23 01:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*135*	*S1+*	*70 - 130*	*08/24/23 16:34*	*08/26/23 01:38*	*1*
o-Terphenyl	*101*		*70 - 130*	*08/24/23 16:34*	*08/26/23 01:38*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**112**		4.99		mg/Kg			08/22/23 22:55	1

Client Sample ID: SS07

Lab Sample ID: 890-5121-7
Matrix: Solid
Date Collected: 08/17/23 10:15
Date Received: 08/17/23 13:43
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		08/26/23 17:44	08/27/23 20:35	1
Toluene	<0.00199	U	0.00199		mg/Kg		08/26/23 17:44	08/27/23 20:35	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		08/26/23 17:44	08/27/23 20:35	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		08/26/23 17:44	08/27/23 20:35	1
o-Xylene	**0.00238**		0.00199		mg/Kg		08/26/23 17:44	08/27/23 20:35	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		08/26/23 17:44	08/27/23 20:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*08/26/23 17:44*	*08/27/23 20:35*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5121-1
SDG: 03C1558263

Client Sample ID: SS07
Date Collected: 08/17/23 10:15
Date Received: 08/17/23 13:43
Sample Depth: 0.5

Lab Sample ID: 890-5121-7
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*08/26/23 17:44*	*08/27/23 20:35*	*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			08/28/23 11:47	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**71.3**		50.2		mg/Kg			08/28/23 22:20	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	50.2		mg/Kg		08/24/23 16:34	08/26/23 02:21	1
Diesel Range Organics (Over C10-C28)	**71.3**		50.2		mg/Kg		08/24/23 16:34	08/26/23 02:21	1
OII Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		08/24/23 16:34	08/26/23 02:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*139*	*S1+*	*70 - 130*	*08/24/23 16:34*	*08/26/23 02:21*	*1*
o-Terphenyl	*106*		*70 - 130*	*08/24/23 16:34*	*08/26/23 02:21*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**146**		4.96		mg/Kg			08/22/23 23:12	1

Surrogate Summary

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5121-1
SDG: 03C1558263

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)
880-32215-A-3-E MS	Matrix Spike	122	112
880-32215-A-3-F MSD	Matrix Spike Duplicate	119	111
880-32567-A-1-B MS	Matrix Spike	90	88
880-32567-A-1-C MSD	Matrix Spike Duplicate	85	95
890-5121-1	SS01	83	95
890-5121-2	SS02	92	102
890-5121-3	SS03	85	97
890-5121-4	SS04	89	102
890-5121-5	SS05	89	107
890-5121-6	SS06	104	79
890-5121-7	SS07	107	94
LCS 880-61153/1-A	Lab Control Sample	80	88
LCS 880-61214/1-A	Lab Control Sample	132 S1+	107
LCSD 880-61153/2-A	Lab Control Sample Dup	94	91
LCSD 880-61214/2-A	Lab Control Sample Dup	119	114
MB 880-61153/5-A	Method Blank	105	124
MB 880-61204/5-A	Method Blank	75	77
MB 880-61205/39	Method Blank	118	127
MB 880-61214/5-A	Method Blank	75	98

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)
890-5113-A-21-C MS	Matrix Spike	138 S1+	97
890-5113-A-21-D MSD	Matrix Spike Duplicate	138 S1+	95
890-5121-1	SS01	162 S1+	107
890-5121-2	SS02	152 S1+	115
890-5121-3	SS03	153 S1+	102
890-5121-4	SS04	155 S1+	116
890-5121-5	SS05	143 S1+	108
890-5121-6	SS06	135 S1+	101
890-5121-7	SS07	139 S1+	106
LCS 880-61031/2-A	Lab Control Sample	137 S1+	123
LCSD 880-61031/3-A	Lab Control Sample Dup	143 S1+	115
MB 880-61031/1-A	Method Blank	254 S1+	200 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5121-1
SDG: 03C1558263

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-61153/5-A
Matrix: Solid
Analysis Batch: 61205

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 61153

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/25/23 15:29	08/27/23 18:03	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/25/23 15:29	08/27/23 18:03	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/25/23 15:29	08/27/23 18:03	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/25/23 15:29	08/27/23 18:03	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/25/23 15:29	08/27/23 18:03	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/25/23 15:29	08/27/23 18:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*08/25/23 15:29*	*08/27/23 18:03*	*1*
1,4-Difluorobenzene (Surr)	*124*		*70 - 130*	*08/25/23 15:29*	*08/27/23 18:03*	*1*

Lab Sample ID: LCS 880-61153/1-A
Matrix: Solid
Analysis Batch: 61205

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 61153

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08666		mg/Kg		87	70 - 130		
Toluene			0.100	0.08832		mg/Kg		88	70 - 130		
Ethylbenzene			0.100	0.07736		mg/Kg		77	70 - 130		
m-Xylene & p-Xylene			0.200	0.1456		mg/Kg		73	70 - 130		
o-Xylene			0.100	0.07144		mg/Kg		71	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*

Lab Sample ID: LCSD 880-61153/2-A
Matrix: Solid
Analysis Batch: 61205

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 61153

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1006		mg/Kg		101	70 - 130	15	35
Toluene			0.100	0.09461		mg/Kg		95	70 - 130	7	35
Ethylbenzene			0.100	0.09008		mg/Kg		90	70 - 130	15	35
m-Xylene & p-Xylene			0.200	0.1817		mg/Kg		91	70 - 130	22	35
o-Xylene			0.100	0.08914		mg/Kg		89	70 - 130	22	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*

Lab Sample ID: 880-32567-A-1-B MS
Matrix: Solid
Analysis Batch: 61205

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 61153

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U F1	0.0996	0.03351	F1	mg/Kg		34	70 - 130		
Toluene	<0.00200	U F1	0.0996	0.009561	F1	mg/Kg		10	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5121-1
SDG: 03C1558263

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

Lab Sample ID: 880-32567-A-1-B MS
Matrix: Solid
Analysis Batch: 61205

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 61153

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U F1 F2	0.0996	0.009198	F1	mg/Kg		9	70 - 130
m-Xylene & p-Xylene	<0.00399	U F1	0.199	0.004127	F1	mg/Kg		2	70 - 130
o-Xylene	<0.00200	U F1	0.0996	0.01405	F1	mg/Kg		13	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*

Lab Sample ID: 880-32567-A-1-C MSD
Matrix: Solid
Analysis Batch: 61205

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 61153

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U F1	0.101	0.03953	F1	mg/Kg		39	70 - 130	16	35
Toluene	<0.00200	U F1	0.101	0.01275	F1	mg/Kg		13	70 - 130	29	35
Ethylbenzene	<0.00200	U F1 F2	0.101	0.005503	F1 F2	mg/Kg		5	70 - 130	50	35
m-Xylene & p-Xylene	<0.00399	U F1	0.202	<0.00403	U F1	mg/Kg		0	70 - 130	NC	35
o-Xylene	<0.00200	U F1	0.101	0.01175	F1	mg/Kg		11	70 - 130	18	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: MB 880-61204/5-A
Matrix: Solid
Analysis Batch: 61199

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 61204

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/26/23 14:36	08/27/23 03:05	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/26/23 14:36	08/27/23 03:05	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/26/23 14:36	08/27/23 03:05	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/26/23 14:36	08/27/23 03:05	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/26/23 14:36	08/27/23 03:05	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/26/23 14:36	08/27/23 03:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*75*		*70 - 130*	*08/26/23 14:36*	*08/27/23 03:05*	*1*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*	*08/26/23 14:36*	*08/27/23 03:05*	*1*

Lab Sample ID: MB 880-61205/39
Matrix: Solid
Analysis Batch: 61205

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg			08/27/23 06:25	1
Toluene	<0.00200	U	0.00200	mg/Kg			08/27/23 06:25	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg			08/27/23 06:25	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg			08/27/23 06:25	1

QC Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5121-1
SDG: 03C1558263

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

Lab Sample ID: MB 880-61205/39
Matrix: Solid
Analysis Batch: 61205

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200		mg/Kg			08/27/23 06:25	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg			08/27/23 06:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*		*08/27/23 06:25*	*1*
1,4-Difluorobenzene (Surr)	*127*		*70 - 130*		*08/27/23 06:25*	*1*

Lab Sample ID: MB 880-61214/5-A
Matrix: Solid
Analysis Batch: 61199

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 61214

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/26/23 17:44	08/27/23 13:41	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/26/23 17:44	08/27/23 13:41	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/26/23 17:44	08/27/23 13:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/26/23 17:44	08/27/23 13:41	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/26/23 17:44	08/27/23 13:41	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/26/23 17:44	08/27/23 13:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*75*		*70 - 130*	*08/26/23 17:44*	*08/27/23 13:41*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*08/26/23 17:44*	*08/27/23 13:41*	*1*

Lab Sample ID: LCS 880-61214/1-A
Matrix: Solid
Analysis Batch: 61199

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 61214

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09989		mg/Kg		100	70 - 130		
Toluene			0.100	0.1127		mg/Kg		113	70 - 130		
Ethylbenzene			0.100	0.1141		mg/Kg		114	70 - 130		
m-Xylene & p-Xylene			0.200	0.2457		mg/Kg		123	70 - 130		
o-Xylene			0.100	0.1298		mg/Kg		130	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*132*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: LCSD 880-61214/2-A
Matrix: Solid
Analysis Batch: 61199

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 61214

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08897		mg/Kg		89	70 - 130	12	35
Toluene			0.100	0.1019		mg/Kg		102	70 - 130	10	35
Ethylbenzene			0.100	0.09976		mg/Kg		100	70 - 130	13	35
m-Xylene & p-Xylene			0.200	0.2196		mg/Kg		110	70 - 130	11	35
o-Xylene			0.100	0.1129		mg/Kg		113	70 - 130	14	35

QC Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5121-1
SDG: 03C1558263

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

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	119		70 - 130
1,4-Difluorobenzene (Surr)	114		70 - 130

Lab Sample ID: 880-32215-A-3-E MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 61199 — **Prep Batch: 61214**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U	0.0996	0.09008		mg/Kg		90	70 - 130		
Toluene	<0.00199	U	0.0996	0.09930		mg/Kg		100	70 - 130		
Ethylbenzene	<0.00199	U	0.0996	0.1003		mg/Kg		101	70 - 130		
m-Xylene & p-Xylene	<0.00398	U	0.199	0.2177		mg/Kg		109	70 - 130		
o-Xylene	<0.00199	U	0.0996	0.1117		mg/Kg		112	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	122		70 - 130
1,4-Difluorobenzene (Surr)	112		70 - 130

Lab Sample ID: 880-32215-A-3-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 61199 — **Prep Batch: 61214**

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	0.08934		mg/Kg		89	70 - 130	1	35
Toluene	<0.00199	U	0.100	0.1012		mg/Kg		101	70 - 130	2	35
Ethylbenzene	<0.00199	U	0.100	0.1001		mg/Kg		100	70 - 130	0	35
m-Xylene & p-Xylene	<0.00398	U	0.200	0.2209		mg/Kg		110	70 - 130	1	35
o-Xylene	<0.00199	U	0.100	0.1133		mg/Kg		113	70 - 130	1	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	119		70 - 130
1,4-Difluorobenzene (Surr)	111		70 - 130

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

Lab Sample ID: MB 880-61031/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 61042 — **Prep Batch: 61031**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/24/23 16:34	08/25/23 20:41	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/24/23 16:34	08/25/23 20:41	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/24/23 16:34	08/25/23 20:41	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	254	S1+	70 - 130	08/24/23 16:34	08/25/23 20:41	1
o-Terphenyl	200	S1+	70 - 130	08/24/23 16:34	08/25/23 20:41	1

QC Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5121-1
SDG: 03C1558263

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

Lab Sample ID: LCS 880-61031/2-A
Matrix: Solid
Analysis Batch: 61042

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 61031

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1036		mg/Kg		104	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1045		mg/Kg		104	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*137*	*S1+*	*70 - 130*
o-Terphenyl	*123*		*70 - 130*

Lab Sample ID: LCSD 880-61031/3-A
Matrix: Solid
Analysis Batch: 61042

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 61031

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1045		mg/Kg		104	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	1019		mg/Kg		102	70 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*143*	*S1+*	*70 - 130*
o-Terphenyl	*115*		*70 - 130*

Lab Sample ID: 890-5113-A-21-C MS
Matrix: Solid
Analysis Batch: 61042

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 61031

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	1010	954.4		mg/Kg		90	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.2	U	1010	1122		mg/Kg		109	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*138*	*S1+*	*70 - 130*
o-Terphenyl	*97*		*70 - 130*

Lab Sample ID: 890-5113-A-21-D MSD
Matrix: Solid
Analysis Batch: 61042

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 61031

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	1010	968.6		mg/Kg		92	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<50.2	U	1010	1119		mg/Kg		109	70 - 130	0	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*138*	*S1+*	*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5121-1
SDG: 03C1558263

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

Lab Sample ID: 890-5113-A-21-D MSD
Matrix: Solid
Analysis Batch: 61042

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 61031

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl	95		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-60728/1-A
Matrix: Solid
Analysis Batch: 60835

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			08/22/23 20:56	1

Lab Sample ID: LCS 880-60728/2-A
Matrix: Solid
Analysis Batch: 60835

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	253.0		mg/Kg		101	90 - 110		

Lab Sample ID: LCSD 880-60728/3-A
Matrix: Solid
Analysis Batch: 60835

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	257.8		mg/Kg		103	90 - 110	2	20

Lab Sample ID: 890-5121-4 MS
Matrix: Solid
Analysis Batch: 60835

Client Sample ID: SS04
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	573		1260	1792		mg/Kg		97	90 - 110		

Lab Sample ID: 890-5121-4 MSD
Matrix: Solid
Analysis Batch: 60835

Client Sample ID: SS04
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	573		1260	1774		mg/Kg		95	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5121-1
SDG: 03C1558263

GC VOA

Prep Batch: 61153

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5121-1	SS01	Total/NA	Solid	5035	
890-5121-2	SS02	Total/NA	Solid	5035	
890-5121-3	SS03	Total/NA	Solid	5035	
890-5121-4	SS04	Total/NA	Solid	5035	
890-5121-5	SS05	Total/NA	Solid	5035	
MB 880-61153/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-61153/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-61153/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-32567-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
880-32567-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 61199

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5121-6	SS06	Total/NA	Solid	8021B	61214
890-5121-7	SS07	Total/NA	Solid	8021B	61214
MB 880-61204/5-A	Method Blank	Total/NA	Solid	8021B	61204
MB 880-61214/5-A	Method Blank	Total/NA	Solid	8021B	61214
LCS 880-61214/1-A	Lab Control Sample	Total/NA	Solid	8021B	61214
LCSD 880-61214/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	61214
880-32215-A-3-E MS	Matrix Spike	Total/NA	Solid	8021B	61214
880-32215-A-3-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	61214

Prep Batch: 61204

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-61204/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 61205

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5121-1	SS01	Total/NA	Solid	8021B	61153
890-5121-2	SS02	Total/NA	Solid	8021B	61153
890-5121-3	SS03	Total/NA	Solid	8021B	61153
890-5121-4	SS04	Total/NA	Solid	8021B	61153
890-5121-5	SS05	Total/NA	Solid	8021B	61153
MB 880-61153/5-A	Method Blank	Total/NA	Solid	8021B	61153
MB 880-61205/39	Method Blank	Total/NA	Solid	8021B	
LCS 880-61153/1-A	Lab Control Sample	Total/NA	Solid	8021B	61153
LCSD 880-61153/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	61153
880-32567-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	61153
880-32567-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	61153

Prep Batch: 61214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5121-6	SS06	Total/NA	Solid	5035	
890-5121-7	SS07	Total/NA	Solid	5035	
MB 880-61214/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-61214/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-61214/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-32215-A-3-E MS	Matrix Spike	Total/NA	Solid	5035	
880-32215-A-3-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

QC Association Summary

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5121-1
SDG: 03C1558263

GC VOA

Analysis Batch: 61267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5121-1	SS01	Total/NA	Solid	Total BTEX	
890-5121-2	SS02	Total/NA	Solid	Total BTEX	
890-5121-3	SS03	Total/NA	Solid	Total BTEX	
890-5121-4	SS04	Total/NA	Solid	Total BTEX	
890-5121-5	SS05	Total/NA	Solid	Total BTEX	
890-5121-6	SS06	Total/NA	Solid	Total BTEX	
890-5121-7	SS07	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 61031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5121-1	SS01	Total/NA	Solid	8015NM Prep	
890-5121-2	SS02	Total/NA	Solid	8015NM Prep	
890-5121-3	SS03	Total/NA	Solid	8015NM Prep	
890-5121-4	SS04	Total/NA	Solid	8015NM Prep	
890-5121-5	SS05	Total/NA	Solid	8015NM Prep	
890-5121-6	SS06	Total/NA	Solid	8015NM Prep	
890-5121-7	SS07	Total/NA	Solid	8015NM Prep	
MB 880-61031/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-61031/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-61031/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5113-A-21-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-5113-A-21-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 61042

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5121-1	SS01	Total/NA	Solid	8015B NM	61031
890-5121-2	SS02	Total/NA	Solid	8015B NM	61031
890-5121-3	SS03	Total/NA	Solid	8015B NM	61031
890-5121-4	SS04	Total/NA	Solid	8015B NM	61031
890-5121-5	SS05	Total/NA	Solid	8015B NM	61031
890-5121-6	SS06	Total/NA	Solid	8015B NM	61031
890-5121-7	SS07	Total/NA	Solid	8015B NM	61031
MB 880-61031/1-A	Method Blank	Total/NA	Solid	8015B NM	61031
LCS 880-61031/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	61031
LCSD 880-61031/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	61031
890-5113-A-21-C MS	Matrix Spike	Total/NA	Solid	8015B NM	61031
890-5113-A-21-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	61031

Analysis Batch: 61402

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5121-1	SS01	Total/NA	Solid	8015 NM	
890-5121-2	SS02	Total/NA	Solid	8015 NM	
890-5121-3	SS03	Total/NA	Solid	8015 NM	
890-5121-4	SS04	Total/NA	Solid	8015 NM	
890-5121-5	SS05	Total/NA	Solid	8015 NM	
890-5121-6	SS06	Total/NA	Solid	8015 NM	
890-5121-7	SS07	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5121-1
SDG: 03C1558263

HPLC/IC

Leach Batch: 60728

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5121-1	SS01	Soluble	Solid	DI Leach	
890-5121-2	SS02	Soluble	Solid	DI Leach	
890-5121-3	SS03	Soluble	Solid	DI Leach	
890-5121-4	SS04	Soluble	Solid	DI Leach	
890-5121-5	SS05	Soluble	Solid	DI Leach	
890-5121-6	SS06	Soluble	Solid	DI Leach	
890-5121-7	SS07	Soluble	Solid	DI Leach	
MB 880-60728/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-60728/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-60728/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5121-4 MS	SS04	Soluble	Solid	DI Leach	
890-5121-4 MSD	SS04	Soluble	Solid	DI Leach	

Analysis Batch: 60835

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5121-1	SS01	Soluble	Solid	300.0	60728
890-5121-2	SS02	Soluble	Solid	300.0	60728
890-5121-3	SS03	Soluble	Solid	300.0	60728
890-5121-4	SS04	Soluble	Solid	300.0	60728
890-5121-5	SS05	Soluble	Solid	300.0	60728
890-5121-6	SS06	Soluble	Solid	300.0	60728
890-5121-7	SS07	Soluble	Solid	300.0	60728
MB 880-60728/1-A	Method Blank	Soluble	Solid	300.0	60728
LCS 880-60728/2-A	Lab Control Sample	Soluble	Solid	300.0	60728
LCSD 880-60728/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	60728
890-5121-4 MS	SS04	Soluble	Solid	300.0	60728
890-5121-4 MSD	SS04	Soluble	Solid	300.0	60728

Lab Chronicle

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5121-1
SDG: 03C1558263

Client Sample ID: SS01
Date Collected: 08/17/23 09:50
Date Received: 08/17/23 13:43

Lab Sample ID: 890-5121-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	61153	08/25/23 15:29	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61205	08/28/23 01:11	SM	EET MID
Total/NA	Analysis	Total BTEX		1			61267	08/28/23 10:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			61402	08/28/23 22:20	SM	EET MID
Total/NA	Prep	8015NM Prep			9.99 g	10 mL	61031	08/24/23 16:34	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61042	08/26/23 00:14	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	60728	08/21/23 11:57	SMC	EET MID
Soluble	Analysis	300.0		50	50 mL	50 mL	60835	08/22/23 22:15	CH	EET MID

Client Sample ID: SS02
Date Collected: 08/17/23 09:55
Date Received: 08/17/23 13:43

Lab Sample ID: 890-5121-2
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	61153	08/25/23 15:29	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61205	08/28/23 01:31	SM	EET MID
Total/NA	Analysis	Total BTEX		1			61267	08/28/23 10:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			61402	08/28/23 22:20	SM	EET MID
Total/NA	Prep	8015NM Prep			9.96 g	10 mL	61031	08/24/23 16:34	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61042	08/26/23 00:35	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	60728	08/21/23 11:57	SMC	EET MID
Soluble	Analysis	300.0		50	50 mL	50 mL	60835	08/22/23 22:21	CH	EET MID

Client Sample ID: SS03
Date Collected: 08/17/23 10:00
Date Received: 08/17/23 13:43

Lab Sample ID: 890-5121-3
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	61153	08/25/23 15:29	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61205	08/28/23 01:51	SM	EET MID
Total/NA	Analysis	Total BTEX		1			61267	08/28/23 10:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			61402	08/28/23 22:20	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	61031	08/24/23 16:34	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61042	08/25/23 23:53	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	60728	08/21/23 11:57	SMC	EET MID
Soluble	Analysis	300.0		50	50 mL	50 mL	60835	08/22/23 22:26	CH	EET MID

Client Sample ID: SS04
Date Collected: 08/17/23 10:05
Date Received: 08/17/23 13:43

Lab Sample ID: 890-5121-4
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			5.00 g	5 mL	61153	08/25/23 15:29	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61205	08/28/23 02:12	SM	EET MID
Total/NA	Analysis	Total BTEX		1			61267	08/28/23 10:04	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5121-1
SDG: 03C1558263

Client Sample ID: SS04
Date Collected: 08/17/23 10:05
Date Received: 08/17/23 13:43

Lab Sample ID: 890-5121-4
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			61402	08/28/23 22:20	SM	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	61031	08/24/23 16:34	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61042	08/26/23 00:56	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	60728	08/21/23 11:57	SMC	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	60835	08/22/23 22:32	CH	EET MID

Client Sample ID: SS05
Date Collected: 08/17/23 10:10
Date Received: 08/17/23 13:43

Lab Sample ID: 890-5121-5
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	61153	08/25/23 15:29	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61205	08/28/23 02:32	SM	EET MID
Total/NA	Analysis	Total BTEX		1			61267	08/28/23 10:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			61402	08/28/23 22:20	SM	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	61031	08/24/23 16:34	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61042	08/26/23 01:17	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	60728	08/21/23 11:57	SMC	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	60835	08/22/23 22:49	CH	EET MID

Client Sample ID: SS06
Date Collected: 08/17/23 10:20
Date Received: 08/17/23 13:43

Lab Sample ID: 890-5121-6
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			5.00 g	5 mL	61214	08/26/23 17:44	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61199	08/27/23 20:14	SM	EET MID
Total/NA	Analysis	Total BTEX		1			61267	08/28/23 11:47	SM	EET MID
Total/NA	Analysis	8015 NM		1			61402	08/28/23 22:20	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	61031	08/24/23 16:34	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61042	08/26/23 01:38	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	60728	08/21/23 11:57	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	60835	08/22/23 22:55	CH	EET MID

Client Sample ID: SS07
Date Collected: 08/17/23 10:15
Date Received: 08/17/23 13:43

Lab Sample ID: 890-5121-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	61214	08/26/23 17:44	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61199	08/27/23 20:35	SM	EET MID
Total/NA	Analysis	Total BTEX		1			61267	08/28/23 11:47	SM	EET MID
Total/NA	Analysis	8015 NM		1			61402	08/28/23 22:20	SM	EET MID
Total/NA	Prep	8015NM Prep			9.96 g	10 mL	61031	08/24/23 16:34	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61042	08/26/23 02:21	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5121-1
SDG: 03C1558263

Client Sample ID: SS07

Date Collected: 08/17/23 10:15
Date Received: 08/17/23 13:43

Lab Sample ID: 890-5121-7

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			5.04 g	50 mL	60728	08/21/23 11:57	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	60835	08/22/23 23:12	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: Hudson 1 Fed Com 9H

Job ID: 890-5121-1
SDG: 03C1558263

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

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

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

Method Summary

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5121-1
SDG: 03C1558263

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: Hudson 1 Fed Com 9H

Job ID: 890-5121-1
SDG: 03C1558263

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5121-1	SS01	Solid	08/17/23 09:50	08/17/23 13:43	0.5
890-5121-2	SS02	Solid	08/17/23 09:55	08/17/23 13:43	0.5
890-5121-3	SS03	Solid	08/17/23 10:00	08/17/23 13:43	0.5
890-5121-4	SS04	Solid	08/17/23 10:05	08/17/23 13:43	0.5
890-5121-5	SS05	Solid	08/17/23 10:10	08/17/23 13:43	0.5
890-5121-6	SS06	Solid	08/17/23 10:20	08/17/23 13:43	0.5
890-5121-7	SS07	Solid	08/17/23 10:15	08/17/23 13:43	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:	Hudson 1 Fed Com 9H	Turn Around	☑ Routine ☐ Rush
Project Number:	03C1558263	Due Date:	
Project Location:	32.33342, -103.83142	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:	TWN007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	1.4
Total Containers:		Corrected Temperature:	1.2

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: BTEX	Chlorides	TPH	Sample Comments
SS01	S	8/17/23	0950	0.5'	G	1		X	X	X	Incident #:
SS02			0955								nAPP2322645719
SS03			1000								
SS04			1005								Cost Center:
SS05			1010								1139091001
SS06			1020								
SS07			1015								mroberts@ensolum.com

890-5121 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			8.17.23 1343			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5121-1
SDG Number: 03C1558263

Login Number: 5121
List Number: 1
Creator: Lopez, Abraham

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: 890-5121-1
SDG Number: 03C1558263

Login Number: 5121
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 08/21/23 08:51 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 9/14/2023 11:14:24 AM

JOB DESCRIPTION

Hudson 1 Fed Com 9H
SDG NUMBER 03C1558263

JOB NUMBER

890-5226-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 9/14/2023 11:28:26 AM

JOB DESCRIPTION

Hudson 1 Fed Com 9H
SDG NUMBER 03C1558263

JOB NUMBER

890-5227-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Eurofins Carlsbad

Job Notes

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

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

Authorization

Generated
9/14/2023 11:28:26 AM

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

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Laboratory Job ID: 890-5227-1
SDG: 03C1558263

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5227-1
SDG: 03C1558263

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5227-1
SDG: 03C1558263

Job ID: 890-5227-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-5227-1

Receipt
The samples were received on 9/8/2023 1:36 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.6°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: PH01 (890-5227-1), PH02 (890-5227-2) and PH03 (890-5227-3).

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: PH02 (890-5227-2), PH03 (890-5227-3) and (890-5226-A-1-D). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (890-5226-A-1-B MS). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (890-5230-A-1-A), (890-5230-A-1-B MS) and (890-5230-A-1-C MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: PH01 (890-5227-1), PH02 (890-5227-2) and PH03 (890-5227-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-62304/20), (CCV 880-62304/31) and (CCV 880-62304/5). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The matrix spike duplicate (MSD) recoveries for preparation batch 880-62270 and analytical batch 880-62304 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

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

Client Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5227-1
SDG: 03C1558263

Client Sample ID: PH01

Lab Sample ID: 890-5227-1
Matrix: Solid
Date Collected: 09/07/23 10:00
Date Received: 09/08/23 13:36
Sample Depth: 2

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/12/23 11:43	09/13/23 04:05	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/12/23 11:43	09/13/23 04:05	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/12/23 11:43	09/13/23 04:05	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/12/23 11:43	09/13/23 04:05	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/12/23 11:43	09/13/23 04:05	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/12/23 11:43	09/13/23 04:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*77*		*70 - 130*	*09/12/23 11:43*	*09/13/23 04:05*	*1*
1,4-Difluorobenzene (Surr)	*76*		*70 - 130*	*09/12/23 11:43*	*09/13/23 04:05*	*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			09/13/23 12:14	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			09/14/23 11:16	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5		mg/Kg		09/12/23 11:33	09/13/23 16:37	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		09/12/23 11:33	09/13/23 16:37	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		09/12/23 11:33	09/13/23 16:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*135*	*S1+*	*70 - 130*	*09/12/23 11:33*	*09/13/23 16:37*	*1*
o-Terphenyl	*113*		*70 - 130*	*09/12/23 11:33*	*09/13/23 16:37*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**713**		4.99		mg/Kg			09/14/23 00:40	1

Client Sample ID: PH02

Lab Sample ID: 890-5227-2
Matrix: Solid
Date Collected: 09/07/23 10:35
Date Received: 09/08/23 13:36
Sample Depth: 2

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		09/12/23 11:43	09/13/23 04:26	1
Toluene	<0.00202	U	0.00202		mg/Kg		09/12/23 11:43	09/13/23 04:26	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		09/12/23 11:43	09/13/23 04:26	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		09/12/23 11:43	09/13/23 04:26	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		09/12/23 11:43	09/13/23 04:26	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		09/12/23 11:43	09/13/23 04:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*	*09/12/23 11:43*	*09/13/23 04:26*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5227-1
SDG: 03C1558263

Client Sample ID: PH02

Date Collected: 09/07/23 10:35
Date Received: 09/08/23 13:36
Sample Depth: 2

Lab Sample ID: 890-5227-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*64*	*S1-*	*70 - 130*	*09/12/23 11:43*	*09/13/23 04:26*	*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			09/13/23 12:14	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1		mg/Kg			09/14/23 11:16	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	<50.1	U	50.1		mg/Kg		09/12/23 11:33	09/13/23 16:59	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		09/12/23 11:33	09/13/23 16:59	1
OII Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		09/12/23 11:33	09/13/23 16:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*133*	*S1+*	*70 - 130*	*09/12/23 11:33*	*09/13/23 16:59*	*1*
o-Terphenyl	*111*		*70 - 130*	*09/12/23 11:33*	*09/13/23 16:59*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**57.9**		4.99		mg/Kg			09/14/23 00:59	1

Client Sample ID: PH03

Date Collected: 09/07/23 10:55
Date Received: 09/08/23 13:36
Sample Depth: 2

Lab Sample ID: 890-5227-3
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		09/12/23 11:43	09/13/23 04:46	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/12/23 11:43	09/13/23 04:46	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/12/23 11:43	09/13/23 04:46	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/12/23 11:43	09/13/23 04:46	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/12/23 11:43	09/13/23 04:46	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/12/23 11:43	09/13/23 04:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*147*	*S1+*	*70 - 130*	*09/12/23 11:43*	*09/13/23 04:46*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*09/12/23 11:43*	*09/13/23 04:46*	*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			09/13/23 12:14	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			09/14/23 11:16	1

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Client Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5227-1
SDG: 03C1558263

Client Sample ID: PH03

Date Collected: 09/07/23 10:55
Date Received: 09/08/23 13:36
Sample Depth: 2

Lab Sample ID: 890-5227-3

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	<50.5	U	50.5		mg/Kg		09/12/23 11:33	09/13/23 17:21	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		09/12/23 11:33	09/13/23 17:21	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		09/12/23 11:33	09/13/23 17:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*158*	*S1+*	*70 - 130*	*09/12/23 11:33*	*09/13/23 17:21*	*1*
o-Terphenyl	*138*	*S1+*	*70 - 130*	*09/12/23 11:33*	*09/13/23 17:21*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**131**		4.97		mg/Kg			09/14/23 01:05	1

Surrogate Summary

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5227-1
SDG: 03C1558263

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)
890-5226-A-1-B MS	Matrix Spike	132 S1+	108
890-5226-A-1-C MSD	Matrix Spike Duplicate	125	116
890-5227-1	PH01	77	76
890-5227-2	PH02	88	64 S1-
890-5227-3	PH03	147 S1+	86
LCS 880-62272/1-A	Lab Control Sample	121	118
LCSD 880-62272/2-A	Lab Control Sample Dup	128	112
MB 880-62129/5-A	Method Blank	70	95
MB 880-62272/5-A	Method Blank	70	88

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)
890-5227-1	PH01	135 S1+	113
890-5227-2	PH02	133 S1+	111
890-5227-3	PH03	158 S1+	138 S1+
890-5230-A-1-B MS	Matrix Spike	133 S1+	102
890-5230-A-1-C MSD	Matrix Spike Duplicate	149 S1+	116
LCS 880-62270/2-A	Lab Control Sample	108	105
LCSD 880-62270/3-A	Lab Control Sample Dup	107	99
MB 880-62270/1-A	Method Blank	130	111

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5227-1
SDG: 03C1558263

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-62129/5-A
Matrix: Solid
Analysis Batch: 62238

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 62129

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/11/23 09:25	09/12/23 11:40	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/11/23 09:25	09/12/23 11:40	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/11/23 09:25	09/12/23 11:40	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/11/23 09:25	09/12/23 11:40	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/11/23 09:25	09/12/23 11:40	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/11/23 09:25	09/12/23 11:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*70*		*70 - 130*	*09/11/23 09:25*	*09/12/23 11:40*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*09/11/23 09:25*	*09/12/23 11:40*	*1*

Lab Sample ID: MB 880-62272/5-A
Matrix: Solid
Analysis Batch: 62238

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 62272

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/12/23 11:43	09/12/23 22:17	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/12/23 11:43	09/12/23 22:17	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/12/23 11:43	09/12/23 22:17	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/12/23 11:43	09/12/23 22:17	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/12/23 11:43	09/12/23 22:17	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/12/23 11:43	09/12/23 22:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*70*		*70 - 130*	*09/12/23 11:43*	*09/12/23 22:17*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*09/12/23 11:43*	*09/12/23 22:17*	*1*

Lab Sample ID: LCS 880-62272/1-A
Matrix: Solid
Analysis Batch: 62238

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 62272

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09610		mg/Kg		96	70 - 130		
Toluene			0.100	0.09660		mg/Kg		97	70 - 130		
Ethylbenzene			0.100	0.1043		mg/Kg		104	70 - 130		
m-Xylene & p-Xylene			0.200	0.2233		mg/Kg		112	70 - 130		
o-Xylene			0.100	0.1130		mg/Kg		113	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*
1,4-Difluorobenzene (Surr)	*118*		*70 - 130*

Lab Sample ID: LCSD 880-62272/2-A
Matrix: Solid
Analysis Batch: 62238

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 62272

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09581		mg/Kg		96	70 - 130	0	35

QC Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5227-1
SDG: 03C1558263

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

Lab Sample ID: LCSD 880-62272/2-A
Matrix: Solid
Analysis Batch: 62238

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 62272

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.1011		mg/Kg		101	70 - 130	5	35
Ethylbenzene			0.100	0.1096		mg/Kg		110	70 - 130	5	35
m-Xylene & p-Xylene			0.200	0.2327		mg/Kg		116	70 - 130	4	35
o-Xylene			0.100	0.1177		mg/Kg		118	70 - 130	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

Lab Sample ID: 890-5226-A-1-B MS
Matrix: Solid
Analysis Batch: 62238

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 62272

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U	0.0998	0.07731		mg/Kg		77	70 - 130
Toluene	<0.00200	U	0.0998	0.08191		mg/Kg		82	70 - 130
Ethylbenzene	<0.00200	U	0.0998	0.09084		mg/Kg		91	70 - 130
m-Xylene & p-Xylene	<0.00401	U	0.200	0.1915		mg/Kg		96	70 - 130
o-Xylene	<0.00200	U	0.0998	0.09648		mg/Kg		97	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*132*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: 890-5226-A-1-C MSD
Matrix: Solid
Analysis Batch: 62238

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 62272

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0990	0.08297		mg/Kg		84	70 - 130	7	35
Toluene	<0.00200	U	0.0990	0.08431		mg/Kg		85	70 - 130	3	35
Ethylbenzene	<0.00200	U	0.0990	0.09286		mg/Kg		94	70 - 130	2	35
m-Xylene & p-Xylene	<0.00401	U	0.198	0.1940		mg/Kg		98	70 - 130	1	35
o-Xylene	<0.00200	U	0.0990	0.09744		mg/Kg		98	70 - 130	1	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*

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

Lab Sample ID: MB 880-62270/1-A
Matrix: Solid
Analysis Batch: 62304

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 62270

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		09/12/23 11:33	09/13/23 08:10	1

QC Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5227-1
SDG: 03C1558263

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

Lab Sample ID: MB 880-62270/1-A
Matrix: Solid
Analysis Batch: 62304

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 62270

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		09/12/23 11:33	09/13/23 08:10	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/12/23 11:33	09/13/23 08:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*130*		*70 - 130*	*09/12/23 11:33*	*09/13/23 08:10*	*1*
o-Terphenyl	*111*		*70 - 130*	*09/12/23 11:33*	*09/13/23 08:10*	*1*

Lab Sample ID: LCS 880-62270/2-A
Matrix: Solid
Analysis Batch: 62304

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 62270

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1056		mg/Kg		106	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	986.8		mg/Kg		99	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*108*		*70 - 130*
o-Terphenyl	*105*		*70 - 130*

Lab Sample ID: LCSD 880-62270/3-A
Matrix: Solid
Analysis Batch: 62304

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 62270

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1081		mg/Kg		108	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	980.9		mg/Kg		98	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*107*		*70 - 130*
o-Terphenyl	*99*		*70 - 130*

Lab Sample ID: 890-5230-A-1-B MS
Matrix: Solid
Analysis Batch: 62304

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 62270

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	1010	950.2		mg/Kg		93	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.6	U F1	1010	1243		mg/Kg		121	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*133*	*S1+*	*70 - 130*
o-Terphenyl	*102*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5227-1
SDG: 03C1558263

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

Lab Sample ID: 890-5230-A-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 62304 — **Prep Batch: 62270**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	1010	1027		mg/Kg		100	70 - 130	8	20
Diesel Range Organics (Over C10-C28)	<49.6	U F1	1010	1392	F1	mg/Kg		135	70 - 130	11	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*149*	*S1+*	*70 - 130*
o-Terphenyl	*116*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-62349/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 62394

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			09/13/23 22:26	1

Lab Sample ID: LCS 880-62349/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 62394

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	250.8		mg/Kg		100	90 - 110		

Lab Sample ID: LCSD 880-62349/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 62394

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	248.6		mg/Kg		99	90 - 110	1	20

Lab Sample ID: 890-5226-A-12-D MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 62394

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	245		251	519.1		mg/Kg		110	90 - 110		

Lab Sample ID: 890-5226-A-12-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 62394

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	245		251	516.5		mg/Kg		109	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5227-1
SDG: 03C1558263

GC VOA

Prep Batch: 62129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-62129/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 62238

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5227-1	PH01	Total/NA	Solid	8021B	62272
890-5227-2	PH02	Total/NA	Solid	8021B	62272
890-5227-3	PH03	Total/NA	Solid	8021B	62272
MB 880-62129/5-A	Method Blank	Total/NA	Solid	8021B	62129
MB 880-62272/5-A	Method Blank	Total/NA	Solid	8021B	62272
LCS 880-62272/1-A	Lab Control Sample	Total/NA	Solid	8021B	62272
LCSD 880-62272/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	62272
890-5226-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	62272
890-5226-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	62272

Prep Batch: 62272

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5227-1	PH01	Total/NA	Solid	5035	
890-5227-2	PH02	Total/NA	Solid	5035	
890-5227-3	PH03	Total/NA	Solid	5035	
MB 880-62272/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-62272/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-62272/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5226-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
890-5226-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 62356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5227-1	PH01	Total/NA	Solid	Total BTEX	
890-5227-2	PH02	Total/NA	Solid	Total BTEX	
890-5227-3	PH03	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 62270

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5227-1	PH01	Total/NA	Solid	8015NM Prep	
890-5227-2	PH02	Total/NA	Solid	8015NM Prep	
890-5227-3	PH03	Total/NA	Solid	8015NM Prep	
MB 880-62270/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-62270/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-62270/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5230-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-5230-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 62304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5227-1	PH01	Total/NA	Solid	8015B NM	62270
890-5227-2	PH02	Total/NA	Solid	8015B NM	62270
890-5227-3	PH03	Total/NA	Solid	8015B NM	62270
MB 880-62270/1-A	Method Blank	Total/NA	Solid	8015B NM	62270
LCS 880-62270/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	62270

QC Association Summary

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5227-1
SDG: 03C1558263

GC Semi VOA (Continued)

Analysis Batch: 62304 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-62270/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	62270
890-5230-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	62270
890-5230-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	62270

Analysis Batch: 62425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5227-1	PH01	Total/NA	Solid	8015 NM	
890-5227-2	PH02	Total/NA	Solid	8015 NM	
890-5227-3	PH03	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 62349

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5227-1	PH01	Soluble	Solid	DI Leach	
890-5227-2	PH02	Soluble	Solid	DI Leach	
890-5227-3	PH03	Soluble	Solid	DI Leach	
MB 880-62349/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-62349/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-62349/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5226-A-12-D MS	Matrix Spike	Soluble	Solid	DI Leach	
890-5226-A-12-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 62394

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5227-1	PH01	Soluble	Solid	300.0	62349
890-5227-2	PH02	Soluble	Solid	300.0	62349
890-5227-3	PH03	Soluble	Solid	300.0	62349
MB 880-62349/1-A	Method Blank	Soluble	Solid	300.0	62349
LCS 880-62349/2-A	Lab Control Sample	Soluble	Solid	300.0	62349
LCSD 880-62349/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	62349
890-5226-A-12-D MS	Matrix Spike	Soluble	Solid	300.0	62349
890-5226-A-12-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	62349

Lab Chronicle

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5227-1
SDG: 03C1558263

Client Sample ID: PH01
Date Collected: 09/07/23 10:00
Date Received: 09/08/23 13:36

Lab Sample ID: 890-5227-1
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	62272	09/12/23 11:43	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62238	09/13/23 04:05	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62356	09/13/23 12:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			62425	09/14/23 11:16	SM	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	62270	09/12/23 11:33	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62304	09/13/23 16:37	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	62349	09/13/23 12:06	AG	EET MID
Soluble	Analysis	300.0		1			62394	09/14/23 00:40	CH	EET MID

Client Sample ID: PH02
Date Collected: 09/07/23 10:35
Date Received: 09/08/23 13:36

Lab Sample ID: 890-5227-2
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			4.95 g	5 mL	62272	09/12/23 11:43	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62238	09/13/23 04:26	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62356	09/13/23 12:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			62425	09/14/23 11:16	SM	EET MID
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	62270	09/12/23 11:33	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62304	09/13/23 16:59	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	62349	09/13/23 12:06	AG	EET MID
Soluble	Analysis	300.0		1			62394	09/14/23 00:59	CH	EET MID

Client Sample ID: PH03
Date Collected: 09/07/23 10:55
Date Received: 09/08/23 13:36

Lab Sample ID: 890-5227-3
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	62272	09/12/23 11:43	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62238	09/13/23 04:46	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62356	09/13/23 12:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			62425	09/14/23 11:16	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	62270	09/12/23 11:33	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62304	09/13/23 17:21	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	62349	09/13/23 12:06	AG	EET MID
Soluble	Analysis	300.0		1			62394	09/14/23 01:05	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: Hudson 1 Fed Com 9H

Job ID: 890-5227-1
SDG: 03C1558263

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

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

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

Method Summary

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5227-1
SDG: 03C1558263

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: Hudson 1 Fed Com 9H

Job ID: 890-5227-1
SDG: 03C1558263

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5227-1	PH01	Solid	09/07/23 10:00	09/08/23 13:36	2
890-5227-2	PH02	Solid	09/07/23 10:35	09/08/23 13:36	2
890-5227-3	PH03	Solid	09/07/23 10:55	09/08/23 13:36	2

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Chain of Custody

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

Work Order No: _____

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:	Hudson 1 Fed Com 9H	Turn Around	☑ Routine ☐ Rush
Project Number:	03C1558263	Due Date:	
Project Location:	32.33342, -103.83142	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:	TVm 007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	2.8
Total Containers:		Corrected Temperature:	2.6

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	BTEX	Chlorides	TPH	MR
PH01	S	9/7/23	1000	2'	G	1		X	X	X	
PH02	S	9/7/23	1035	2'	G	1		X	X	X	
PH03	S	9/7/23	1055	2'	G	1		X	X	X	

Parameters

ANALYSIS REQUEST

890-5227 Chain of Custody

Preservative Codes

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

Sample Comments

Incident #:
NAPP2322645119

Cost Center:
1139091001

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		9-8-23 13:30	4		
3			6		
5					

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5227-1
SDG Number: 03C1558263

Login Number: 5227
List Number: 1
Creator: Lopez, Abraham

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: 890-5227-1
SDG Number: 03C1558263

Login Number: 5227
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 09/12/23 11:10 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 Carlsbad

Job Notes

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

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

Authorization

Generated
9/14/2023 11:14:24 AM

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

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Laboratory Job ID: 890-5226-1
SDG: 03C1558263

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5226-1
SDG: 03C1558263

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5226-1
SDG: 03C1558263

Job ID: 890-5226-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-5226-1

Receipt
The samples were received on 9/8/2023 1:36 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.6°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: FS01 (890-5226-1), FS02 (890-5226-2), FS03 (890-5226-3), FS04 (890-5226-4), FS05 (890-5226-5), FS06 (890-5226-6), FS07 (890-5226-7), FS08 (890-5226-8), FS09 (890-5226-9), FS10 (890-5226-10), FS11 (890-5226-11), SW01 (890-5226-12) and SW02 (890-5226-13).

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: FS01 (890-5226-1), FS02 (890-5226-2), FS03 (890-5226-3), FS05 (890-5226-5), FS07 (890-5226-7), FS08 (890-5226-8), FS10 (890-5226-10) and SW01 (890-5226-12). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (890-5226-A-1-B MS). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (890-5224-A-11-D MS) and (890-5224-A-11-E MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: FS01 (890-5226-1), FS02 (890-5226-2), FS03 (890-5226-3) and FS04 (890-5226-4). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: FS05 (890-5226-5), FS06 (890-5226-6), FS07 (890-5226-7), FS08 (890-5226-8), FS09 (890-5226-9), FS10 (890-5226-10), FS11 (890-5226-11), SW01 (890-5226-12) and SW02 (890-5226-13). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-62229/20), (CCV 880-62229/31) and (CCV 880-62229/5). Evidence of matrix interferences is not obvious.

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

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

Client Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5226-1
SDG: 03C1558263

Client Sample ID: FS01

Lab Sample ID: 890-5226-1
Matrix: Solid
Date Collected: 09/08/23 10:25
Date Received: 09/08/23 13:36
Sample Depth: 2'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/12/23 11:43	09/12/23 22:38	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/12/23 11:43	09/12/23 22:38	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/12/23 11:43	09/12/23 22:38	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		09/12/23 11:43	09/12/23 22:38	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/12/23 11:43	09/12/23 22:38	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		09/12/23 11:43	09/12/23 22:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*09/12/23 11:43*	*09/12/23 22:38*	*1*
1,4-Difluorobenzene (Surr)	*65*	*S1-*	*70 - 130*	*09/12/23 11:43*	*09/12/23 22:38*	*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			09/13/23 12:14	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**54.6**		50.4		mg/Kg			09/13/23 10:49	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	50.4		mg/Kg		09/12/23 11:26	09/12/23 15:00	1
Diesel Range Organics (Over C10-C28)	**54.6**		50.4		mg/Kg		09/12/23 11:26	09/12/23 15:00	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		09/12/23 11:26	09/12/23 15:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*136*	*S1+*	*70 - 130*	*09/12/23 11:26*	*09/12/23 15:00*	*1*
o-Terphenyl	*115*		*70 - 130*	*09/12/23 11:26*	*09/12/23 15:00*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**895**		4.99		mg/Kg			09/14/23 06:20	1

Client Sample ID: FS02

Lab Sample ID: 890-5226-2
Matrix: Solid
Date Collected: 09/08/23 10:30
Date Received: 09/08/23 13:36
Sample Depth: 2'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/12/23 11:43	09/12/23 22:59	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/12/23 11:43	09/12/23 22:59	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/12/23 11:43	09/12/23 22:59	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/12/23 11:43	09/12/23 22:59	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/12/23 11:43	09/12/23 22:59	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/12/23 11:43	09/12/23 22:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*09/12/23 11:43*	*09/12/23 22:59*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5226-1
SDG: 03C1558263

Client Sample ID: FS02

Lab Sample ID: 890-5226-2
Matrix: Solid
Date Collected: 09/08/23 10:30
Date Received: 09/08/23 13:36
Sample Depth: 2'

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*60*	*S1-*	*70 - 130*	*09/12/23 11:43*	*09/12/23 22:59*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			09/13/23 12:14	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5	mg/Kg			09/13/23 10:49	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5	mg/Kg		09/12/23 11:26	09/12/23 15:22	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5	mg/Kg		09/12/23 11:26	09/12/23 15:22	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5	mg/Kg		09/12/23 11:26	09/12/23 15:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*138*	*S1+*	*70 - 130*	*09/12/23 11:26*	*09/12/23 15:22*	*1*
o-Terphenyl	*117*		*70 - 130*	*09/12/23 11:26*	*09/12/23 15:22*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**498**		5.04	mg/Kg			09/13/23 22:45	1

Client Sample ID: FS03

Lab Sample ID: 890-5226-3
Matrix: Solid
Date Collected: 09/08/23 10:35
Date Received: 09/08/23 13:36
Sample Depth: 2'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		09/12/23 11:43	09/12/23 23:19	1
Toluene	<0.00199	U	0.00199	mg/Kg		09/12/23 11:43	09/12/23 23:19	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		09/12/23 11:43	09/12/23 23:19	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		09/12/23 11:43	09/12/23 23:19	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		09/12/23 11:43	09/12/23 23:19	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		09/12/23 11:43	09/12/23 23:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*81*		*70 - 130*	*09/12/23 11:43*	*09/12/23 23:19*	*1*
1,4-Difluorobenzene (Surr)	*57*	*S1-*	*70 - 130*	*09/12/23 11:43*	*09/12/23 23:19*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			09/13/23 12:14	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7	mg/Kg			09/13/23 10:49	1

Client Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5226-1
SDG: 03C1558263

Client Sample ID: FS03

Lab Sample ID: 890-5226-3
Matrix: Solid
Date Collected: 09/08/23 10:35
Date Received: 09/08/23 13:36
Sample Depth: 2'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		09/12/23 11:26	09/12/23 15:44	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		09/12/23 11:26	09/12/23 15:44	1
OII Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		09/12/23 11:26	09/12/23 15:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*133*	*S1+*	*70 - 130*	*09/12/23 11:26*	*09/12/23 15:44*	*1*
o-Terphenyl	*114*		*70 - 130*	*09/12/23 11:26*	*09/12/23 15:44*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**212**		5.02		mg/Kg			09/13/23 23:04	1

Client Sample ID: FS04

Lab Sample ID: 890-5226-4
Matrix: Solid
Date Collected: 09/08/23 10:40
Date Received: 09/08/23 13:36
Sample Depth: 2'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/12/23 11:43	09/12/23 23:40	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/12/23 11:43	09/12/23 23:40	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/12/23 11:43	09/12/23 23:40	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/12/23 11:43	09/12/23 23:40	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/12/23 11:43	09/12/23 23:40	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/12/23 11:43	09/12/23 23:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*09/12/23 11:43*	*09/12/23 23:40*	*1*
1,4-Difluorobenzene (Surr)	*75*		*70 - 130*	*09/12/23 11:43*	*09/12/23 23:40*	*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			09/13/23 12:14	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/13/23 10:49	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		09/12/23 11:26	09/12/23 16:06	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/12/23 11:26	09/12/23 16:06	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/12/23 11:26	09/12/23 16:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*139*	*S1+*	*70 - 130*	*09/12/23 11:26*	*09/12/23 16:06*	*1*
o-Terphenyl	*116*		*70 - 130*	*09/12/23 11:26*	*09/12/23 16:06*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5226-1
SDG: 03C1558263

Client Sample ID: FS04

Lab Sample ID: 890-5226-4
Matrix: Solid
Date Collected: 09/08/23 10:40
Date Received: 09/08/23 13:36
Sample Depth: 2'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	114		5.05		mg/Kg			09/13/23 23:10	1

Client Sample ID: FS05

Lab Sample ID: 890-5226-5
Matrix: Solid
Date Collected: 09/08/23 10:45
Date Received: 09/08/23 13:36
Sample Depth: 2'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/12/23 11:43	09/13/23 00:00	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/12/23 11:43	09/13/23 00:00	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/12/23 11:43	09/13/23 00:00	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/12/23 11:43	09/13/23 00:00	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/12/23 11:43	09/13/23 00:00	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/12/23 11:43	09/13/23 00:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*	*09/12/23 11:43*	*09/13/23 00:00*	*1*
1,4-Difluorobenzene (Surr)	*60*	*S1-*	*70 - 130*	*09/12/23 11:43*	*09/13/23 00:00*	*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			09/13/23 12:14	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/13/23 10:49	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		09/12/23 11:26	09/12/23 16:50	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/12/23 11:26	09/12/23 16:50	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/12/23 11:26	09/12/23 16:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*132*	*S1+*	*70 - 130*	*09/12/23 11:26*	*09/12/23 16:50*	*1*
o-Terphenyl	*113*		*70 - 130*	*09/12/23 11:26*	*09/12/23 16:50*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	158		5.05		mg/Kg			09/13/23 23:17	1

Client Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5226-1
SDG: 03C1558263

Client Sample ID: FS06

Lab Sample ID: 890-5226-6
Matrix: Solid
Date Collected: 09/08/23 10:50
Date Received: 09/08/23 13:36
Sample Depth: 2'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/12/23 11:43	09/13/23 00:21	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/12/23 11:43	09/13/23 00:21	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/12/23 11:43	09/13/23 00:21	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		09/12/23 11:43	09/13/23 00:21	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/12/23 11:43	09/13/23 00:21	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		09/12/23 11:43	09/13/23 00:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*09/12/23 11:43*	*09/13/23 00:21*	*1*
1,4-Difluorobenzene (Surr)	*76*		*70 - 130*	*09/12/23 11:43*	*09/13/23 00:21*	*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			09/13/23 12:14	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			09/13/23 10:49	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6		mg/Kg		09/12/23 11:26	09/12/23 17:13	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		09/12/23 11:26	09/12/23 17:13	1
OII Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		09/12/23 11:26	09/12/23 17:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*134*	*S1+*	*70 - 130*	*09/12/23 11:26*	*09/12/23 17:13*	*1*
o-Terphenyl	*114*		*70 - 130*	*09/12/23 11:26*	*09/12/23 17:13*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**268**		5.03		mg/Kg			09/13/23 23:23	1

Client Sample ID: FS07

Lab Sample ID: 890-5226-7
Matrix: Solid
Date Collected: 09/08/23 10:55
Date Received: 09/08/23 13:36
Sample Depth: 2'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/12/23 11:43	09/13/23 00:41	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/12/23 11:43	09/13/23 00:41	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/12/23 11:43	09/13/23 00:41	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/12/23 11:43	09/13/23 00:41	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/12/23 11:43	09/13/23 00:41	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/12/23 11:43	09/13/23 00:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*	*09/12/23 11:43*	*09/13/23 00:41*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5226-1
SDG: 03C1558263

Client Sample ID: FS07

Lab Sample ID: 890-5226-7
Matrix: Solid
Date Collected: 09/08/23 10:55
Date Received: 09/08/23 13:36
Sample Depth: 2'

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*51*	*S1-*	*70 - 130*	*09/12/23 11:43*	*09/13/23 00:41*	*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			09/13/23 12:14	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.5	U	49.5	mg/Kg			09/13/23 10:49	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.5	U	49.5	mg/Kg		09/12/23 11:26	09/12/23 17:35	1
Diesel Range Organics (Over C10-C28)	<49.5	U	49.5	mg/Kg		09/12/23 11:26	09/12/23 17:35	1
OII Range Organics (Over C28-C36)	<49.5	U	49.5	mg/Kg		09/12/23 11:26	09/12/23 17:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*134*	*S1+*	*70 - 130*	*09/12/23 11:26*	*09/12/23 17:35*	*1*
o-Terphenyl	*115*		*70 - 130*	*09/12/23 11:26*	*09/12/23 17:35*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**354**		4.99	mg/Kg			09/13/23 23:42	1

Client Sample ID: FS08

Lab Sample ID: 890-5226-8
Matrix: Solid
Date Collected: 09/08/23 11:00
Date Received: 09/08/23 13:36
Sample Depth: 2'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		09/12/23 11:43	09/13/23 01:01	1
Toluene	<0.00199	U	0.00199	mg/Kg		09/12/23 11:43	09/13/23 01:01	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		09/12/23 11:43	09/13/23 01:01	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		09/12/23 11:43	09/13/23 01:01	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		09/12/23 11:43	09/13/23 01:01	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		09/12/23 11:43	09/13/23 01:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*09/12/23 11:43*	*09/13/23 01:01*	*1*
1,4-Difluorobenzene (Surr)	*50*	*S1-*	*70 - 130*	*09/12/23 11:43*	*09/13/23 01:01*	*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			09/13/23 12:14	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3	mg/Kg			09/13/23 10:49	1

Client Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5226-1
SDG: 03C1558263

Client Sample ID: FS08

Lab Sample ID: 890-5226-8
Matrix: Solid
Date Collected: 09/08/23 11:00
Date Received: 09/08/23 13:36
Sample Depth: 2'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	50.3		mg/Kg		09/12/23 11:26	09/12/23 17:56	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3		mg/Kg		09/12/23 11:26	09/12/23 17:56	1
OII Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		09/12/23 11:26	09/12/23 17:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*134*	*S1+*	*70 - 130*	*09/12/23 11:26*	*09/12/23 17:56*	*1*
o-Terphenyl	*117*		*70 - 130*	*09/12/23 11:26*	*09/12/23 17:56*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**146**		4.97		mg/Kg			09/13/23 23:49	1

Client Sample ID: FS09

Lab Sample ID: 890-5226-9
Matrix: Solid
Date Collected: 09/08/23 11:05
Date Received: 09/08/23 13:36
Sample Depth: 2'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/12/23 11:43	09/13/23 01:22	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/12/23 11:43	09/13/23 01:22	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/12/23 11:43	09/13/23 01:22	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/12/23 11:43	09/13/23 01:22	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/12/23 11:43	09/13/23 01:22	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/12/23 11:43	09/13/23 01:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*70 - 130*	*09/12/23 11:43*	*09/13/23 01:22*	*1*
1,4-Difluorobenzene (Surr)	*72*		*70 - 130*	*09/12/23 11:43*	*09/13/23 01:22*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			09/13/23 12:14	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.2	U	50.2		mg/Kg			09/13/23 10:49	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	50.2		mg/Kg		09/12/23 11:26	09/12/23 18:18	1
Diesel Range Organics (Over C10-C28)	<50.2	U	50.2		mg/Kg		09/12/23 11:26	09/12/23 18:18	1
OII Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		09/12/23 11:26	09/12/23 18:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*134*	*S1+*	*70 - 130*	*09/12/23 11:26*	*09/12/23 18:18*	*1*
o-Terphenyl	*115*		*70 - 130*	*09/12/23 11:26*	*09/12/23 18:18*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5226-1
SDG: 03C1558263

Client Sample ID: FS09

Lab Sample ID: 890-5226-9
Matrix: Solid
Date Collected: 09/08/23 11:05
Date Received: 09/08/23 13:36
Sample Depth: 2'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	126		5.02		mg/Kg			09/13/23 23:55	1

Client Sample ID: FS10

Lab Sample ID: 890-5226-10
Matrix: Solid
Date Collected: 09/08/23 11:10
Date Received: 09/08/23 13:36
Sample Depth: 2'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/12/23 11:43	09/13/23 01:42	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/12/23 11:43	09/13/23 01:42	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/12/23 11:43	09/13/23 01:42	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/12/23 11:43	09/13/23 01:42	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/12/23 11:43	09/13/23 01:42	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/12/23 11:43	09/13/23 01:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*78*		*70 - 130*	*09/12/23 11:43*	*09/13/23 01:42*	*1*
1,4-Difluorobenzene (Surr)	*70*		*70 - 130*	*09/12/23 11:43*	*09/13/23 01:42*	*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			09/13/23 12:14	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1		mg/Kg			09/13/23 10:49	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	<50.1	U	50.1		mg/Kg		09/12/23 11:26	09/12/23 18:39	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		09/12/23 11:26	09/12/23 18:39	1
OII Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		09/12/23 11:26	09/12/23 18:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*148*	*S1+*	*70 - 130*	*09/12/23 11:26*	*09/12/23 18:39*	*1*
o-Terphenyl	*131*	*S1+*	*70 - 130*	*09/12/23 11:26*	*09/12/23 18:39*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	184		4.96		mg/Kg			09/14/23 00:02	1

Client Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5226-1
SDG: 03C1558263

Client Sample ID: FS11

Lab Sample ID: 890-5226-11
Matrix: Solid
Date Collected: 09/08/23 11:15
Date Received: 09/08/23 13:36
Sample Depth: 2'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/12/23 11:43	09/13/23 03:04	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/12/23 11:43	09/13/23 03:04	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/12/23 11:43	09/13/23 03:04	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/12/23 11:43	09/13/23 03:04	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/12/23 11:43	09/13/23 03:04	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/12/23 11:43	09/13/23 03:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*76*		*70 - 130*	*09/12/23 11:43*	*09/13/23 03:04*	*1*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*	*09/12/23 11:43*	*09/13/23 03:04*	*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			09/13/23 12:14	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			09/13/23 10:49	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5		mg/Kg		09/12/23 11:26	09/12/23 19:01	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		09/12/23 11:26	09/12/23 19:01	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		09/12/23 11:26	09/12/23 19:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*134*	*S1+*	*70 - 130*	*09/12/23 11:26*	*09/12/23 19:01*	*1*
o-Terphenyl	*113*		*70 - 130*	*09/12/23 11:26*	*09/12/23 19:01*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**121**		4.97		mg/Kg			09/14/23 00:08	1

Client Sample ID: SW01

Lab Sample ID: 890-5226-12
Matrix: Solid
Date Collected: 09/08/23 11:20
Date Received: 09/08/23 13:36
Sample Depth: 0-2'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/12/23 11:43	09/13/23 03:25	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/12/23 11:43	09/13/23 03:25	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/12/23 11:43	09/13/23 03:25	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/12/23 11:43	09/13/23 03:25	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/12/23 11:43	09/13/23 03:25	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/12/23 11:43	09/13/23 03:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*	*09/12/23 11:43*	*09/13/23 03:25*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5226-1
SDG: 03C1558263

Client Sample ID: SW01

Lab Sample ID: 890-5226-12
Matrix: Solid

Date Collected: 09/08/23 11:20
Date Received: 09/08/23 13:36
Sample Depth: 0-2'

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*54*	*S1-*	*70 - 130*	*09/12/23 11:43*	*09/13/23 03:25*	*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			09/13/23 12:14	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**71.1**		50.0	mg/Kg			09/13/23 10:49	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		09/12/23 11:26	09/12/23 19:22	1
Diesel Range Organics (Over C10-C28)	**71.1**		50.0	mg/Kg		09/12/23 11:26	09/12/23 19:22	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		09/12/23 11:26	09/12/23 19:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*142*	*S1+*	*70 - 130*	*09/12/23 11:26*	*09/12/23 19:22*	*1*
o-Terphenyl	*122*		*70 - 130*	*09/12/23 11:26*	*09/12/23 19:22*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**245**		5.01	mg/Kg			09/14/23 00:14	1

Client Sample ID: SW02

Lab Sample ID: 890-5226-13
Matrix: Solid

Date Collected: 09/08/23 11:25
Date Received: 09/08/23 13:36
Sample Depth: 0-2'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/12/23 11:43	09/13/23 03:45	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/12/23 11:43	09/13/23 03:45	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/12/23 11:43	09/13/23 03:45	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		09/12/23 11:43	09/13/23 03:45	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/12/23 11:43	09/13/23 03:45	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		09/12/23 11:43	09/13/23 03:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*78*		*70 - 130*	*09/12/23 11:43*	*09/13/23 03:45*	*1*
1,4-Difluorobenzene (Surr)	*74*		*70 - 130*	*09/12/23 11:43*	*09/13/23 03:45*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			09/13/23 12:14	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			09/13/23 10:49	1

Client Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5226-1
SDG: 03C1558263

Client Sample ID: SW02

Date Collected: 09/08/23 11:25
Date Received: 09/08/23 13:36
Sample Depth: 0-2'

Lab Sample ID: 890-5226-13

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		09/12/23 11:26	09/12/23 19:43	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/12/23 11:26	09/12/23 19:43	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/12/23 11:26	09/12/23 19:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*138*	*S1+*	*70 - 130*	*09/12/23 11:26*	*09/12/23 19:43*	*1*
o-Terphenyl	*119*		*70 - 130*	*09/12/23 11:26*	*09/12/23 19:43*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**208**		5.02		mg/Kg			09/14/23 00:34	1

Surrogate Summary

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5226-1
SDG: 03C1558263

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)
890-5226-1	FS01	110	65 S1-
890-5226-1 MS	FS01	132 S1+	108
890-5226-1 MSD	FS01	125	116
890-5226-2	FS02	98	60 S1-
890-5226-3	FS03	81	57 S1-
890-5226-4	FS04	80	75
890-5226-5	FS05	92	60 S1-
890-5226-6	FS06	80	76
890-5226-7	FS07	91	51 S1-
890-5226-8	FS08	100	50 S1-
890-5226-9	FS09	82	72
890-5226-10	FS10	78	70
890-5226-11	FS11	76	77
890-5226-12	SW01	92	54 S1-
890-5226-13	SW02	78	74
LCS 880-62272/1-A	Lab Control Sample	121	118
LCSD 880-62272/2-A	Lab Control Sample Dup	128	112
MB 880-62129/5-A	Method Blank	70	95
MB 880-62272/5-A	Method Blank	70	88

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)
890-5224-A-11-D MS	Matrix Spike	132 S1+	102
890-5224-A-11-E MSD	Matrix Spike Duplicate	133 S1+	103
890-5226-1	FS01	136 S1+	115
890-5226-2	FS02	138 S1+	117
890-5226-3	FS03	133 S1+	114
890-5226-4	FS04	139 S1+	116
890-5226-5	FS05	132 S1+	113
890-5226-6	FS06	134 S1+	114
890-5226-7	FS07	134 S1+	115
890-5226-8	FS08	134 S1+	117
890-5226-9	FS09	134 S1+	115
890-5226-10	FS10	148 S1+	131 S1+
890-5226-11	FS11	134 S1+	113
890-5226-12	SW01	142 S1+	122
890-5226-13	SW02	138 S1+	119
LCS 880-62268/2-A	Lab Control Sample	105	103
LCSD 880-62268/3-A	Lab Control Sample Dup	106	100
MB 880-62268/1-A	Method Blank	123	109

Surrogate Legend

1CO = 1-Chlorooctane

Surrogate Summary

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5226-1
SDG: 03C1558263

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5226-1
SDG: 03C1558263

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-62129/5-A
Matrix: Solid
Analysis Batch: 62238

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 62129

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/11/23 09:25	09/12/23 11:40	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/11/23 09:25	09/12/23 11:40	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/11/23 09:25	09/12/23 11:40	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/11/23 09:25	09/12/23 11:40	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/11/23 09:25	09/12/23 11:40	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/11/23 09:25	09/12/23 11:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*70*		*70 - 130*	*09/11/23 09:25*	*09/12/23 11:40*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*09/11/23 09:25*	*09/12/23 11:40*	*1*

Lab Sample ID: MB 880-62272/5-A
Matrix: Solid
Analysis Batch: 62238

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 62272

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/12/23 11:43	09/12/23 22:17	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/12/23 11:43	09/12/23 22:17	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/12/23 11:43	09/12/23 22:17	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/12/23 11:43	09/12/23 22:17	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/12/23 11:43	09/12/23 22:17	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/12/23 11:43	09/12/23 22:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*70*		*70 - 130*	*09/12/23 11:43*	*09/12/23 22:17*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*09/12/23 11:43*	*09/12/23 22:17*	*1*

Lab Sample ID: LCS 880-62272/1-A
Matrix: Solid
Analysis Batch: 62238

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 62272

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09610		mg/Kg		96	70 - 130		
Toluene			0.100	0.09660		mg/Kg		97	70 - 130		
Ethylbenzene			0.100	0.1043		mg/Kg		104	70 - 130		
m-Xylene & p-Xylene			0.200	0.2233		mg/Kg		112	70 - 130		
o-Xylene			0.100	0.1130		mg/Kg		113	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*
1,4-Difluorobenzene (Surr)	*118*		*70 - 130*

Lab Sample ID: LCSD 880-62272/2-A
Matrix: Solid
Analysis Batch: 62238

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 62272

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09581		mg/Kg		96	70 - 130	0	35

QC Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5226-1
SDG: 03C1558263

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

Lab Sample ID: LCSD 880-62272/2-A
Matrix: Solid
Analysis Batch: 62238

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 62272

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.1011		mg/Kg		101	70 - 130	5	35
Ethylbenzene			0.100	0.1096		mg/Kg		110	70 - 130	5	35
m-Xylene & p-Xylene			0.200	0.2327		mg/Kg		116	70 - 130	4	35
o-Xylene			0.100	0.1177		mg/Kg		118	70 - 130	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

Lab Sample ID: 890-5226-1 MS
Matrix: Solid
Analysis Batch: 62238

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 62272

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U	0.0998	0.07731		mg/Kg		77	70 - 130
Toluene	<0.00200	U	0.0998	0.08191		mg/Kg		82	70 - 130
Ethylbenzene	<0.00200	U	0.0998	0.09084		mg/Kg		91	70 - 130
m-Xylene & p-Xylene	<0.00401	U	0.200	0.1915		mg/Kg		96	70 - 130
o-Xylene	<0.00200	U	0.0998	0.09648		mg/Kg		97	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*132*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: 890-5226-1 MSD
Matrix: Solid
Analysis Batch: 62238

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 62272

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0990	0.08297		mg/Kg		84	70 - 130	7	35
Toluene	<0.00200	U	0.0990	0.08431		mg/Kg		85	70 - 130	3	35
Ethylbenzene	<0.00200	U	0.0990	0.09286		mg/Kg		94	70 - 130	2	35
m-Xylene & p-Xylene	<0.00401	U	0.198	0.1940		mg/Kg		98	70 - 130	1	35
o-Xylene	<0.00200	U	0.0990	0.09744		mg/Kg		98	70 - 130	1	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*

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

Lab Sample ID: MB 880-62268/1-A
Matrix: Solid
Analysis Batch: 62229

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 62268

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		09/12/23 08:00	09/12/23 08:26	1

QC Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5226-1
SDG: 03C1558263

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

Lab Sample ID: MB 880-62268/1-A
Matrix: Solid
Analysis Batch: 62229

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 62268

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		09/12/23 08:00	09/12/23 08:26	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/12/23 08:00	09/12/23 08:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*123*		*70 - 130*	*09/12/23 08:00*	*09/12/23 08:26*	*1*
o-Terphenyl	*109*		*70 - 130*	*09/12/23 08:00*	*09/12/23 08:26*	*1*

Lab Sample ID: LCS 880-62268/2-A
Matrix: Solid
Analysis Batch: 62229

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 62268

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1005		mg/Kg		101	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	963.8		mg/Kg		96	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*105*		*70 - 130*
o-Terphenyl	*103*		*70 - 130*

Lab Sample ID: LCSD 880-62268/3-A
Matrix: Solid
Analysis Batch: 62229

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 62268

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1016		mg/Kg		102	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	976.3		mg/Kg		98	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*106*		*70 - 130*
o-Terphenyl	*100*		*70 - 130*

Lab Sample ID: 890-5224-A-11-D MS
Matrix: Solid
Analysis Batch: 62229

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 62268

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	999	946.3		mg/Kg		95	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.6	U	999	1288		mg/Kg		129	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*132*	*S1+*	*70 - 130*
o-Terphenyl	*102*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5226-1
SDG: 03C1558263

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

Lab Sample ID: 890-5224-A-11-E MSD
Matrix: Solid
Analysis Batch: 62229

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 62268

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	999	956.5		mg/Kg		96	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<49.6	U	999	1296		mg/Kg		130	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*133*	*S1+*	*70 - 130*
o-Terphenyl	*103*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-62349/1-A
Matrix: Solid
Analysis Batch: 62394

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			09/13/23 22:26	1

Lab Sample ID: LCS 880-62349/2-A
Matrix: Solid
Analysis Batch: 62394

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	250.8		mg/Kg		100	90 - 110		

Lab Sample ID: LCSD 880-62349/3-A
Matrix: Solid
Analysis Batch: 62394

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	248.6		mg/Kg		99	90 - 110	1	20

Lab Sample ID: 890-5226-2 MS
Matrix: Solid
Analysis Batch: 62394

Client Sample ID: FS02
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	498		252	729.1		mg/Kg		92	90 - 110		

Lab Sample ID: 890-5226-2 MSD
Matrix: Solid
Analysis Batch: 62394

Client Sample ID: FS02
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	498		252	725.4		mg/Kg		90	90 - 110	1	20

QC Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5226-1
SDG: 03C1558263

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-5226-12 MS
Matrix: Solid
Analysis Batch: 62394

Client Sample ID: SW01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	245		251	519.1		mg/Kg		110	90 - 110

Lab Sample ID: 890-5226-12 MSD
Matrix: Solid
Analysis Batch: 62394

Client Sample ID: SW01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	245		251	516.5		mg/Kg		109	90 - 110	0	20

Lab Sample ID: MB 880-62266/1-A
Matrix: Solid
Analysis Batch: 62407

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			09/14/23 03:13	1

Lab Sample ID: LCS 880-62266/2-A
Matrix: Solid
Analysis Batch: 62407

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride			250	243.2		mg/Kg		97	90 - 110

Lab Sample ID: LCSD 880-62266/3-A
Matrix: Solid
Analysis Batch: 62407

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	248.3		mg/Kg		99	90 - 110	2	20

Lab Sample ID: 890-5224-A-7-E MS
Matrix: Solid
Analysis Batch: 62407

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	507		250	778.8		mg/Kg		109	90 - 110

Lab Sample ID: 890-5224-A-7-F MSD
Matrix: Solid
Analysis Batch: 62407

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	507		250	776.2		mg/Kg		108	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5226-1
SDG: 03C1558263

GC VOA

Prep Batch: 62129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-62129/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 62238

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5226-1	FS01	Total/NA	Solid	8021B	62272
890-5226-2	FS02	Total/NA	Solid	8021B	62272
890-5226-3	FS03	Total/NA	Solid	8021B	62272
890-5226-4	FS04	Total/NA	Solid	8021B	62272
890-5226-5	FS05	Total/NA	Solid	8021B	62272
890-5226-6	FS06	Total/NA	Solid	8021B	62272
890-5226-7	FS07	Total/NA	Solid	8021B	62272
890-5226-8	FS08	Total/NA	Solid	8021B	62272
890-5226-9	FS09	Total/NA	Solid	8021B	62272
890-5226-10	FS10	Total/NA	Solid	8021B	62272
890-5226-11	FS11	Total/NA	Solid	8021B	62272
890-5226-12	SW01	Total/NA	Solid	8021B	62272
890-5226-13	SW02	Total/NA	Solid	8021B	62272
MB 880-62129/5-A	Method Blank	Total/NA	Solid	8021B	62129
MB 880-62272/5-A	Method Blank	Total/NA	Solid	8021B	62272
LCS 880-62272/1-A	Lab Control Sample	Total/NA	Solid	8021B	62272
LCSD 880-62272/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	62272
890-5226-1 MS	FS01	Total/NA	Solid	8021B	62272
890-5226-1 MSD	FS01	Total/NA	Solid	8021B	62272

Prep Batch: 62272

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5226-1	FS01	Total/NA	Solid	5035	
890-5226-2	FS02	Total/NA	Solid	5035	
890-5226-3	FS03	Total/NA	Solid	5035	
890-5226-4	FS04	Total/NA	Solid	5035	
890-5226-5	FS05	Total/NA	Solid	5035	
890-5226-6	FS06	Total/NA	Solid	5035	
890-5226-7	FS07	Total/NA	Solid	5035	
890-5226-8	FS08	Total/NA	Solid	5035	
890-5226-9	FS09	Total/NA	Solid	5035	
890-5226-10	FS10	Total/NA	Solid	5035	
890-5226-11	FS11	Total/NA	Solid	5035	
890-5226-12	SW01	Total/NA	Solid	5035	
890-5226-13	SW02	Total/NA	Solid	5035	
MB 880-62272/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-62272/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-62272/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5226-1 MS	FS01	Total/NA	Solid	5035	
890-5226-1 MSD	FS01	Total/NA	Solid	5035	

Analysis Batch: 62355

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5226-1	FS01	Total/NA	Solid	Total BTEX	
890-5226-2	FS02	Total/NA	Solid	Total BTEX	
890-5226-3	FS03	Total/NA	Solid	Total BTEX	
890-5226-4	FS04	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5226-1
SDG: 03C1558263

GC VOA (Continued)

Analysis Batch: 62355 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5226-5	FS05	Total/NA	Solid	Total BTEX	
890-5226-6	FS06	Total/NA	Solid	Total BTEX	
890-5226-7	FS07	Total/NA	Solid	Total BTEX	
890-5226-8	FS08	Total/NA	Solid	Total BTEX	
890-5226-9	FS09	Total/NA	Solid	Total BTEX	
890-5226-10	FS10	Total/NA	Solid	Total BTEX	
890-5226-11	FS11	Total/NA	Solid	Total BTEX	
890-5226-12	SW01	Total/NA	Solid	Total BTEX	
890-5226-13	SW02	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 62229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5226-1	FS01	Total/NA	Solid	8015B NM	62268
890-5226-2	FS02	Total/NA	Solid	8015B NM	62268
890-5226-3	FS03	Total/NA	Solid	8015B NM	62268
890-5226-4	FS04	Total/NA	Solid	8015B NM	62268
890-5226-5	FS05	Total/NA	Solid	8015B NM	62268
890-5226-6	FS06	Total/NA	Solid	8015B NM	62268
890-5226-7	FS07	Total/NA	Solid	8015B NM	62268
890-5226-8	FS08	Total/NA	Solid	8015B NM	62268
890-5226-9	FS09	Total/NA	Solid	8015B NM	62268
890-5226-10	FS10	Total/NA	Solid	8015B NM	62268
890-5226-11	FS11	Total/NA	Solid	8015B NM	62268
890-5226-12	SW01	Total/NA	Solid	8015B NM	62268
890-5226-13	SW02	Total/NA	Solid	8015B NM	62268
MB 880-62268/1-A	Method Blank	Total/NA	Solid	8015B NM	62268
LCS 880-62268/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	62268
LCSD 880-62268/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	62268
890-5224-A-11-D MS	Matrix Spike	Total/NA	Solid	8015B NM	62268
890-5224-A-11-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	62268

Prep Batch: 62268

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5226-1	FS01	Total/NA	Solid	8015NM Prep	
890-5226-2	FS02	Total/NA	Solid	8015NM Prep	
890-5226-3	FS03	Total/NA	Solid	8015NM Prep	
890-5226-4	FS04	Total/NA	Solid	8015NM Prep	
890-5226-5	FS05	Total/NA	Solid	8015NM Prep	
890-5226-6	FS06	Total/NA	Solid	8015NM Prep	
890-5226-7	FS07	Total/NA	Solid	8015NM Prep	
890-5226-8	FS08	Total/NA	Solid	8015NM Prep	
890-5226-9	FS09	Total/NA	Solid	8015NM Prep	
890-5226-10	FS10	Total/NA	Solid	8015NM Prep	
890-5226-11	FS11	Total/NA	Solid	8015NM Prep	
890-5226-12	SW01	Total/NA	Solid	8015NM Prep	
890-5226-13	SW02	Total/NA	Solid	8015NM Prep	
MB 880-62268/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-62268/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-62268/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5226-1
SDG: 03C1558263

GC Semi VOA (Continued)

Prep Batch: 62268 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5224-A-11-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-5224-A-11-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 62339

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5226-1	FS01	Total/NA	Solid	8015 NM	
890-5226-2	FS02	Total/NA	Solid	8015 NM	
890-5226-3	FS03	Total/NA	Solid	8015 NM	
890-5226-4	FS04	Total/NA	Solid	8015 NM	
890-5226-5	FS05	Total/NA	Solid	8015 NM	
890-5226-6	FS06	Total/NA	Solid	8015 NM	
890-5226-7	FS07	Total/NA	Solid	8015 NM	
890-5226-8	FS08	Total/NA	Solid	8015 NM	
890-5226-9	FS09	Total/NA	Solid	8015 NM	
890-5226-10	FS10	Total/NA	Solid	8015 NM	
890-5226-11	FS11	Total/NA	Solid	8015 NM	
890-5226-12	SW01	Total/NA	Solid	8015 NM	
890-5226-13	SW02	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 62266

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5226-1	FS01	Soluble	Solid	DI Leach	
MB 880-62266/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-62266/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-62266/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5224-A-7-E MS	Matrix Spike	Soluble	Solid	DI Leach	
890-5224-A-7-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Leach Batch: 62349

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5226-2	FS02	Soluble	Solid	DI Leach	
890-5226-3	FS03	Soluble	Solid	DI Leach	
890-5226-4	FS04	Soluble	Solid	DI Leach	
890-5226-5	FS05	Soluble	Solid	DI Leach	
890-5226-6	FS06	Soluble	Solid	DI Leach	
890-5226-7	FS07	Soluble	Solid	DI Leach	
890-5226-8	FS08	Soluble	Solid	DI Leach	
890-5226-9	FS09	Soluble	Solid	DI Leach	
890-5226-10	FS10	Soluble	Solid	DI Leach	
890-5226-11	FS11	Soluble	Solid	DI Leach	
890-5226-12	SW01	Soluble	Solid	DI Leach	
890-5226-13	SW02	Soluble	Solid	DI Leach	
MB 880-62349/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-62349/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-62349/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5226-2 MS	FS02	Soluble	Solid	DI Leach	
890-5226-2 MSD	FS02	Soluble	Solid	DI Leach	
890-5226-12 MS	SW01	Soluble	Solid	DI Leach	
890-5226-12 MSD	SW01	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5226-1
SDG: 03C1558263

HPLC/IC

Analysis Batch: 62394

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5226-2	FS02	Soluble	Solid	300.0	62349
890-5226-3	FS03	Soluble	Solid	300.0	62349
890-5226-4	FS04	Soluble	Solid	300.0	62349
890-5226-5	FS05	Soluble	Solid	300.0	62349
890-5226-6	FS06	Soluble	Solid	300.0	62349
890-5226-7	FS07	Soluble	Solid	300.0	62349
890-5226-8	FS08	Soluble	Solid	300.0	62349
890-5226-9	FS09	Soluble	Solid	300.0	62349
890-5226-10	FS10	Soluble	Solid	300.0	62349
890-5226-11	FS11	Soluble	Solid	300.0	62349
890-5226-12	SW01	Soluble	Solid	300.0	62349
890-5226-13	SW02	Soluble	Solid	300.0	62349
MB 880-62349/1-A	Method Blank	Soluble	Solid	300.0	62349
LCS 880-62349/2-A	Lab Control Sample	Soluble	Solid	300.0	62349
LCSD 880-62349/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	62349
890-5226-2 MS	FS02	Soluble	Solid	300.0	62349
890-5226-2 MSD	FS02	Soluble	Solid	300.0	62349
890-5226-12 MS	SW01	Soluble	Solid	300.0	62349
890-5226-12 MSD	SW01	Soluble	Solid	300.0	62349

Analysis Batch: 62407

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5226-1	FS01	Soluble	Solid	300.0	62266
MB 880-62266/1-A	Method Blank	Soluble	Solid	300.0	62266
LCS 880-62266/2-A	Lab Control Sample	Soluble	Solid	300.0	62266
LCSD 880-62266/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	62266
890-5224-A-7-E MS	Matrix Spike	Soluble	Solid	300.0	62266
890-5224-A-7-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	62266

Lab Chronicle

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5226-1
SDG: 03C1558263

Client Sample ID: FS01
Date Collected: 09/08/23 10:25
Date Received: 09/08/23 13:36

Lab Sample ID: 890-5226-1
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	62272	09/12/23 11:43	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62238	09/12/23 22:38	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62355	09/13/23 12:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			62339	09/13/23 10:49	SM	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	62268	09/12/23 11:26	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62229	09/12/23 15:00	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	62266	09/12/23 10:26	AG	EET MID
Soluble	Analysis	300.0		1			62407	09/14/23 06:20	CH	EET MID

Client Sample ID: FS02
Date Collected: 09/08/23 10:30
Date Received: 09/08/23 13:36

Lab Sample ID: 890-5226-2
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	62272	09/12/23 11:43	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62238	09/12/23 22:59	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62355	09/13/23 12:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			62339	09/13/23 10:49	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	62268	09/12/23 11:26	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62229	09/12/23 15:22	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	62349	09/13/23 12:06	AG	EET MID
Soluble	Analysis	300.0		1			62394	09/13/23 22:45	CH	EET MID

Client Sample ID: FS03
Date Collected: 09/08/23 10:35
Date Received: 09/08/23 13:36

Lab Sample ID: 890-5226-3
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	62272	09/12/23 11:43	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62238	09/12/23 23:19	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62355	09/13/23 12:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			62339	09/13/23 10:49	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	62268	09/12/23 11:26	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62229	09/12/23 15:44	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	62349	09/13/23 12:06	AG	EET MID
Soluble	Analysis	300.0		1			62394	09/13/23 23:04	CH	EET MID

Client Sample ID: FS04
Date Collected: 09/08/23 10:40
Date Received: 09/08/23 13:36

Lab Sample ID: 890-5226-4
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			5.01 g	5 mL	62272	09/12/23 11:43	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62238	09/12/23 23:40	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62355	09/13/23 12:14	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5226-1
SDG: 03C1558263

Client Sample ID: FS04
Date Collected: 09/08/23 10:40
Date Received: 09/08/23 13:36

Lab Sample ID: 890-5226-4
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			62339	09/13/23 10:49	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	62268	09/12/23 11:26	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62229	09/12/23 16:06	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	62349	09/13/23 12:06	AG	EET MID
Soluble	Analysis	300.0		1			62394	09/13/23 23:10	CH	EET MID

Client Sample ID: FS05
Date Collected: 09/08/23 10:45
Date Received: 09/08/23 13:36

Lab Sample ID: 890-5226-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	62272	09/12/23 11:43	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62238	09/13/23 00:00	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62355	09/13/23 12:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			62339	09/13/23 10:49	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	62268	09/12/23 11:26	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62229	09/12/23 16:50	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	62349	09/13/23 12:06	AG	EET MID
Soluble	Analysis	300.0		1			62394	09/13/23 23:17	CH	EET MID

Client Sample ID: FS06
Date Collected: 09/08/23 10:50
Date Received: 09/08/23 13:36

Lab Sample ID: 890-5226-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	62272	09/12/23 11:43	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62238	09/13/23 00:21	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62355	09/13/23 12:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			62339	09/13/23 10:49	SM	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	62268	09/12/23 11:26	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62229	09/12/23 17:13	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	62349	09/13/23 12:06	AG	EET MID
Soluble	Analysis	300.0		1			62394	09/13/23 23:23	CH	EET MID

Client Sample ID: FS07
Date Collected: 09/08/23 10:55
Date Received: 09/08/23 13:36

Lab Sample ID: 890-5226-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	62272	09/12/23 11:43	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62238	09/13/23 00:41	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62355	09/13/23 12:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			62339	09/13/23 10:49	SM	EET MID
Total/NA	Prep	8015NM Prep			10.10 g	10 mL	62268	09/12/23 11:26	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62229	09/12/23 17:35	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5226-1
SDG: 03C1558263

Client Sample ID: FS07

Lab Sample ID: 890-5226-7
Matrix: Solid
Date Collected: 09/08/23 10:55
Date Received: 09/08/23 13:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.01 g	50 mL	62349	09/13/23 12:06	AG	EET MID
Soluble	Analysis	300.0		1			62394	09/13/23 23:42	CH	EET MID

Client Sample ID: FS08

Lab Sample ID: 890-5226-8
Matrix: Solid
Date Collected: 09/08/23 11:00
Date Received: 09/08/23 13:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	62272	09/12/23 11:43	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62238	09/13/23 01:01	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62355	09/13/23 12:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			62339	09/13/23 10:49	SM	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	62268	09/12/23 11:26	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62229	09/12/23 17:56	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	62349	09/13/23 12:06	AG	EET MID
Soluble	Analysis	300.0		1			62394	09/13/23 23:49	CH	EET MID

Client Sample ID: FS09

Lab Sample ID: 890-5226-9
Matrix: Solid
Date Collected: 09/08/23 11:05
Date Received: 09/08/23 13:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	62272	09/12/23 11:43	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62238	09/13/23 01:22	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62355	09/13/23 12:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			62339	09/13/23 10:49	SM	EET MID
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	62268	09/12/23 11:26	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62229	09/12/23 18:18	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	62349	09/13/23 12:06	AG	EET MID
Soluble	Analysis	300.0		1			62394	09/13/23 23:55	CH	EET MID

Client Sample ID: FS10

Lab Sample ID: 890-5226-10
Matrix: Solid
Date Collected: 09/08/23 11:10
Date Received: 09/08/23 13:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	62272	09/12/23 11:43	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62238	09/13/23 01:42	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62355	09/13/23 12:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			62339	09/13/23 10:49	SM	EET MID
Total/NA	Prep	8015NM Prep			9.99 g	10 mL	62268	09/12/23 11:26	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62229	09/12/23 18:39	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	62349	09/13/23 12:06	AG	EET MID
Soluble	Analysis	300.0		1			62394	09/14/23 00:02	CH	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5226-1
SDG: 03C1558263

Client Sample ID: FS11

Lab Sample ID: 890-5226-11
Matrix: Solid
Date Collected: 09/08/23 11:15
Date Received: 09/08/23 13:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	62272	09/12/23 11:43	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62238	09/13/23 03:04	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62355	09/13/23 12:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			62339	09/13/23 10:49	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	62268	09/12/23 11:26	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62229	09/12/23 19:01	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	62349	09/13/23 12:06	AG	EET MID
Soluble	Analysis	300.0		1			62394	09/14/23 00:08	CH	EET MID

Client Sample ID: SW01

Lab Sample ID: 890-5226-12
Matrix: Solid
Date Collected: 09/08/23 11:20
Date Received: 09/08/23 13:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	62272	09/12/23 11:43	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62238	09/13/23 03:25	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62355	09/13/23 12:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			62339	09/13/23 10:49	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	62268	09/12/23 11:26	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62229	09/12/23 19:22	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	62349	09/13/23 12:06	AG	EET MID
Soluble	Analysis	300.0		1			62394	09/14/23 00:14	CH	EET MID

Client Sample ID: SW02

Lab Sample ID: 890-5226-13
Matrix: Solid
Date Collected: 09/08/23 11:25
Date Received: 09/08/23 13:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	62272	09/12/23 11:43	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62238	09/13/23 03:45	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62355	09/13/23 12:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			62339	09/13/23 10:49	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	62268	09/12/23 11:26	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62229	09/12/23 19:43	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	62349	09/13/23 12:06	AG	EET MID
Soluble	Analysis	300.0		1			62394	09/14/23 00:34	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5226-1
SDG: 03C1558263

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

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

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

Method Summary

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5226-1
SDG: 03C1558263

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: Hudson 1 Fed Com 9H

Job ID: 890-5226-1
SDG: 03C1558263

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5226-1	FS01	Solid	09/08/23 10:25	09/08/23 13:36	2'
890-5226-2	FS02	Solid	09/08/23 10:30	09/08/23 13:36	2'
890-5226-3	FS03	Solid	09/08/23 10:35	09/08/23 13:36	2'
890-5226-4	FS04	Solid	09/08/23 10:40	09/08/23 13:36	2'
890-5226-5	FS05	Solid	09/08/23 10:45	09/08/23 13:36	2'
890-5226-6	FS06	Solid	09/08/23 10:50	09/08/23 13:36	2'
890-5226-7	FS07	Solid	09/08/23 10:55	09/08/23 13:36	2'
890-5226-8	FS08	Solid	09/08/23 11:00	09/08/23 13:36	2'
890-5226-9	FS09	Solid	09/08/23 11:05	09/08/23 13:36	2'
890-5226-10	FS10	Solid	09/08/23 11:10	09/08/23 13:36	2'
890-5226-11	FS11	Solid	09/08/23 11:15	09/08/23 13:36	2'
890-5226-12	SW01	Solid	09/08/23 11:20	09/08/23 13:36	0-2'
890-5226-13	SW02	Solid	09/08/23 11:25	09/08/23 13:36	0-2'

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 2

Project Manager:	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:	Hudson 1 FED COM 9H	Turn Around	☑ Routine ☐ Rush
Project Number:	03C1558263	Due Date:	
Project Location:	32.33342, -103.83142	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
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	2.8
Total Containers:		Corrected Temperature:	2.6

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
FS01	S	9/8/23	1025	2'	C	1		X	X	X	Incident #: NAPP2322645119
FS02			1030								
FS03			1035								
FS04			1040								Cost Center: 1139091001
FS05			1045								
FS06			1050								
FS07			1055								mroberts@ensolum.com
FS08			1100								
FS09			1105								
FS10	↓	↓	1110	↓	↓	↓		↓	↓	↓	

890-5226 Chain of Custody

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			9-8-23 13:3	2		
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5226-1
SDG Number: 03C1558263

Login Number: 5226
List Number: 1
Creator: Lopez, Abraham

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	
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: 890-5226-1
SDG Number: 03C1558263

Login Number: 5226
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 09/12/23 11:10 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 9/28/2023 2:45:12 PM Revision 2

JOB DESCRIPTION

Hudson 1 Fed Com 9H
SDG NUMBER 03C1558263

JOB NUMBER

890-5271-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Eurofins Carlsbad

Job Notes

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

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

Authorization

Generated
9/28/2023 2:45:12 PM
Revision 2

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

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Laboratory Job ID: 890-5271-1
SDG: 03C1558263

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5271-1
SDG: 03C1558263

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, 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: Hudson 1 Fed Com 9H

Job ID: 890-5271-1
SDG: 03C1558263

Job ID: 890-5271-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-5271-1

REVISION

The report being provided is a revision of the original report sent on 9/21/2023. The report (revision 2) is being revised due to Per client email, requesting sample depth correction.

Report revision history
Revision 1 - 9/27/2023 - Reason - Per client email, requesting TPH re run on SW03.

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The sample was received on 9/14/2023 4:40 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.2°C

Receipt Exceptions
The following sample was received and analyzed from an unpreserved bulk soil jar: SW03 (890-5271-1).

GC VOA
Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-62674 and analytical batch 880-62672 was outside the control limits.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (LCS 880-63318/2-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The continuing calibration verification (CCV) associated with batch 880-63276 recovered below the lower control limit for Diesel Range Organics (Over C10-C28). An acceptable CCV was ran within the 12 hour window, therefore the data has been qualified and reported. The associated sample is impacted: (CCV 880-63276/31).

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

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

Client Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5271-1
SDG: 03C1558263

Client Sample ID: SW03

Date Collected: 09/14/23 02:43
Date Received: 09/14/23 16:40
Sample Depth: 0 - 2.5'

Lab Sample ID: 890-5271-1

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/18/23 15:08	09/19/23 00:18	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/18/23 15:08	09/19/23 00:18	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/18/23 15:08	09/19/23 00:18	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/18/23 15:08	09/19/23 00:18	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/18/23 15:08	09/19/23 00:18	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/18/23 15:08	09/19/23 00:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*09/18/23 15:08*	*09/19/23 00:18*	*1*
1,4-Difluorobenzene (Surr)	*78*		*70 - 130*	*09/18/23 15:08*	*09/19/23 00:18*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/19/23 00:18	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**96.6**		49.6		mg/Kg			09/26/23 16:05	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6		mg/Kg		09/26/23 10:59	09/26/23 16:05	1
Diesel Range Organics (Over C10-C28)	**96.6**		49.6		mg/Kg		09/26/23 10:59	09/26/23 16:05	1
Oil Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		09/26/23 10:59	09/26/23 16:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*09/26/23 10:59*	*09/26/23 16:05*	*1*
o-Terphenyl	*117*		*70 - 130*	*09/26/23 10:59*	*09/26/23 16:05*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**539**		4.95		mg/Kg			09/20/23 20:19	1

Surrogate Summary

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5271-1
SDG: 03C1558263

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)
890-5271-1	SW03	96	78
890-5274-A-21-A MS	Matrix Spike	102	115
890-5274-A-21-B MSD	Matrix Spike Duplicate	99	106
LCS 880-62599/1-A	Lab Control Sample	100	115
LCSD 880-62599/2-A	Lab Control Sample Dup	100	106
MB 880-62599/5-A	Method Blank	71	98
MB 880-62674/5-A	Method Blank	69 S1-	97

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)
880-33630-A-15-D MS	Matrix Spike	107	110
880-33630-A-15-E MSD	Matrix Spike Duplicate	109	108
890-5271-1	SW03	109	117
LCS 880-63318/2-A	Lab Control Sample	67 S1-	79
LCSD 880-63318/3-A	Lab Control Sample Dup	76	84
MB 880-63318/1-A	Method Blank	74	89

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5271-1
SDG: 03C1558263

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-62599/5-A
Matrix: Solid
Analysis Batch: 62672

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 62599

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/18/23 15:08	09/18/23 21:54	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/18/23 15:08	09/18/23 21:54	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/18/23 15:08	09/18/23 21:54	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/18/23 15:08	09/18/23 21:54	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/18/23 15:08	09/18/23 21:54	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/18/23 15:08	09/18/23 21:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*71*		*70 - 130*	*09/18/23 15:08*	*09/18/23 21:54*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*09/18/23 15:08*	*09/18/23 21:54*	*1*

Lab Sample ID: LCS 880-62599/1-A
Matrix: Solid
Analysis Batch: 62672

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 62599

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.07810		mg/Kg		78	70 - 130		
Toluene			0.100	0.08476		mg/Kg		85	70 - 130		
Ethylbenzene			0.100	0.08259		mg/Kg		83	70 - 130		
m-Xylene & p-Xylene			0.200	0.1713		mg/Kg		86	70 - 130		
o-Xylene			0.100	0.08671		mg/Kg		87	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*

Lab Sample ID: LCSD 880-62599/2-A
Matrix: Solid
Analysis Batch: 62672

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 62599

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08604		mg/Kg		86	70 - 130	10	35
Toluene			0.100	0.08846		mg/Kg		88	70 - 130	4	35
Ethylbenzene			0.100	0.08613		mg/Kg		86	70 - 130	4	35
m-Xylene & p-Xylene			0.200	0.1791		mg/Kg		90	70 - 130	4	35
o-Xylene			0.100	0.09090		mg/Kg		91	70 - 130	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: 890-5274-A-21-A MS
Matrix: Solid
Analysis Batch: 62672

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 62599

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U	0.0998	0.08115		mg/Kg		81	70 - 130		
Toluene	<0.00199	U	0.0998	0.08570		mg/Kg		86	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5271-1
SDG: 03C1558263

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

Lab Sample ID: 890-5274-A-21-A MS
Matrix: Solid
Analysis Batch: 62672

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 62599

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U	0.0998	0.08302		mg/Kg		83	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1706		mg/Kg		85	70 - 130
o-Xylene	<0.00199	U	0.0998	0.08580		mg/Kg		86	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*

Lab Sample ID: 890-5274-A-21-B MSD
Matrix: Solid
Analysis Batch: 62672

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 62599

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.0996	0.07875		mg/Kg		79	70 - 130	3	35
Toluene	<0.00199	U	0.0996	0.08119		mg/Kg		82	70 - 130	5	35
Ethylbenzene	<0.00199	U	0.0996	0.07757		mg/Kg		78	70 - 130	7	35
m-Xylene & p-Xylene	<0.00398	U	0.199	0.1592		mg/Kg		80	70 - 130	7	35
o-Xylene	<0.00199	U	0.0996	0.07997		mg/Kg		80	70 - 130	7	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: MB 880-62674/5-A
Matrix: Solid
Analysis Batch: 62672

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 62674

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/18/23 08:50	09/18/23 11:16	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/18/23 08:50	09/18/23 11:16	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/18/23 08:50	09/18/23 11:16	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		09/18/23 08:50	09/18/23 11:16	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/18/23 08:50	09/18/23 11:16	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		09/18/23 08:50	09/18/23 11:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*69*	*S1-*	*70 - 130*	*09/18/23 08:50*	*09/18/23 11:16*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*09/18/23 08:50*	*09/18/23 11:16*	*1*

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

Lab Sample ID: MB 880-63318/1-A
Matrix: Solid
Analysis Batch: 63276

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 63318

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		09/26/23 08:00	09/26/23 08:35	1

QC Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5271-1
SDG: 03C1558263

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

Lab Sample ID: MB 880-63318/1-A
Matrix: Solid
Analysis Batch: 63276

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 63318

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		09/26/23 08:00	09/26/23 08:35	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/26/23 08:00	09/26/23 08:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*74*		*70 - 130*	*09/26/23 08:00*	*09/26/23 08:35*	*1*
o-Terphenyl	*89*		*70 - 130*	*09/26/23 08:00*	*09/26/23 08:35*	*1*

Lab Sample ID: LCS 880-63318/2-A
Matrix: Solid
Analysis Batch: 63276

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 63318

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	915.7		mg/Kg		92	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	731.3		mg/Kg		73	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*67*	*S1-*	*70 - 130*
o-Terphenyl	*79*		*70 - 130*

Lab Sample ID: LCSD 880-63318/3-A
Matrix: Solid
Analysis Batch: 63276

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 63318

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	902.3		mg/Kg		90	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	808.4		mg/Kg		81	70 - 130	10	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*76*		*70 - 130*
o-Terphenyl	*84*		*70 - 130*

Lab Sample ID: 880-33630-A-15-D MS
Matrix: Solid
Analysis Batch: 63276

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 63318

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	997	856.8		mg/Kg		84	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.3	U	997	870.9		mg/Kg		85	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*107*		*70 - 130*
o-Terphenyl	*110*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5271-1
SDG: 03C1558263

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

Lab Sample ID: 880-33630-A-15-E MSD
Matrix: Solid
Analysis Batch: 63276

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 63318

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	997	899.3		mg/Kg		88	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<50.3	U	997	867.3		mg/Kg		85	70 - 130	0	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*109*		*70 - 130*
o-Terphenyl	*108*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-62713/1-A
Matrix: Solid
Analysis Batch: 62902

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			09/20/23 17:30	1

Lab Sample ID: LCS 880-62713/2-A
Matrix: Solid
Analysis Batch: 62902

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	246.9		mg/Kg		99	90 - 110		

Lab Sample ID: LCSD 880-62713/3-A
Matrix: Solid
Analysis Batch: 62902

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	246.8		mg/Kg		99	90 - 110	0	20

Lab Sample ID: 880-33333-A-11-B MS
Matrix: Solid
Analysis Batch: 62902

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	103		250	353.1		mg/Kg		100	90 - 110		

Lab Sample ID: 880-33333-A-11-C MSD
Matrix: Solid
Analysis Batch: 62902

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	103		250	352.8		mg/Kg		100	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5271-1
SDG: 03C1558263

GC VOA

Prep Batch: 62599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5271-1	SW03	Total/NA	Solid	5035	
MB 880-62599/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-62599/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-62599/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5274-A-21-A MS	Matrix Spike	Total/NA	Solid	5035	
890-5274-A-21-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 62672

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5271-1	SW03	Total/NA	Solid	8021B	62599
MB 880-62599/5-A	Method Blank	Total/NA	Solid	8021B	62599
MB 880-62674/5-A	Method Blank	Total/NA	Solid	8021B	62674
LCS 880-62599/1-A	Lab Control Sample	Total/NA	Solid	8021B	62599
LCSD 880-62599/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	62599
890-5274-A-21-A MS	Matrix Spike	Total/NA	Solid	8021B	62599
890-5274-A-21-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	62599

Prep Batch: 62674

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-62674/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 62799

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5271-1	SW03	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 62826

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5271-1	SW03	Total/NA	Solid	8015 NM	

Analysis Batch: 63276

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5271-1	SW03	Total/NA	Solid	8015B NM	63318
MB 880-63318/1-A	Method Blank	Total/NA	Solid	8015B NM	63318
LCS 880-63318/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	63318
LCSD 880-63318/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	63318
880-33630-A-15-D MS	Matrix Spike	Total/NA	Solid	8015B NM	63318
880-33630-A-15-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	63318

Prep Batch: 63318

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5271-1	SW03	Total/NA	Solid	8015NM Prep	
MB 880-63318/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-63318/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-63318/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-33630-A-15-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-33630-A-15-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5271-1
SDG: 03C1558263

HPLC/IC

Leach Batch: 62713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5271-1	SW03	Soluble	Solid	DI Leach	
MB 880-62713/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-62713/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-62713/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-33333-A-11-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-33333-A-11-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 62902

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5271-1	SW03	Soluble	Solid	300.0	62713
MB 880-62713/1-A	Method Blank	Soluble	Solid	300.0	62713
LCS 880-62713/2-A	Lab Control Sample	Soluble	Solid	300.0	62713
LCSD 880-62713/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	62713
880-33333-A-11-B MS	Matrix Spike	Soluble	Solid	300.0	62713
880-33333-A-11-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	62713

Lab Chronicle

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5271-1
SDG: 03C1558263

Client Sample ID: SW03
Date Collected: 09/14/23 02:43
Date Received: 09/14/23 16:40

Lab Sample ID: 890-5271-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	62599	09/18/23 15:08	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62672	09/19/23 00:18	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62799	09/19/23 00:18	SM	EET MID
Total/NA	Analysis	8015 NM		1			62826	09/26/23 16:05	SM	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	63318	09/26/23 10:59	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	63276	09/26/23 16:05	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	62713	09/18/23 11:01	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	62902	09/20/23 20:19	SMC	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5271-1
SDG: 03C1558263

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

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

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

Method Summary

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5271-1
SDG: 03C1558263

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: Hudson 1 Fed Com 9H

Job ID: 890-5271-1
SDG: 03C1558263

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5271-1	SW03	Solid	09/14/23 02:43	09/14/23 16:40	0 - 2.5'

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

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

Work Order Comments

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

Project Name:	Hudson 1 Fed Com 9H	Turn Around	☑ Routine ☐ Rush
Project Number:	03C1558263	Due Date:	
Project Location:		TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Connor Whitman		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	Yes (No)
Samples Received Intact:	(Yes) No	Thermometer ID:	TM0007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	4.4
Total Containers:		Corrected Temperature:	4.2

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: CHLORIDES (EPA: 3000.0)	TPH (8015)	BTEX (8021)	Sample Comments
SW03	S	9/14/23	2:45	0-1	C	1		✓	✓	✓	Incident ID:
											Cost Center:
											AFE:

890-5271 Chain of Custody

ANALYSIS REQUEST

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		9-14 16:40	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5271-1
SDG Number: 03C1558263

Login Number: 5271
List Number: 1
Creator: Lopez, Abraham

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: 890-5271-1
SDG Number: 03C1558263

Login Number: 5271
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 09/18/23 08:43 AM

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

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 9/26/2023 9:06:51 AM Revision 1

JOB DESCRIPTION

Hudson 1 Fed Com 9H
SDG NUMBER 03C1558263

JOB NUMBER

890-5281-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Eurofins Carlsbad

Job Notes

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

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

Authorization

Generated
9/26/2023 9:06:51 AM
Revision 1

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

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Laboratory Job ID: 890-5281-1
SDG: 03C1558263

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5281-1
SDG: 03C1558263

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5281-1
SDG: 03C1558263

Job ID: 890-5281-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-5281-1

REVISION

The report being provided is a revision of the original report sent on 9/22/2023. The report (revision 1) is being revised due to Per client email, requesting sample dpeth correction on final report.

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 9/15/2023 1:14 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 2.8°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: FS01A (890-5281-1), FS12 (890-5281-2), FS13 (890-5281-3) and SW04 (890-5281-4).

GC VOA
Method 8021B: The continuing calibration verification (CCV) associated with batch 880-62964 recovered above the upper control limit for m-Xylene & p-Xylene and o-Xylene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported

Method 8021B: Surrogate recovery for the following sample was outside control limits: (890-5273-A-1-F MS). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following samples were outside control limits: FS01A (890-5281-1), FS12 (890-5281-2) and SW04 (890-5281-4). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (890-5282-A-8-C), (890-5282-A-8-D MS) and (890-5282-A-8-E MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: FS12 (890-5281-2), FS13 (890-5281-3) and SW04 (890-5281-4). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

HPLC/IC
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: Hudson 1 Fed Com 9H

Job ID: 890-5281-1
SDG: 03C1558263

Client Sample ID: FS01A

Date Collected: 09/15/23 09:55
Date Received: 09/15/23 13:14
Sample Depth: 2.5

Lab Sample ID: 890-5281-1
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		09/19/23 09:19	09/22/23 00:09	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/19/23 09:19	09/22/23 00:09	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/19/23 09:19	09/22/23 00:09	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/19/23 09:19	09/22/23 00:09	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/19/23 09:19	09/22/23 00:09	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/19/23 09:19	09/22/23 00:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*09/19/23 09:19*	*09/22/23 00:09*	*1*
1,4-Difluorobenzene (Surr)	*62*	*S1-*	*70 - 130*	*09/19/23 09:19*	*09/22/23 00:09*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			09/22/23 00:09	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			09/19/23 20:16	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5		mg/Kg		09/19/23 12:28	09/19/23 20:16	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		09/19/23 12:28	09/19/23 20:16	1
Oil Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		09/19/23 12:28	09/19/23 20:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*09/19/23 12:28*	*09/19/23 20:16*	*1*
o-Terphenyl	*114*		*70 - 130*	*09/19/23 12:28*	*09/19/23 20:16*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**50.5**		4.97		mg/Kg			09/19/23 17:40	1

Client Sample ID: FS12

Date Collected: 09/15/23 11:15
Date Received: 09/15/23 13:14
Sample Depth: 2

Lab Sample ID: 890-5281-2
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		09/19/23 09:19	09/22/23 00:30	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/19/23 09:19	09/22/23 00:30	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/19/23 09:19	09/22/23 00:30	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		09/19/23 09:19	09/22/23 00:30	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/19/23 09:19	09/22/23 00:30	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		09/19/23 09:19	09/22/23 00:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*09/19/23 09:19*	*09/22/23 00:30*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5281-1
SDG: 03C1558263

Client Sample ID: FS12

Date Collected: 09/15/23 11:15
Date Received: 09/15/23 13:14
Sample Depth: 2

Lab Sample ID: 890-5281-2

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*65*	*S1-*	*70 - 130*	*09/19/23 09:19*	*09/22/23 00:30*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			09/22/23 00:30	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6	mg/Kg			09/19/23 20:38	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6	mg/Kg		09/19/23 12:28	09/19/23 20:38	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6	mg/Kg		09/19/23 12:28	09/19/23 20:38	1
Oil Range Organics (Over C28-C36)	<49.6	U	49.6	mg/Kg		09/19/23 12:28	09/19/23 20:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*120*		*70 - 130*	*09/19/23 12:28*	*09/19/23 20:38*	*1*
o-Terphenyl	*134*	*S1+*	*70 - 130*	*09/19/23 12:28*	*09/19/23 20:38*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**42.8**		4.99	mg/Kg			09/19/23 17:57	1

Client Sample ID: FS13

Date Collected: 09/15/23 11:20
Date Received: 09/15/23 13:14
Sample Depth: 2.5

Lab Sample ID: 890-5281-3

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		09/19/23 09:19	09/22/23 00:50	1
Toluene	<0.00199	U	0.00199	mg/Kg		09/19/23 09:19	09/22/23 00:50	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		09/19/23 09:19	09/22/23 00:50	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		09/19/23 09:19	09/22/23 00:50	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		09/19/23 09:19	09/22/23 00:50	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		09/19/23 09:19	09/22/23 00:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*09/19/23 09:19*	*09/22/23 00:50*	*1*
1,4-Difluorobenzene (Surr)	*70*		*70 - 130*	*09/19/23 09:19*	*09/22/23 00:50*	*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			09/22/23 00:50	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3	mg/Kg			09/19/23 21:01	1

Client Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5281-1
SDG: 03C1558263

Client Sample ID: FS13

Lab Sample ID: 890-5281-3
Matrix: Solid
Date Collected: 09/15/23 11:20
Date Received: 09/15/23 13:14
Sample Depth: 2.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	50.3		mg/Kg		09/19/23 12:28	09/19/23 21:01	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3		mg/Kg		09/19/23 12:28	09/19/23 21:01	1
Oil Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		09/19/23 12:28	09/19/23 21:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*127*		*70 - 130*	*09/19/23 12:28*	*09/19/23 21:01*	*1*
o-Terphenyl	*145*	*S1+*	*70 - 130*	*09/19/23 12:28*	*09/19/23 21:01*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**187**		5.00		mg/Kg			09/19/23 18:03	1

Client Sample ID: SW04

Lab Sample ID: 890-5281-4
Matrix: Solid
Date Collected: 09/15/23 11:25
Date Received: 09/15/23 13:14
Sample Depth: 0 - 2.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/19/23 09:19	09/22/23 01:11	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/19/23 09:19	09/22/23 01:11	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/19/23 09:19	09/22/23 01:11	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/19/23 09:19	09/22/23 01:11	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/19/23 09:19	09/22/23 01:11	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/19/23 09:19	09/22/23 01:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*	*09/19/23 09:19*	*09/22/23 01:11*	*1*
1,4-Difluorobenzene (Surr)	*63*	*S1-*	*70 - 130*	*09/19/23 09:19*	*09/22/23 01:11*	*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			09/22/23 01:11	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			09/19/23 21:24	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/19/23 12:28	09/19/23 21:24	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/19/23 12:28	09/19/23 21:24	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/19/23 12:28	09/19/23 21:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*60*	*S1-*	*70 - 130*	*09/19/23 12:28*	*09/19/23 21:24*	*1*
o-Terphenyl	*51*	*S1-*	*70 - 130*	*09/19/23 12:28*	*09/19/23 21:24*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5281-1
SDG: 03C1558263

Client Sample ID: SW04

Date Collected: 09/15/23 11:25
Date Received: 09/15/23 13:14
Sample Depth: 0 - 2.5'

Lab Sample ID: 890-5281-4

Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	50.4		4.98		mg/Kg			09/19/23 18:09	1

Surrogate Summary

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5281-1
SDG: 03C1558263

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)
890-5273-A-1-F MS	Matrix Spike	134 S1+	93
890-5273-A-1-G MSD	Matrix Spike Duplicate	127	98
890-5281-1	FS01A	94	62 S1-
890-5281-2	FS12	93	65 S1-
890-5281-3	FS13	94	70
890-5281-4	SW04	92	63 S1-
LCS 880-62786/1-A	Lab Control Sample	128	100
LCSD 880-62786/2-A	Lab Control Sample Dup	130	97
MB 880-62786/5-A	Method Blank	73	90
MB 880-62886/5-A	Method Blank	72	94

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-5281-1	FS01A	104	114
890-5281-2	FS12	120	134 S1+
890-5281-3	FS13	127	145 S1+
890-5281-4	SW04	60 S1-	51 S1-
890-5282-A-8-D MS	Matrix Spike	137 S1+	140 S1+
890-5282-A-8-E MSD	Matrix Spike Duplicate	140 S1+	142 S1+
LCS 880-62823/2-A	Lab Control Sample	101	115
LCSD 880-62823/3-A	Lab Control Sample Dup	93	106
MB 880-62823/1-A	Method Blank	77	88

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5281-1
SDG: 03C1558263

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-62786/5-A
Matrix: Solid
Analysis Batch: 62964

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 62786

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/19/23 09:19	09/21/23 21:45	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/19/23 09:19	09/21/23 21:45	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/19/23 09:19	09/21/23 21:45	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/19/23 09:19	09/21/23 21:45	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/19/23 09:19	09/21/23 21:45	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/19/23 09:19	09/21/23 21:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*73*		*70 - 130*	*09/19/23 09:19*	*09/21/23 21:45*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*09/19/23 09:19*	*09/21/23 21:45*	*1*

Lab Sample ID: LCS 880-62786/1-A
Matrix: Solid
Analysis Batch: 62964

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 62786

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.07199		mg/Kg		72	70 - 130		
Toluene			0.100	0.08136		mg/Kg		81	70 - 130		
Ethylbenzene			0.100	0.09307		mg/Kg		93	70 - 130		
m-Xylene & p-Xylene			0.200	0.1937		mg/Kg		97	70 - 130		
o-Xylene			0.100	0.09886		mg/Kg		99	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 880-62786/2-A
Matrix: Solid
Analysis Batch: 62964

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 62786

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08444		mg/Kg		84	70 - 130	16	35
Toluene			0.100	0.09277		mg/Kg		93	70 - 130	13	35
Ethylbenzene			0.100	0.1113		mg/Kg		111	70 - 130	18	35
m-Xylene & p-Xylene			0.200	0.1928		mg/Kg		96	70 - 130	0	35
o-Xylene			0.100	0.1158		mg/Kg		116	70 - 130	16	35

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

Lab Sample ID: 890-5273-A-1-F MS
Matrix: Solid
Analysis Batch: 62964

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 62786

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U	0.0998	0.09211		mg/Kg		92	70 - 130		
Toluene	<0.00200	U	0.0998	0.1089		mg/Kg		109	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5281-1
SDG: 03C1558263

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

Lab Sample ID: 890-5273-A-1-F MS
Matrix: Solid
Analysis Batch: 62964

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 62786

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.0998	0.1241		mg/Kg		124	70 - 130
m-Xylene & p-Xylene	<0.00401	U	0.200	0.2561		mg/Kg		128	70 - 130
o-Xylene	<0.00200	U	0.0998	0.1259		mg/Kg		126	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*134*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

Lab Sample ID: 890-5273-A-1-G MSD
Matrix: Solid
Analysis Batch: 62964

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 62786

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0990	0.08842		mg/Kg		89	70 - 130	4	35
Toluene	<0.00200	U	0.0990	0.09962		mg/Kg		101	70 - 130	9	35
Ethylbenzene	<0.00200	U	0.0990	0.1120		mg/Kg		113	70 - 130	10	35
m-Xylene & p-Xylene	<0.00401	U	0.198	0.2284		mg/Kg		115	70 - 130	11	35
o-Xylene	<0.00200	U	0.0990	0.1117		mg/Kg		113	70 - 130	12	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*127*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: MB 880-62886/5-A
Matrix: Solid
Analysis Batch: 62964

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 62886

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/20/23 10:13	09/21/23 11:12	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/20/23 10:13	09/21/23 11:12	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/20/23 10:13	09/21/23 11:12	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		09/20/23 10:13	09/21/23 11:12	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/20/23 10:13	09/21/23 11:12	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		09/20/23 10:13	09/21/23 11:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*72*		*70 - 130*	*09/20/23 10:13*	*09/21/23 11:12*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*09/20/23 10:13*	*09/21/23 11:12*	*1*

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

Lab Sample ID: MB 880-62823/1-A
Matrix: Solid
Analysis Batch: 62775

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 62823

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		09/19/23 08:00	09/19/23 08:41	1

QC Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5281-1
SDG: 03C1558263

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

Lab Sample ID: MB 880-62823/1-A
Matrix: Solid
Analysis Batch: 62775

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 62823

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		09/19/23 08:00	09/19/23 08:41	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/19/23 08:00	09/19/23 08:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*77*		*70 - 130*	*09/19/23 08:00*	*09/19/23 08:41*	*1*
o-Terphenyl	*88*		*70 - 130*	*09/19/23 08:00*	*09/19/23 08:41*	*1*

Lab Sample ID: LCS 880-62823/2-A
Matrix: Solid
Analysis Batch: 62775

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 62823

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	918.8		mg/Kg		92	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	991.0		mg/Kg		99	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*101*		*70 - 130*
o-Terphenyl	*115*		*70 - 130*

Lab Sample ID: LCSD 880-62823/3-A
Matrix: Solid
Analysis Batch: 62775

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 62823

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	934.1		mg/Kg		93	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	914.9		mg/Kg		91	70 - 130	8	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*93*		*70 - 130*
o-Terphenyl	*106*		*70 - 130*

Lab Sample ID: 890-5282-A-8-D MS
Matrix: Solid
Analysis Batch: 62775

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 62823

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	997	910.8		mg/Kg		87	70 - 130		
Diesel Range Organics (Over C10-C28)	57.6		997	1124		mg/Kg		107	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*137*	*S1+*	*70 - 130*
o-Terphenyl	*140*	*S1+*	*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5281-1
SDG: 03C1558263

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

Lab Sample ID: 890-5282-A-8-E MSD
Matrix: Solid
Analysis Batch: 62775

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 62823

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	997	948.4		mg/Kg		91	70 - 130	4	20
Diesel Range Organics (Over C10-C28)	57.6		997	1137		mg/Kg		108	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*140*	*S1+*	*70 - 130*
o-Terphenyl	*142*	*S1+*	*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-62809/1-A
Matrix: Solid
Analysis Batch: 62854

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			09/19/23 16:47	1

Lab Sample ID: LCS 880-62809/2-A
Matrix: Solid
Analysis Batch: 62854

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	245.4		mg/Kg		98	90 - 110		

Lab Sample ID: LCSD 880-62809/3-A
Matrix: Solid
Analysis Batch: 62854

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	245.3		mg/Kg		98	90 - 110	0	20

Lab Sample ID: 890-5280-A-1-B MS
Matrix: Solid
Analysis Batch: 62854

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	217		253	449.5		mg/Kg		92	90 - 110		

Lab Sample ID: 890-5280-A-1-C MSD
Matrix: Solid
Analysis Batch: 62854

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	217		253	449.6		mg/Kg		92	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5281-1
SDG: 03C1558263

GC VOA

Prep Batch: 62786

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5281-1	FS01A	Total/NA	Solid	5035	
890-5281-2	FS12	Total/NA	Solid	5035	
890-5281-3	FS13	Total/NA	Solid	5035	
890-5281-4	SW04	Total/NA	Solid	5035	
MB 880-62786/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-62786/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-62786/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5273-A-1-F MS	Matrix Spike	Total/NA	Solid	5035	
890-5273-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 62886

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-62886/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 62964

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5281-1	FS01A	Total/NA	Solid	8021B	62786
890-5281-2	FS12	Total/NA	Solid	8021B	62786
890-5281-3	FS13	Total/NA	Solid	8021B	62786
890-5281-4	SW04	Total/NA	Solid	8021B	62786
MB 880-62786/5-A	Method Blank	Total/NA	Solid	8021B	62786
MB 880-62886/5-A	Method Blank	Total/NA	Solid	8021B	62886
LCS 880-62786/1-A	Lab Control Sample	Total/NA	Solid	8021B	62786
LCSD 880-62786/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	62786
890-5273-A-1-F MS	Matrix Spike	Total/NA	Solid	8021B	62786
890-5273-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	62786

Analysis Batch: 63051

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5281-1	FS01A	Total/NA	Solid	Total BTEX	
890-5281-2	FS12	Total/NA	Solid	Total BTEX	
890-5281-3	FS13	Total/NA	Solid	Total BTEX	
890-5281-4	SW04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 62775

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5281-1	FS01A	Total/NA	Solid	8015B NM	62823
890-5281-2	FS12	Total/NA	Solid	8015B NM	62823
890-5281-3	FS13	Total/NA	Solid	8015B NM	62823
890-5281-4	SW04	Total/NA	Solid	8015B NM	62823
MB 880-62823/1-A	Method Blank	Total/NA	Solid	8015B NM	62823
LCS 880-62823/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	62823
LCSD 880-62823/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	62823
890-5282-A-8-D MS	Matrix Spike	Total/NA	Solid	8015B NM	62823
890-5282-A-8-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	62823

Prep Batch: 62823

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5281-1	FS01A	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5281-1
SDG: 03C1558263

GC Semi VOA (Continued)

Prep Batch: 62823 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5281-2	FS12	Total/NA	Solid	8015NM Prep	
890-5281-3	FS13	Total/NA	Solid	8015NM Prep	
890-5281-4	SW04	Total/NA	Solid	8015NM Prep	
MB 880-62823/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-62823/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-62823/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5282-A-8-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-5282-A-8-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 62893

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5281-1	FS01A	Total/NA	Solid	8015 NM	
890-5281-2	FS12	Total/NA	Solid	8015 NM	
890-5281-3	FS13	Total/NA	Solid	8015 NM	
890-5281-4	SW04	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 62809

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5281-1	FS01A	Soluble	Solid	DI Leach	
890-5281-2	FS12	Soluble	Solid	DI Leach	
890-5281-3	FS13	Soluble	Solid	DI Leach	
890-5281-4	SW04	Soluble	Solid	DI Leach	
MB 880-62809/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-62809/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-62809/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5280-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-5280-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 62854

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5281-1	FS01A	Soluble	Solid	300.0	62809
890-5281-2	FS12	Soluble	Solid	300.0	62809
890-5281-3	FS13	Soluble	Solid	300.0	62809
890-5281-4	SW04	Soluble	Solid	300.0	62809
MB 880-62809/1-A	Method Blank	Soluble	Solid	300.0	62809
LCS 880-62809/2-A	Lab Control Sample	Soluble	Solid	300.0	62809
LCSD 880-62809/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	62809
890-5280-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	62809
890-5280-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	62809

Lab Chronicle

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5281-1
SDG: 03C1558263

Client Sample ID: FS01A
Date Collected: 09/15/23 09:55
Date Received: 09/15/23 13:14

Lab Sample ID: 890-5281-1
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			5.00 g	5 mL	62786	09/19/23 09:19	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62964	09/22/23 00:09	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			63051	09/22/23 00:09	SM	EET MID
Total/NA	Analysis	8015 NM		1			62893	09/19/23 20:16	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	62823	09/19/23 12:28	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62775	09/19/23 20:16	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	62809	09/19/23 11:36	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	62854	09/19/23 17:40	CH	EET MID

Client Sample ID: FS12
Date Collected: 09/15/23 11:15
Date Received: 09/15/23 13:14

Lab Sample ID: 890-5281-2
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	62786	09/19/23 09:19	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62964	09/22/23 00:30	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			63051	09/22/23 00:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			62893	09/19/23 20:38	SM	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	62823	09/19/23 12:28	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62775	09/19/23 20:38	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	62809	09/19/23 11:36	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	62854	09/19/23 17:57	CH	EET MID

Client Sample ID: FS13
Date Collected: 09/15/23 11:20
Date Received: 09/15/23 13:14

Lab Sample ID: 890-5281-3
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	62786	09/19/23 09:19	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62964	09/22/23 00:50	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			63051	09/22/23 00:50	SM	EET MID
Total/NA	Analysis	8015 NM		1			62893	09/19/23 21:01	SM	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	62823	09/19/23 12:28	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62775	09/19/23 21:01	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	62809	09/19/23 11:36	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	62854	09/19/23 18:03	CH	EET MID

Client Sample ID: SW04
Date Collected: 09/15/23 11:25
Date Received: 09/15/23 13:14

Lab Sample ID: 890-5281-4
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			5.03 g	5 mL	62786	09/19/23 09:19	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62964	09/22/23 01:11	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			63051	09/22/23 01:11	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5281-1
SDG: 03C1558263

Client Sample ID: SW04
Date Collected: 09/15/23 11:25
Date Received: 09/15/23 13:14

Lab Sample ID: 890-5281-4
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			62893	09/19/23 21:24	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	62823	09/19/23 12:28	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62775	09/19/23 21:24	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	62809	09/19/23 11:36	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	62854	09/19/23 18:09	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: Hudson 1 Fed Com 9H

Job ID: 890-5281-1
SDG: 03C1558263

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

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

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

Method Summary

Client: Ensolum
Project/Site: Hudson 1 Fed Com 9H

Job ID: 890-5281-1
SDG: 03C1558263

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: Hudson 1 Fed Com 9H

Job ID: 890-5281-1
SDG: 03C1558263

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5281-1	FS01A	Solid	09/15/23 09:55	09/15/23 13:14	2.5
890-5281-2	FS12	Solid	09/15/23 11:15	09/15/23 13:14	2
890-5281-3	FS13	Solid	09/15/23 11:20	09/15/23 13:14	2.5
890-5281-4	SW04	Solid	09/15/23 11:25	09/15/23 13:14	0 - 2.5'

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Ben Bellil	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:	bbellil@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:	Hudson 1 Fed Com 9H	Turn Around	☑ Routine ☐ Rush
Project Number:	03C1558263	Due Date:	
Project Location:	32.33342, -103.83142	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:	TN0007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	3.0
Total Containers:		Corrected Temperature:	2.8

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

890-5281 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	BTEX	Chlorides	TPH	Sample Comments
FS01A	S	9/15/23	0955	2.5'	C	1	X	X	X	Incident #: NAPP2322645119
FS12	↓	↓	1115	2'	↓	↓	↓	↓	↓	
FS13			1120	2.5'						
SW04			1125	0-2'						Cost Center: 1139091001

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Meredith		15:30 9.15	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5281-1
SDG Number: 03C1558263

Login Number: 5281
List Number: 1
Creator: Lopez, Abraham

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: 890-5281-1
SDG Number: 03C1558263

Login Number: 5281
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 09/19/23 10:55 AM

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

ENSOLUM

APPENDIX E

NMOCD Notifications

From: Collins, Melanie
To: Green, Garrett J; Ben Belill; Ashley Ager
Subject: FW: [EXTERNAL] XTO - Sampling Notification (Week of 9/5/23 - 9/8/23)
Date: Thursday, August 31, 2023 11:05:43 AM
Attachments: image001.png

[**EXTERNAL EMAIL**]

Time of sampling requested…..again. ugh.

Melanie Collins

XTO ENERGY

Environmental Technician
melanie.collins@exxonmobil.com
432-556-3756

From: Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>
Sent: Thursday, August 31, 2023 10:01 AM
To: Collins, Melanie <melanie.collins@exxonmobil.com>
Cc: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>
Subject: RE: [EXTERNAL] XTO - Sampling Notification (Week of 9/5/23 - 9/8/23)

External Email - Think Before You Click

Hi Melanie,

The OCD has received your notification. When reporting sampling at multiple locations it is required to provide the date and time for each location. Include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Thank you,

Shelly

Shelly Wells * Environmental Specialist-Advanced
Environmental Bureau
EMNRD-Oil Conservation Division
1220 S. St. Francis Drive|Santa Fe, NM 87505
(505)469-7520|Shelly.Wells@emnrd.nm.gov
http://www.emnrd.state.nm.us/OCD/

From: Collins, Melanie <melanie.collins@exxonmobil.com>
Sent: Thursday, August 31, 2023 8:49 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; spills@slo.state.nm.us
Cc: bbelill@ensolum.com; Green, Garrett J <garrett.green@exxonmobil.com>
Subject: [EXTERNAL] XTO - Sampling Notification (Week of 9/5/23 - 9/8/23)

All,

XTO plans to complete final sampling activities at the sites listed below for the week of September 5, 2023.

Tuesday
- PLU 18 TWR Sat Battery / nAPP2230551957

Wednesday
- PLU 18 TWR Sat Battery / nAPP2230551957
- James Ranch Unit 19 Tank Battery / NAPP2322348507 (SLO)

Thursday
- PLU 18 TWR Sat Battery / nAPP2230551957
- James Ranch Unit 2 702H / nAPP2211654411
- JRU 108 / nAPP2217931599
- Hudson 1 Fed Com 9H / nAPP2322645119

Friday
- PLU 18 TWR Sat Battery / nAPP2230551957
- JRU 108 / nAPP2217931599
- Hudson 1 Fed Com 9H / nAPP2322645119

Thank you,

Melanie Collins
XTO ENERGY
Environmental Technician
melanie.collins@exxonmobil.com
432-556-3756

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

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

CONDITIONS

Action 280339

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 280339
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	None	11/28/2023