State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | NAPP2226337852 |
| District RP | |
| Facility ID | |
| Application ID | |

# 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: _Environmental Coordinator_____

Signature: _____ Date: __05/02/2023_____

email: __garrett.green@exxonmobil.com_____ Telephone: ___575-200-0729_____

**OCD Only**

Received by: Jocelyn Harimon Date: 05/03/2023

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: Robert Hamlet Date: 9/20/2023

Printed Name: Robert Hamlet Title: Environmental Specialist - Advanced

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 | NAPP2226337852 |
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| 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 32.10159 Longitude -103.87212
*(NAD 83 in decimal degrees to 5 decimal places)*

| | |
|---|---|
| Site Name PLU 27 Brushy Draw 163H | Site Type Production Well |
| Date Release Discovered 09/07/2022 | API# *(if applicable)* |

| Unit Letter | Section | Township | Range | County |
|---|---|---|---|---|
| F | 27 | 25S | 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) | Volume Recovered (bbls) |
| ☐ Produced Water | Volume Released (bbls) | Volume Recovered (bbls) |
| | 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) Produced water w/FR | Volume/Weight Released (provide units) 23.00 BBLS | Volume/Weight Recovered (provide units) 22.50 BBLS |

Cause of Release: Human error caused a tank to overflow both into containment and onto 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 | NAPP2226337852 |
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| Facility ID | |
| Application ID | |

| | |
|---|---|
| Was this a major release as defined by 19.15.29.7(A) NMAC?<br><br>☐ Yes ☒ No | If YES, for what reason(s) does the responsible party consider this a major release?<br>N/A |
| If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?<br>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: 9/20/2022

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

**OCD Only**

Received by: _____  Date: _____

| Location: | PLU 27 Brushy Draw 163H | |
|---|---|---|
| Spill Date: | 9/7/2022 | |

| Area 1 | | |
|---|---|---|
| Approximate Area = | 112.29 | cu.ft. |
| VOLUME OF LEAK | | |
| Total Crude Oil = | 0.00 | bbls |
| Total Produced Water = | 20.00 | bbls |

| Area 2 | | |
|---|---|---|
| Approximate Area = | 742.00 | sq. ft. |
| Average Saturation (or depth) of spill = | 1.50 | inches |

| | | |
|---|---|---|
| Average Porosity Factor = | 0.03 | |

| VOLUME OF LEAK | | |
|---|---|---|
| Total Crude Oil = | 0.00 | bbls |
| Total Produced Water = | 3.00 | bbls |

| TOTAL VOLUME OF LEAK | | |
|---|---|---|
| **Total Crude Oil =** | **0.00** | **bbls** |
| **Total Produced Water =** | **23.00** | **bbls** |
| **TOTAL VOLUME RECOVERED** | | |
| **Total Crude Oil =** | **0.00** | **bbls** |
| **Total Produced Water =** | **22.50** | **bbls** |

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | NAPP2226337852 |
| 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.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | NAPP2226337852 |
| District RP | |
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| Application ID | |

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

Printed Name: Garrett Green Title: Environmental Coordinator

Signature:  Date: 05/02/2023

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

**OCD Only**

Received by: Jocelyn Harimon Date: 05/03/2023

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | NAPP2226337852 |
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| Facility ID | |
| Application ID | |

# 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: _Environmental Coordinator_____

Signature: _____ Date: __05/02/2023_____

email: __garrett.green@exxonmobil.com_____ Telephone: ___575-200-0729_____

**OCD Only**

Received by: _____Jocelyn Harimon_____ Date: ___05/03/2023___

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: _____ Date: _____

Printed Name: _____ Title: _____

ENSOLUM

May 2, 2023

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

**Re: Closure Request**
**PLU 27 Brushy Draw 163H**
**Incident Number NAPP2226337852**
**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 site assessment and soil sampling activities performed at the PLU 27 Brushy Draw 163H (Site). The purpose of the Site assessment and soil sampling activities was to assess for the presence or absence of impacts to soil resulting from a release of produced water with friction reducer (FR) at the Site. Based on Site assessment activities and soil sample laboratory analytical results, XTO is submitting this *Closure Request*, describing remediation activities that have occurred and requesting no further action for Incident Number NAPP2226337852.

## SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit F, Section 27, Township 25 South, Range 30 East, in Eddy County, New Mexico (32.10159°, -103.87212°) and is associated with oil and gas exploration and production operations on federal land managed by the Bureau of Land Management (BLM).

On September 7, 2022, human error caused a tank to overflow, resulting in a release of approximately 23 barrels (bbls) of produced water with FR into a temporary containment and onto the pad. A vacuum truck was immediately dispatched to the Site to recover the free-standing fluids; approximately 22.50 bbls of fluid were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on September 20, 2022. The release was assigned Incident Number NAPP2226337852.

Produced water is recycled through filtering and separation, then mixed in a blender with FR and used as hydraulic fracturing (frac) fluid during the well completion process. The Safety Data Sheet (SDS) for FR is provided as an attachment.

The temporary lined containment was removed prior to beginning Site assessment activities. As such, a liner inspection could not be completed. The location of the release extent and the temporary containment was identified based on information provided on the Form C-141 and visual observations.

## SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess the applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC).

Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization. Potential Site receptors are identified on Figure 1.

Depth to groundwater at the Site is greater than 100 feet below ground surface (bgs) based on a recent soil boring drilled for determination of regional groundwater depth. On April 17, 2023, a soil boring (BH01) was drilled utilizing a truck-mounted air rotary rig. Soil boring BH01 was drilled to a depth of 105 feet bgs. The location of the borehole is approximately 1,064 feet east of the release area and is depicted on Figure 1. A field geologist logged and described soils continuously. No moisture or groundwater was encountered during drilling activites. 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 was greater than 105 feet bgs. The borehole was properly abandoned with drill cuttings and hydrated bentonite chips. The referenced well record is included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is an intermittent stream, located approximately 1,203 feet northeast of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied resedence, 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 overlyin a subsurface mine. The Site is not underlain by unstable geology (low karst designation area). Potential site receptors are identified on Figure 1.

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

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

## SITE ASSESSMENT AND DELINEATION ACTIVITIES

Between January 19 and March 20, 2023, Ensolum personnel were onsite to evaluate the release extent based on information provided on the C-141 and visual observations. Eight delineation soil samples (SS01 through SS08) were collected within and around the release extent at a depth of 0.5 feet bgs to assess for the presence or absence of impacted soil. The soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride utilizing Hach® chloride QuanTab® test strips. Three potholes were advanced via backhoe to depths ranging from 1-foot to 4 feet bgs. Potholes PH01 through PH03 were advanced in the vicinity of soil samples SS01 through SS03, respectively. Pothole PH03 was advanced in the area of removed temporary containment. Field screening results and observations for the potholes were logged on lithologic/soil sampling logs and are included in Appendix B. The release extent and soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was conducted during the delineation activities and a photographic log is included in Appendix C.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico,

for analysis of the following chemicals of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0. Soil samples delivered to the laboratory the same day they were collected may not have equilibrated to 6 degrees Celcius, required for shipment and long term storage, but are considered by the laboratory to have been received in acceptable condition.

## LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for delineation soil samples SS01 through SS08 and PH01 through PH03 indicated all COC concentrations were compliant with the Site Closure Criteria. Laboratory analytical results for soil samples SS04, SS05, SS07, and SS08, collected around the release extent, indicated all COCs were complaint with the most stringent Table I Closure Criteria and successfully defined the lateral extent of the release. Laboratory analytical results are summarized in Table 1 and the laboratory analytical reports are attached in Appendix D.

## CLOSURE REQUEST

Site assessment activities were conducted at the Site to assess for the presence or absence of impacted soil resulting from the September 7, 2022 release of produced water with FR. Laboratory analytical results for soil samples collected within and around the release extent, at depths ranging from 0.5 feet to 4 feet bgs, indicated all COC concentrations were compliant with the Site Closure Criteria and provided lateral and vertical delineation to the most stringent Table I Closure Criteria.

Based on initial response efforts, depth to groundwater greater than 100 feet bgs, and soil sample laboratory analytical results compliant with the Closure Criteria, no further remediation was required. XTO believes these remedial actions are protective of human health, the environment, and groundwater and respectfully requests closure for Incident Number NAPP2226337852.

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
Field Geologist

Daniel R. Moir, PG
Senior Managing Geologist

cc: Garrett Green, XTO
Shelby Pennington, XTO
BLM

Appendices:

Figure 1 Site Receptor Map
Figure 2 Delineation Soil Sample Locations

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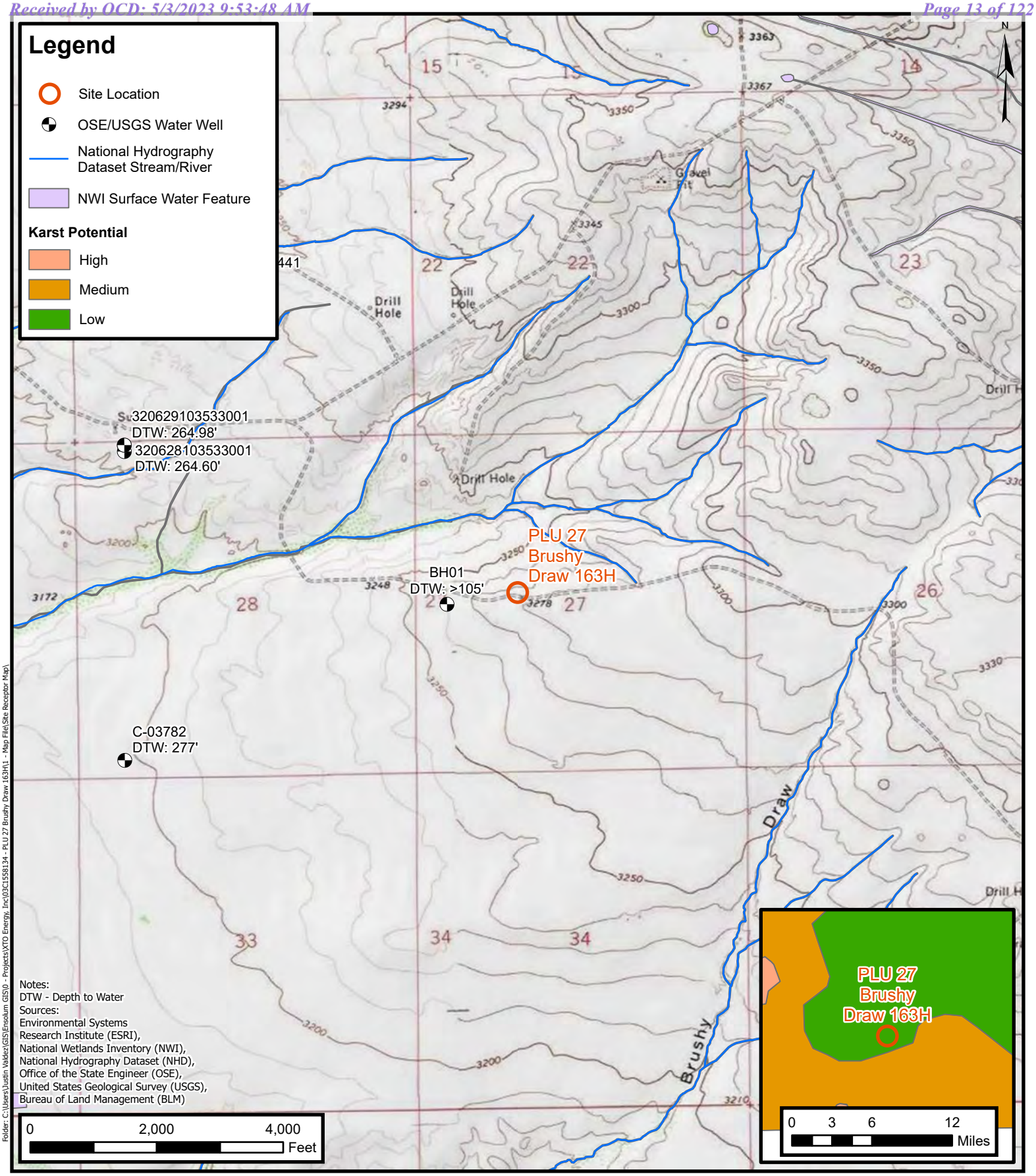
# FIGURES



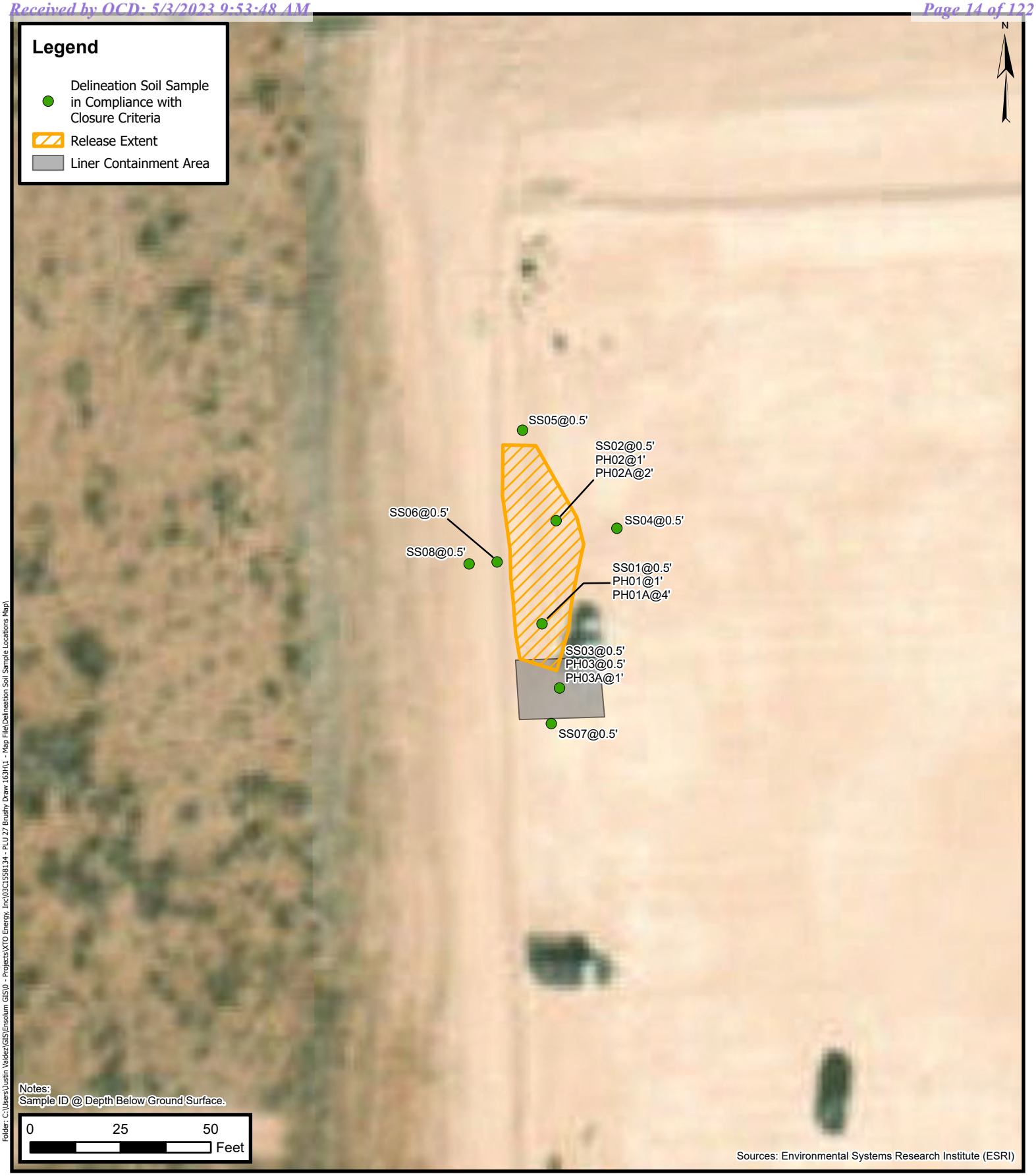

Folder: C:\Users\Justin Valdez\GIS\Ensolum GIS\0 - Projects\XTO Energy, Inc\03C1558134 - PLU 27 Brushy Draw 163H\1 - Map File\Site Receptor Map\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

# Site Receptor Map

XTO Energy, Inc
PLU 27 Brushy Draw 163H
Incident Number: nAPP2226337852
Unit F, Sec 27, T25S, R30E
Eddy County, New Mexico

**FIGURE 1**




Folder: C:\Users\Justin Valdez\GIS\Ensolum GIS\0 - Projects\XTO Energy, Inc\03C1558134 - PLU 27 Brushy Draw 163H\1 - Map File\Delineation Soil Sample Locations Map\

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Environmental, Engineering and Hydrogeologic Consultants

# Delineation Soil Sample Locations

XTO Energy, Inc
PLU 27 Brushy Draw 163H
Incident Number: nAPP2226337852
Unit F, Sec 27, T25S, R30E
Eddy County, New Mexico

**FIGURE 2**

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# TABLES

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**TABLE 1**
**SOIL SAMPLE ANALYTICAL RESULTS**
**PLU 27 BRUSHY DRAW 163H**
**XTO Energy, Inc.**
**Eddy County, New Mexico**

| Sample I.D. | Sample Date | Sample Depth (feet bgs) | Benzene (mg/kg) | Total BTEX (mg/kg) | TPH GRO (mg/kg) | TPH DRO (mg/kg) | TPH ORO (mg/kg) | GRO+DRO (mg/kg) | Total TPH (mg/kg) | Chloride (mg/kg) |
|---|---|---|---|---|---|---|---|---|---|---|
| **NMOCD Table I Closure Criteria (NMAC 19.15.29)** | | | **10** | **50** | **NE** | **NE** | **NE** | **1,000** | **2,500** | **20,000** |
| **Delineation Soil Samples** | | | | | | | | | | |
| SS01 | 01/19/2023 | 0.5 | <0.00202 | <0.00403 | <49.9 | <49.9 | <49.9 | <49.9 | <49.9 | 1,330 |
| PH01 | 01/30/2023 | 1 | <0.00202 | <0.00403 | <49.8 | <49.8 | <49.8 | <49.8 | <49.8 | 483 |
| PH01A | 01/30/2023 | 4 | <0.00199 | <0.00398 | <50.0 | <50.0 | <50.0 | <50.0 | <50.0 | 319 |
| SS02 | 01/19/2023 | 0.5 | <0.00199 | <0.00398 | <49.9 | 118 | <49.9 | 118 | 118 | 674 |
| PH02 | 01/30/2023 | 1 | <0.00199 | <0.00398 | <49.9 | <49.9 | <49.9 | <49.9 | <49.9 | 128 |
| PH02A | 01/30/2023 | 2 | <0.00199 | <0.00398 | <50.0 | <50.0 | <50.0 | <50.0 | <50.0 | 158 |
| SS03 | 01/19/2023 | 0.5 | <0.00198 | <0.00396 | <49.9 | 357 | <49.9 | 357 | 357 | 586 |
| PH03 | 01/30/2023 | 0.5 | <0.00199 | <0.00398 | <50.0 | <50.0 | <50.0 | <50.0 | <50.0 | 672 |
| PH03A | 01/30/2023 | 1 | <0.00200 | <0.00399 | <49.9 | <49.9 | <49.9 | <49.9 | <49.9 | 341 |
| SS04 | 01/19/2023 | 0.5 | <0.00200 | <0.00399 | <49.9 | 69.0 | <49.9 | 69.0 | 69.0 | 415 |
| SS05 | 01/19/2023 | 0.5 | <0.00199 | <0.00398 | <50.0 | 60.8 | <50.0 | 60.8 | 60.8 | 115 |
| SS06 | 01/19/2023 | 0.5 | <0.00201 | <0.00402 | <49.9 | 130 | <49.9 | 130 | 130 | 20 |
| SS07 | 03/20/2023 | 0.5 | <0.00201 | <0.00402 | <50.0 | <50.0 | <50.0 | <50.0 | <50.0 | 242 |
| SS08 | 03/20/2023 | 0.5 | <0.00200 | <0.00401 | <50.0 | <50.0 | <50.0 | <50.0 | <50.0 | 386 |

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

Concentrations in bold exceed the NMOCD Table I Closure Criteria or reclamation standard where applicable.

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

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# APPENDIX A

## Referenced Well Records

ENSOLUM

| | | |
|---|---|---|
| Sample Name: BH01 | Date: 4/17/23 | |
| Site Name: PLU 27 Brushy Draw 161H | | |
| Incident Number: | | |
| Job Number: 03C1558089/91/93 | | |
| **LITHOLOGIC / SOIL SAMPLING LOG** | Logged By: MR | Method: Air Rotary |
| Coordinates: 32.100909, -103.875339 | Hole Diameter: | Total Depth: 105' |

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.

| Moisture Content | Chloride (ppm) | Vapor (ppm) | Staining | Sample ID | Sample Depth (ft bgs) | Depth (ft bgs) | USCS/Rock Symbol | Lithologic Descriptions |
|---|---|---|---|---|---|---|---|---|
| D | | | | | 0' | 0' | CCHE | 0-20' CALICHE, white-light brown, poorly sorted, medium grained |
| D | | | | | 10' | 10' | | SAA - largely gravel |
| D | | | | | 20' | 20' | | 20'-40' CALICHE, light brown/slightly red/pink w/ sand mixed in. Medium grained, poorly sorted |
| | | | | | 30' | 30' | | CALICHE - assorted gravel, stones. Large portion sand (but muddy due to injection). Poorly sorted |
| | | | | | 40' | 40' | SC | 40'- SAND (CLAYEY), ~~light brown~~ reddish, poorly sorted. Muddy/consistency of cool-whip due to added soap/loamy. Med. grained |
| | | | | | 50' | 50' | | SAA - but ~~light~~ med brown |
| | | | | | 60' | 60' | | SAA |
| | | | | | 70' | 70' | | SAA |
| | | | | | 80' | 80' | | SAA - but light brown/white |
| | | | | | 90' | 90' | | SAA - ~~but m~~ MC |
| | | | | | 100' | 100' | | SAA - but med. brown |
| | | | | | 105' | | | SAA - but white (v. light brown) |
| | | | | | | 110' | TD | 105' |

No water hit

All wet due to injection of water/soap mix to stabilize

Adding soap + water @ ~30'

0 10 20 30 40 50 60 70 80 90 100 105' 110

Click to hideNews Bulletins

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

Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

## Search Results -- 1 sites found

**Agency code =** usgs
**site_no list =**
- 320628103533001

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

## USGS 320628103533001 25S.30E.21.333424

Eddy County, New Mexico
Latitude 32°06'28", Longitude 103°53'30" NAD27
Land-surface elevation 3,207 feet above NAVD88
The depth of the well is 288 feet below land surface.
This well is completed in the Pecos River Basin alluvial aquifer (N100PCSRVR) national aquifer.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

**Output formats**

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

| Date | Time | ? Water-level date-time accuracy | ? Parameter code | Water level, feet below land surface | Water level, feet above specific vertical datum | Referenced vertical datum | ? Status | ? Method of measurement | ? Measuring agency | ? Source measu |
|---|---|---|---|---|---|---|---|---|---|---|
| 1958-08-21 | | D | 62610 | | 2972.36 | NGVD29 | 1 | Z | | |
| 1958-08-21 | | D | 62611 | | 2974.00 | NAVD88 | 1 | Z | | |
| 1958-08-21 | | D | 72019 | 233.00 | | | 1 | Z | | |
| 1959-02-05 | | D | 62610 | | 2939.26 | NGVD29 | P | Z | | |
| 1959-02-05 | | D | 62611 | | 2940.90 | NAVD88 | P | Z | | |
| 1959-02-05 | | D | 72019 | 266.10 | | | P | Z | | |
| 1983-02-01 | | D | 62610 | | 2945.48 | NGVD29 | 1 | Z | | |
| 1983-02-01 | | D | 62611 | | 2947.12 | NAVD88 | 1 | Z | | |
| 1983-02-01 | | D | 72019 | 259.88 | | | 1 | Z | | |
| 1998-01-28 | | D | 62610 | | 2940.76 | NGVD29 | 1 | S | | |
| 1998-01-28 | | D | 62611 | | 2942.40 | NAVD88 | 1 | S | | |
| 1998-01-28 | | D | 72019 | 264.60 | | | 1 | S | | |

**Explanation**

| Section | Code | Description |
|---|---|---|

| Section | Code | Description |
|---|---|---|
| Water-level date-time accuracy | D | Date is accurate to the Day |
| Parameter code | 62610 | Groundwater level above NGVD 1929, feet |
| Parameter code | 62611 | Groundwater level above NAVD 1988, feet |
| Parameter code | 72019 | Depth to water level, feet below land surface |
| Referenced vertical datum | NAVD88 | North American Vertical Datum of 1988 |
| Referenced vertical datum | NGVD29 | National Geodetic Vertical Datum of 1929 |
| Status | 1 | Static |
| Status | P | Pumping |
| Method of measurement | S | Steel-tape measurement. |
| Method of measurement | Z | Other. |
| Measuring agency | | Not determined |
| Source of measurement | | Not determined |
| Water-level approval status | A | Approved for publication -- Processing and review completed. |

ENSOLUM

# APPENDIX B

## Lithologic/Soil Sampling Logs

ENSOLUM

| | | |
|---|---|---|
| Sample Name: PH01 | 1/30/2023 | |
| Site Name: PLU 27 Brushy Draw 163H | | |
| Incident Number: NAPP2226337852 | | |
| Job Number: 03C1558134 | | |
| **LITHOLOGIC / SOIL SAMPLING LOG** | Logged By: MR | Method: Backhoe |
| Coordinates: 32.10159, -103.87212 | Hole Diameter: NA | Total Depth: 4' |

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

| Moisture Content | Chloride (ppm) | Vapor (ppm) | Staining | Sample ID | Sample Depth (ft bgs) | Depth (ft bgs) | USCS/Rock Symbol | Lithologic Descriptions |
|---|---|---|---|---|---|---|---|---|
| D | 1,120 | 0.4 | N | SS01 | 0.5 | 0.5 | CCHE | CALCIHE, tan, sub-rounded grains, poorly sorted, no stain, no odor, dry |
| D | 526.4 | 1.4 | N | PH01 | 1 | 1 | | |
| D | 324.8 | 0.6 | N | | | 2 | | |
| D | 302.4 | 0.5 | N | | | 3 | | |
| D | 347.2 | 0.7 | N | PH01A | 4 | 4 | | |
| | | | | | | | TD | Total Depth @ 4' |

| ENSOLUM | Sample Name: PH02 | 1/30/2023 |
|---|---|---|
| | Site Name: PLU 27 Brushy Draw 163H | |
| | Incident Number: NAPP2226337852 | |
| | Job Number: 03C1558134 | |
| **LITHOLOGIC / SOIL SAMPLING LOG** | Logged By: MR | Method: Backhoe |
| Coordinates: 32.10159, -103.87212 | Hole Diameter: NA | 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.

| Moisture Content | Chloride (ppm) | Vapor (ppm) | Staining | Sample ID | Sample Depth (ft bgs) | Depth (ft bgs) | USCS/Rock Symbol | Lithologic Descriptions |
|---|---|---|---|---|---|---|---|---|
| D | 879.2 | 0.6 | N | SS02 | 0.5 | 0.5 | CCHE | CALCIHE, tan, sub-rounded grains, poorly sorted, no stain, no odor, dry |
| D | <172.6 | 0.5 | N | PH02 | 1 | 1 | | |
| D | <172.6 | 0.4 | N | PH02A | 2 | 2 | | |
| | | | | | | | TD | Total Depth @ 2' |

ENSOLUM

| | | |
|---|---|---|
| | Sample Name: PH03 | 1/30/2023 |
| | Site Name: PLU 27 Brushy Draw 163H | |
| | Incident Number: NAPP2226337852 | |
| | Job Number: 03C1558134 | |
| **LITHOLOGIC / SOIL SAMPLING LOG** | Logged By: MR | Method: Backhoe |
| Coordinates: 32.10159, -103.87212 | Hole Diameter: NA | 1' |

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.

| Moisture Content | Chloride (ppm) | Vapor (ppm) | Staining | Sample ID | Sample Depth (ft bgs) | Depth (ft bgs) | USCS/Rock Symbol | Lithologic Descriptions |
|---|---|---|---|---|---|---|---|---|
| D | 397.6 | 0.4 | N | PH03 | 0.5 | 0.5 | CCHE | CALCIHE, light brown/tan, sub-rounded grains, poorly sorted, no stain, no odor, dry |
| D | 212.8 | 0.3 | N | PH03A | 1 | 1 | | |
| | | | | | | | TD | Total Depth @ 1' |

ENSOLUM

# APPENDIX C

## Photographic Log

ENSOLUM

**Photographic Log**
XTO Energy, Inc
PLU 27 Brushy Draw 163H
NAPP2226337852


Photograph 1 Date: 1/19/2023
Description: Initial release extent
View: East


Photograph 2 Date: 1/30/2023
Description: Release extent, pre-delineation activities
View: West


Photograph 3 Date: 1/30/2023
Description: Delineation activities at PH01
View: Southeast


Photograph 4 Date: 1/30/2023
Description: Site post-delineation activities
View: North

ENSOLUM

# APPENDIX D

## Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing



# ANALYTICAL REPORT

## PREPARED FOR

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

Generated 2/3/2023 7:13:45 PM

## JOB DESCRIPTION

PLU 27 Brushy Draw 163H
SDG NUMBER 03C1558134

## JOB NUMBER

890-3900-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.





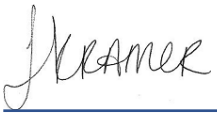
my EOL

# Eurofins Carlsbad

## Job Notes

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
2/3/2023 7:13:45 PM

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

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Laboratory Job ID: 890-3900-1
SDG: 03C1558134

# Table of Contents

# Definitions/Glossary

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3900-1
SDG: 03C1558134

## 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 |
|---|---|
| U | Indicates the analyte was analyzed for but not detected. |

### HPLC/IC

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

## Glossary

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

# Case Narrative

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3900-1
SDG: 03C1558134

## Job ID: 890-3900-1

**Laboratory: Eurofins Carlsbad**

**Narrative**

**Job Narrative**
**890-3900-1**

**Receipt**
The samples were received on 1/19/2023 1:11 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 1.6°C

**Receipt Exceptions**
The following samples were received and analyzed from an unpreserved bulk soil jar: SS01 (890-3900-1), SS02 (890-3900-2), SS03 (890-3900-3), SS04 (890-3900-4), SS05 (890-3900-5) and SS06 (890-3900-6).

**GC VOA**
Method 8021B: Surrogate recovery for the following sample was outside control limits: SS05 (890-3900-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

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

**HPLC/IC**
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-44667 and analytical batch 880-44725 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

# Client Sample Results

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3900-1
SDG: 03C1558134

## Client Sample ID: SS01

**Lab Sample ID: 890-3900-1**
**Matrix: Solid**
**Date Collected: 01/19/23 10:50**
**Date Received: 01/19/23 13:11**
**Sample Depth: 0.5'**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U | 0.00202 | | mg/Kg | | 01/30/23 12:49 | 01/30/23 23:51 | 1 |
| Toluene | <0.00202 | U | 0.00202 | | mg/Kg | | 01/30/23 12:49 | 01/30/23 23:51 | 1 |
| Ethylbenzene | <0.00202 | U | 0.00202 | | mg/Kg | | 01/30/23 12:49 | 01/30/23 23:51 | 1 |
| m-Xylene & p-Xylene | <0.00403 | U | 0.00403 | | mg/Kg | | 01/30/23 12:49 | 01/30/23 23:51 | 1 |
| o-Xylene | <0.00202 | U | 0.00202 | | mg/Kg | | 01/30/23 12:49 | 01/30/23 23:51 | 1 |
| Xylenes, Total | <0.00403 | U | 0.00403 | | mg/Kg | | 01/30/23 12:49 | 01/30/23 23:51 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *100* | | *70 - 130* | *01/30/23 12:49* | *01/30/23 23:51* | *1* |
| *1,4-Difluorobenzene (Surr)* | *84* | | *70 - 130* | *01/30/23 12:49* | *01/30/23 23:51* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00403 | U | 0.00403 | | mg/Kg | | | 01/31/23 14:02 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.9 | U | 49.9 | | mg/Kg | | | 02/03/23 17:31 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U | 49.9 | | mg/Kg | | 02/01/23 13:05 | 02/03/23 16:00 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 02/01/23 13:05 | 02/03/23 16:00 | 1 |
| OII Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 02/01/23 13:05 | 02/03/23 16:00 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *111* | | *70 - 130* | *02/01/23 13:05* | *02/03/23 16:00* | *1* |
| *o-Terphenyl* | *106* | | *70 - 130* | *02/01/23 13:05* | *02/03/23 16:00* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **1330** | **F1** | 25.2 | | mg/Kg | | | 01/26/23 03:52 | 5 |

## Client Sample ID: SS02

**Lab Sample ID: 890-3900-2**
**Matrix: Solid**
**Date Collected: 01/19/23 10:55**
**Date Received: 01/19/23 13:11**
**Sample Depth: 0.5'**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 01/30/23 12:49 | 01/31/23 00:12 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 01/30/23 12:49 | 01/31/23 00:12 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 01/30/23 12:49 | 01/31/23 00:12 | 1 |
| m-Xylene & p-Xylene | <0.00398 | U | 0.00398 | | mg/Kg | | 01/30/23 12:49 | 01/31/23 00:12 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 01/30/23 12:49 | 01/31/23 00:12 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 01/30/23 12:49 | 01/31/23 00:12 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *83* | | *70 - 130* | *01/30/23 12:49* | *01/31/23 00:12* | *1* |

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# Client Sample Results

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3900-1
SDG: 03C1558134

## Client Sample ID: SS02

**Lab Sample ID: 890-3900-2**
**Matrix: Solid**
**Date Collected: 01/19/23 10:55**
**Date Received: 01/19/23 13:11**
**Sample Depth: 0.5'**

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

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,4-Difluorobenzene (Surr)* | *81* | | *70 - 130* | *01/30/23 12:49* | *01/31/23 00:12* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00398 | U | 0.00398 | mg/Kg | | | 01/31/23 14:02 | 1 |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Total TPH** | **118** | | 49.9 | mg/Kg | | | 02/03/23 17:31 | 1 |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U | 49.9 | mg/Kg | | 02/01/23 13:05 | 02/03/23 16:22 | 1 |
| **Diesel Range Organics (Over C10-C28)** | **118** | | 49.9 | mg/Kg | | 02/01/23 13:05 | 02/03/23 16:22 | 1 |
| OII Range Organics (Over C28-C36) | <49.9 | U | 49.9 | mg/Kg | | 02/01/23 13:05 | 02/03/23 16:22 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *90* | | *70 - 130* | *02/01/23 13:05* | *02/03/23 16:22* | *1* |
| *o-Terphenyl* | *88* | | *70 - 130* | *02/01/23 13:05* | *02/03/23 16:22* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Chloride** | **674** | | 25.0 | mg/Kg | | | 01/26/23 04:07 | 5 |

## Client Sample ID: SS03

**Lab Sample ID: 890-3900-3**
**Matrix: Solid**
**Date Collected: 01/19/23 10:00**
**Date Received: 01/19/23 13:11**
**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 | | 01/30/23 12:49 | 01/31/23 00:32 | 1 |
| Toluene | <0.00198 | U | 0.00198 | mg/Kg | | 01/30/23 12:49 | 01/31/23 00:32 | 1 |
| Ethylbenzene | <0.00198 | U | 0.00198 | mg/Kg | | 01/30/23 12:49 | 01/31/23 00:32 | 1 |
| m-Xylene & p-Xylene | <0.00396 | U | 0.00396 | mg/Kg | | 01/30/23 12:49 | 01/31/23 00:32 | 1 |
| o-Xylene | <0.00198 | U | 0.00198 | mg/Kg | | 01/30/23 12:49 | 01/31/23 00:32 | 1 |
| Xylenes, Total | <0.00396 | U | 0.00396 | mg/Kg | | 01/30/23 12:49 | 01/31/23 00:32 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *109* | | *70 - 130* | *01/30/23 12:49* | *01/31/23 00:32* | *1* |
| *1,4-Difluorobenzene (Surr)* | *81* | | *70 - 130* | *01/30/23 12:49* | *01/31/23 00:32* | *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 | | | 01/31/23 14:02 | 1 |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Total TPH** | **357** | | 49.9 | mg/Kg | | | 02/03/23 17:31 | 1 |

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# Client Sample Results

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3900-1
SDG: 03C1558134

## Client Sample ID: SS03

**Date Collected: 01/19/23 10:00**
**Date Received: 01/19/23 13:11**
**Sample Depth: 0.5'**

**Lab Sample ID: 890-3900-3**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U | 49.9 | | mg/Kg | | 02/01/23 13:05 | 02/03/23 16:43 | 1 |
| **Diesel Range Organics (Over C10-C28)** | **357** | | 49.9 | | mg/Kg | | 02/01/23 13:05 | 02/03/23 16:43 | 1 |
| OII Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 02/01/23 13:05 | 02/03/23 16:43 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *107* | | *70 - 130* | *02/01/23 13:05* | *02/03/23 16:43* | *1* |
| *o-Terphenyl* | *104* | | *70 - 130* | *02/01/23 13:05* | *02/03/23 16:43* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **586** | | 24.9 | | mg/Kg | | | 01/26/23 04:11 | 5 |

## Client Sample ID: SS04

**Date Collected: 01/19/23 10:35**
**Date Received: 01/19/23 13:11**
**Sample Depth: 0.5'**

**Lab Sample ID: 890-3900-4**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 01/30/23 12:49 | 01/31/23 00:53 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 01/30/23 12:49 | 01/31/23 00:53 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 01/30/23 12:49 | 01/31/23 00:53 | 1 |
| m-Xylene & p-Xylene | <0.00399 | U | 0.00399 | | mg/Kg | | 01/30/23 12:49 | 01/31/23 00:53 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 01/30/23 12:49 | 01/31/23 00:53 | 1 |
| Xylenes, Total | <0.00399 | U | 0.00399 | | mg/Kg | | 01/30/23 12:49 | 01/31/23 00:53 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *87* | | *70 - 130* | *01/30/23 12:49* | *01/31/23 00:53* | *1* |
| *1,4-Difluorobenzene (Surr)* | *85* | | *70 - 130* | *01/30/23 12:49* | *01/31/23 00:53* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00399 | U | 0.00399 | | mg/Kg | | | 01/31/23 14:02 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total TPH** | **69.0** | | 49.9 | | mg/Kg | | | 02/03/23 20:05 | 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 | <49.9 | U | 49.9 | | mg/Kg | | 02/01/23 13:05 | 02/03/23 17:05 | 1 |
| **Diesel Range Organics (Over C10-C28)** | **69.0** | | 49.9 | | mg/Kg | | 02/01/23 13:05 | 02/03/23 17:05 | 1 |
| OII Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 02/01/23 13:05 | 02/03/23 17:05 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *93* | | *70 - 130* | *02/01/23 13:05* | *02/03/23 17:05* | *1* |
| *o-Terphenyl* | *94* | | *70 - 130* | *02/01/23 13:05* | *02/03/23 17:05* | *1* |

# Client Sample Results

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3900-1
SDG: 03C1558134

## Client Sample ID: SS04

**Lab Sample ID: 890-3900-4**
**Matrix: Solid**
**Date Collected: 01/19/23 10:35**
**Date Received: 01/19/23 13:11**
**Sample Depth: 0.5'**

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **415** | | 5.05 | | mg/Kg | | | 01/26/23 04:16 | 1 |

## Client Sample ID: SS05

**Lab Sample ID: 890-3900-5**
**Matrix: Solid**
**Date Collected: 01/19/23 10:10**
**Date Received: 01/19/23 13:11**
**Sample Depth: 0.5'**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 01/30/23 12:49 | 01/31/23 01:13 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 01/30/23 12:49 | 01/31/23 01:13 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 01/30/23 12:49 | 01/31/23 01:13 | 1 |
| m-Xylene & p-Xylene | <0.00398 | U | 0.00398 | | mg/Kg | | 01/30/23 12:49 | 01/31/23 01:13 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 01/30/23 12:49 | 01/31/23 01:13 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 01/30/23 12:49 | 01/31/23 01:13 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *114* | | *70 - 130* | *01/30/23 12:49* | *01/31/23 01:13* | *1* |
| *1,4-Difluorobenzene (Surr)* | *61* | *S1-* | *70 - 130* | *01/30/23 12:49* | *01/31/23 01:13* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00398 | U | 0.00398 | | mg/Kg | | | 01/31/23 14:02 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total TPH** | **60.8** | | 50.0 | | mg/Kg | | | 02/03/23 20:05 | 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 | <50.0 | U | 50.0 | | mg/Kg | | 02/01/23 13:05 | 02/03/23 17:26 | 1 |
| **Diesel Range Organics (Over C10-C28)** | **60.8** | | 50.0 | | mg/Kg | | 02/01/23 13:05 | 02/03/23 17:26 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 02/01/23 13:05 | 02/03/23 17:26 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *93* | | *70 - 130* | *02/01/23 13:05* | *02/03/23 17:26* | *1* |
| *o-Terphenyl* | *95* | | *70 - 130* | *02/01/23 13:05* | *02/03/23 17:26* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **115** | | 4.99 | | mg/Kg | | | 01/26/23 04:21 | 1 |

# Client Sample Results

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3900-1
SDG: 03C1558134

## Client Sample ID: SS06

**Date Collected: 01/19/23 10:15**
**Date Received: 01/19/23 13:11**
**Sample Depth: 0.5'**

## Lab Sample ID: 890-3900-6

**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00201 | U | 0.00201 | | mg/Kg | | 01/30/23 12:49 | 01/31/23 01:34 | 1 |
| Toluene | <0.00201 | U | 0.00201 | | mg/Kg | | 01/30/23 12:49 | 01/31/23 01:34 | 1 |
| Ethylbenzene | <0.00201 | U | 0.00201 | | mg/Kg | | 01/30/23 12:49 | 01/31/23 01:34 | 1 |
| m-Xylene & p-Xylene | <0.00402 | U | 0.00402 | | mg/Kg | | 01/30/23 12:49 | 01/31/23 01:34 | 1 |
| o-Xylene | <0.00201 | U | 0.00201 | | mg/Kg | | 01/30/23 12:49 | 01/31/23 01:34 | 1 |
| Xylenes, Total | <0.00402 | U | 0.00402 | | mg/Kg | | 01/30/23 12:49 | 01/31/23 01:34 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *87* | | *70 - 130* | *01/30/23 12:49* | *01/31/23 01:34* | *1* |
| *1,4-Difluorobenzene (Surr)* | *85* | | *70 - 130* | *01/30/23 12:49* | *01/31/23 01:34* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00402 | U | 0.00402 | | mg/Kg | | | 01/31/23 14:02 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total TPH** | **130** | | 49.9 | | mg/Kg | | | 02/03/23 20:05 | 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 | <49.9 | U | 49.9 | | mg/Kg | | 02/01/23 13:05 | 02/03/23 17:48 | 1 |
| **Diesel Range Organics (Over C10-C28)** | **130** | | 49.9 | | mg/Kg | | 02/01/23 13:05 | 02/03/23 17:48 | 1 |
| OII Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 02/01/23 13:05 | 02/03/23 17:48 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *109* | | *70 - 130* | *02/01/23 13:05* | *02/03/23 17:48* | *1* |
| *o-Terphenyl* | *105* | | *70 - 130* | *02/01/23 13:05* | *02/03/23 17:48* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **19.9** | | 5.01 | | mg/Kg | | | 01/26/23 04:36 | 1 |

# Surrogate Summary

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3900-1
SDG: 03C1558134

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

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

| Lab Sample ID | Client Sample ID | Percent Surrogate Recovery (Acceptance Limits) BFB1 (70-130) | DFBZ1 (70-130) |
|---|---|---|---|
| 890-3900-1 | SS01 | 100 | 84 |
| 890-3900-1 MS | SS01 | 120 | 102 |
| 890-3900-1 MSD | SS01 | 109 | 109 |
| 890-3900-2 | SS02 | 83 | 81 |
| 890-3900-3 | SS03 | 109 | 81 |
| 890-3900-4 | SS04 | 87 | 85 |
| 890-3900-5 | SS05 | 114 | 61 S1- |
| 890-3900-6 | SS06 | 87 | 85 |
| LCS 880-45052/1-A | Lab Control Sample | 109 | 113 |
| LCSD 880-45052/2-A | Lab Control Sample Dup | 104 | 112 |
| MB 880-44925/5-A | Method Blank | 71 | 94 |
| MB 880-45052/5-A | Method Blank | 73 | 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**

| Lab Sample ID | Client Sample ID | Percent Surrogate Recovery (Acceptance Limits) 1CO1 (70-130) | OTPH1 (70-130) |
|---|---|---|---|
| 890-3900-1 | SS01 | 111 | 106 |
| 890-3900-2 | SS02 | 90 | 88 |
| 890-3900-3 | SS03 | 107 | 104 |
| 890-3900-4 | SS04 | 93 | 94 |
| 890-3900-5 | SS05 | 93 | 95 |
| 890-3900-6 | SS06 | 109 | 105 |
| 890-3916-A-1-G MS | Matrix Spike | 86 | 81 |
| 890-3916-A-1-H MSD | Matrix Spike Duplicate | 88 | 82 |
| LCS 880-45210/2-A | Lab Control Sample | 123 | 110 |
| LCSD 880-45210/3-A | Lab Control Sample Dup | 102 | 92 |
| MB 880-45210/1-A | Method Blank | 117 | 117 |

**Surrogate Legend**

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

# QC Sample Results

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3900-1
SDG: 03C1558134

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

**Lab Sample ID: MB 880-44925/5-A**
**Matrix: Solid**
**Analysis Batch: 44988**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 44925**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 01/27/23 12:27 | 01/30/23 12:53 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 01/27/23 12:27 | 01/30/23 12:53 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 01/27/23 12:27 | 01/30/23 12:53 | 1 |
| m-Xylene & p-Xylene | <0.00400 | U | 0.00400 | | mg/Kg | | 01/27/23 12:27 | 01/30/23 12:53 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 01/27/23 12:27 | 01/30/23 12:53 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 01/27/23 12:27 | 01/30/23 12:53 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *71* | | *70 - 130* | *01/27/23 12:27* | *01/30/23 12:53* | *1* |
| *1,4-Difluorobenzene (Surr)* | *94* | | *70 - 130* | *01/27/23 12:27* | *01/30/23 12:53* | *1* |

**Lab Sample ID: MB 880-45052/5-A**
**Matrix: Solid**
**Analysis Batch: 44988**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 45052**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 01/30/23 12:49 | 01/30/23 23:30 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 01/30/23 12:49 | 01/30/23 23:30 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 01/30/23 12:49 | 01/30/23 23:30 | 1 |
| m-Xylene & p-Xylene | <0.00400 | U | 0.00400 | | mg/Kg | | 01/30/23 12:49 | 01/30/23 23:30 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 01/30/23 12:49 | 01/30/23 23:30 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 01/30/23 12:49 | 01/30/23 23:30 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *73* | | *70 - 130* | *01/30/23 12:49* | *01/30/23 23:30* | *1* |
| *1,4-Difluorobenzene (Surr)* | *88* | | *70 - 130* | *01/30/23 12:49* | *01/30/23 23:30* | *1* |

**Lab Sample ID: LCS 880-45052/1-A**
**Matrix: Solid**
**Analysis Batch: 44988**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 45052**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.1099 | | mg/Kg | | 110 | 70 - 130 | | |
| Toluene | | | 0.100 | 0.09817 | | mg/Kg | | 98 | 70 - 130 | | |
| Ethylbenzene | | | 0.100 | 0.09926 | | mg/Kg | | 99 | 70 - 130 | | |
| m-Xylene & p-Xylene | | | 0.200 | 0.2083 | | mg/Kg | | 104 | 70 - 130 | | |
| o-Xylene | | | 0.100 | 0.1082 | | mg/Kg | | 108 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *109* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *113* | | *70 - 130* |

**Lab Sample ID: LCSD 880-45052/2-A**
**Matrix: Solid**
**Analysis Batch: 44988**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 45052**

| 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 | 9 | 35 |

# QC Sample Results

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3900-1
SDG: 03C1558134

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

**Lab Sample ID: LCSD 880-45052/2-A**
**Matrix: Solid**
**Analysis Batch: 44988**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 45052**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | | | 0.100 | 0.09135 | | mg/Kg | | 91 | 70 - 130 | 7 | 35 |
| Ethylbenzene | | | 0.100 | 0.09303 | | mg/Kg | | 93 | 70 - 130 | 6 | 35 |
| m-Xylene & p-Xylene | | | 0.200 | 0.1942 | | mg/Kg | | 97 | 70 - 130 | 7 | 35 |
| o-Xylene | | | 0.100 | 0.09855 | | mg/Kg | | 99 | 70 - 130 | 9 | 35 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *104* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *112* | | *70 - 130* |

**Lab Sample ID: 890-3900-1 MS**
**Matrix: Solid**
**Analysis Batch: 44988**

**Client Sample ID: SS01**
**Prep Type: Total/NA**
**Prep Batch: 45052**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U | 0.101 | 0.09694 | | mg/Kg | | 96 | 70 - 130 |
| Toluene | <0.00202 | U | 0.101 | 0.07905 | | mg/Kg | | 78 | 70 - 130 |
| Ethylbenzene | <0.00202 | U | 0.101 | 0.07326 | | mg/Kg | | 73 | 70 - 130 |
| m-Xylene & p-Xylene | <0.00403 | U | 0.202 | 0.1455 | | mg/Kg | | 72 | 70 - 130 |
| o-Xylene | <0.00202 | U | 0.101 | 0.07622 | | mg/Kg | | 76 | 70 - 130 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *120* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *102* | | *70 - 130* |

**Lab Sample ID: 890-3900-1 MSD**
**Matrix: Solid**
**Analysis Batch: 44988**

**Client Sample ID: SS01**
**Prep Type: Total/NA**
**Prep Batch: 45052**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U | 0.0996 | 0.09646 | | mg/Kg | | 97 | 70 - 130 | 0 | 35 |
| Toluene | <0.00202 | U | 0.0996 | 0.08354 | | mg/Kg | | 84 | 70 - 130 | 6 | 35 |
| Ethylbenzene | <0.00202 | U | 0.0996 | 0.08142 | | mg/Kg | | 82 | 70 - 130 | 11 | 35 |
| m-Xylene & p-Xylene | <0.00403 | U | 0.199 | 0.1655 | | mg/Kg | | 83 | 70 - 130 | 13 | 35 |
| o-Xylene | <0.00202 | U | 0.0996 | 0.08459 | | mg/Kg | | 85 | 70 - 130 | 10 | 35 |

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

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

**Lab Sample ID: MB 880-45210/1-A**
**Matrix: Solid**
**Analysis Batch: 45299**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 45210**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U | 49.9 | | mg/Kg | | 02/01/23 13:05 | 02/03/23 08:32 | 1 |

# QC Sample Results

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3900-1
SDG: 03C1558134

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

**Lab Sample ID: MB 880-45210/1-A** — **Client Sample ID: Method Blank**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 45299** — **Prep Batch: 45210**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 02/01/23 13:05 | 02/03/23 08:32 | 1 |
| OII Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 02/01/23 13:05 | 02/03/23 08:32 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *117* | | *70 - 130* | *02/01/23 13:05* | *02/03/23 08:32* | *1* |
| *o-Terphenyl* | *117* | | *70 - 130* | *02/01/23 13:05* | *02/03/23 08:32* | *1* |

**Lab Sample ID: LCS 880-45210/2-A** — **Client Sample ID: Lab Control Sample**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 45299** — **Prep Batch: 45210**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 999 | 1031 | | mg/Kg | | 103 | 70 - 130 | | |
| Diesel Range Organics (Over C10-C28) | | | 999 | 1013 | | mg/Kg | | 101 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane* | *123* | | *70 - 130* |
| *o-Terphenyl* | *110* | | *70 - 130* |

**Lab Sample ID: LCSD 880-45210/3-A** — **Client Sample ID: Lab Control Sample Dup**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 45299** — **Prep Batch: 45210**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 999 | 855.5 | | mg/Kg | | 86 | 70 - 130 | 19 | 20 |
| Diesel Range Organics (Over C10-C28) | | | 999 | 830.8 | | mg/Kg | | 83 | 70 - 130 | 20 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane* | *102* | | *70 - 130* |
| *o-Terphenyl* | *92* | | *70 - 130* |

**Lab Sample ID: 890-3916-A-1-G MS** — **Client Sample ID: Matrix Spike**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 45299** — **Prep Batch: 45210**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 1000 | 784.1 | | mg/Kg | | 75 | 70 - 130 | | |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 1000 | 875.4 | | mg/Kg | | 86 | 70 - 130 | | |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane* | *86* | | *70 - 130* |
| *o-Terphenyl* | *81* | | *70 - 130* |

# QC Sample Results

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3900-1
SDG: 03C1558134

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

**Lab Sample ID: 890-3916-A-1-H MSD** — **Client Sample ID: Matrix Spike Duplicate**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 45299** — **Prep Batch: 45210**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 998 | 855.0 | | mg/Kg | | 82 | 70 - 130 | 9 | 20 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 998 | 884.5 | | mg/Kg | | 87 | 70 - 130 | 1 | 20 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane* | *88* | | *70 - 130* |
| *o-Terphenyl* | *82* | | *70 - 130* |

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 880-44667/1-A** — **Client Sample ID: Method Blank**
**Matrix: Solid** — **Prep Type: Soluble**
**Analysis Batch: 44725**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <5.00 | U | 5.00 | | mg/Kg | | | 01/26/23 03:38 | 1 |

**Lab Sample ID: LCS 880-44667/2-A** — **Client Sample ID: Lab Control Sample**
**Matrix: Solid** — **Prep Type: Soluble**
**Analysis Batch: 44725**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 250 | 270.9 | | mg/Kg | | 108 | 90 - 110 | | |

**Lab Sample ID: LCSD 880-44667/3-A** — **Client Sample ID: Lab Control Sample Dup**
**Matrix: Solid** — **Prep Type: Soluble**
**Analysis Batch: 44725**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 250 | 251.9 | | mg/Kg | | 101 | 90 - 110 | 7 | 20 |

**Lab Sample ID: 890-3900-1 MS** — **Client Sample ID: SS01**
**Matrix: Solid** — **Prep Type: Soluble**
**Analysis Batch: 44725**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1330 | F1 | 1260 | 2871 | F1 | mg/Kg | | 122 | 90 - 110 | | |

**Lab Sample ID: 890-3900-1 MSD** — **Client Sample ID: SS01**
**Matrix: Solid** — **Prep Type: Soluble**
**Analysis Batch: 44725**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1330 | F1 | 1260 | 2863 | F1 | mg/Kg | | 122 | 90 - 110 | 0 | 20 |

# QC Association Summary

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3900-1
SDG: 03C1558134

## GC VOA

### Prep Batch: 44925

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| MB 880-44925/5-A | Method Blank | Total/NA | Solid | 5035 | |

### Analysis Batch: 44988

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-3900-1 | SS01 | Total/NA | Solid | 8021B | 45052 |
| 890-3900-2 | SS02 | Total/NA | Solid | 8021B | 45052 |
| 890-3900-3 | SS03 | Total/NA | Solid | 8021B | 45052 |
| 890-3900-4 | SS04 | Total/NA | Solid | 8021B | 45052 |
| 890-3900-5 | SS05 | Total/NA | Solid | 8021B | 45052 |
| 890-3900-6 | SS06 | Total/NA | Solid | 8021B | 45052 |
| MB 880-44925/5-A | Method Blank | Total/NA | Solid | 8021B | 44925 |
| MB 880-45052/5-A | Method Blank | Total/NA | Solid | 8021B | 45052 |
| LCS 880-45052/1-A | Lab Control Sample | Total/NA | Solid | 8021B | 45052 |
| LCSD 880-45052/2-A | Lab Control Sample Dup | Total/NA | Solid | 8021B | 45052 |
| 890-3900-1 MS | SS01 | Total/NA | Solid | 8021B | 45052 |
| 890-3900-1 MSD | SS01 | Total/NA | Solid | 8021B | 45052 |

### Prep Batch: 45052

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-3900-1 | SS01 | Total/NA | Solid | 5035 | |
| 890-3900-2 | SS02 | Total/NA | Solid | 5035 | |
| 890-3900-3 | SS03 | Total/NA | Solid | 5035 | |
| 890-3900-4 | SS04 | Total/NA | Solid | 5035 | |
| 890-3900-5 | SS05 | Total/NA | Solid | 5035 | |
| 890-3900-6 | SS06 | Total/NA | Solid | 5035 | |
| MB 880-45052/5-A | Method Blank | Total/NA | Solid | 5035 | |
| LCS 880-45052/1-A | Lab Control Sample | Total/NA | Solid | 5035 | |
| LCSD 880-45052/2-A | Lab Control Sample Dup | Total/NA | Solid | 5035 | |
| 890-3900-1 MS | SS01 | Total/NA | Solid | 5035 | |
| 890-3900-1 MSD | SS01 | Total/NA | Solid | 5035 | |

### Analysis Batch: 45142

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-3900-1 | SS01 | Total/NA | Solid | Total BTEX | |
| 890-3900-2 | SS02 | Total/NA | Solid | Total BTEX | |
| 890-3900-3 | SS03 | Total/NA | Solid | Total BTEX | |
| 890-3900-4 | SS04 | Total/NA | Solid | Total BTEX | |
| 890-3900-5 | SS05 | Total/NA | Solid | Total BTEX | |
| 890-3900-6 | SS06 | Total/NA | Solid | Total BTEX | |

## GC Semi VOA

### Prep Batch: 45210

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-3900-1 | SS01 | Total/NA | Solid | 8015NM Prep | |
| 890-3900-2 | SS02 | Total/NA | Solid | 8015NM Prep | |
| 890-3900-3 | SS03 | Total/NA | Solid | 8015NM Prep | |
| 890-3900-4 | SS04 | Total/NA | Solid | 8015NM Prep | |
| 890-3900-5 | SS05 | Total/NA | Solid | 8015NM Prep | |
| 890-3900-6 | SS06 | Total/NA | Solid | 8015NM Prep | |
| MB 880-45210/1-A | Method Blank | Total/NA | Solid | 8015NM Prep | |

# QC Association Summary

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3900-1
SDG: 03C1558134

## GC Semi VOA (Continued)

### Prep Batch: 45210 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| LCS 880-45210/2-A | Lab Control Sample | Total/NA | Solid | 8015NM Prep | |
| LCSD 880-45210/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015NM Prep | |
| 890-3916-A-1-G MS | Matrix Spike | Total/NA | Solid | 8015NM Prep | |
| 890-3916-A-1-H MSD | Matrix Spike Duplicate | Total/NA | Solid | 8015NM Prep | |

### Analysis Batch: 45299

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-3900-1 | SS01 | Total/NA | Solid | 8015B NM | 45210 |
| 890-3900-2 | SS02 | Total/NA | Solid | 8015B NM | 45210 |
| 890-3900-3 | SS03 | Total/NA | Solid | 8015B NM | 45210 |
| 890-3900-4 | SS04 | Total/NA | Solid | 8015B NM | 45210 |
| 890-3900-5 | SS05 | Total/NA | Solid | 8015B NM | 45210 |
| 890-3900-6 | SS06 | Total/NA | Solid | 8015B NM | 45210 |
| MB 880-45210/1-A | Method Blank | Total/NA | Solid | 8015B NM | 45210 |
| LCS 880-45210/2-A | Lab Control Sample | Total/NA | Solid | 8015B NM | 45210 |
| LCSD 880-45210/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015B NM | 45210 |
| 890-3916-A-1-G MS | Matrix Spike | Total/NA | Solid | 8015B NM | 45210 |
| 890-3916-A-1-H MSD | Matrix Spike Duplicate | Total/NA | Solid | 8015B NM | 45210 |

### Analysis Batch: 45426

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-3900-1 | SS01 | Total/NA | Solid | 8015 NM | |
| 890-3900-2 | SS02 | Total/NA | Solid | 8015 NM | |
| 890-3900-3 | SS03 | Total/NA | Solid | 8015 NM | |
| 890-3900-4 | SS04 | Total/NA | Solid | 8015 NM | |
| 890-3900-5 | SS05 | Total/NA | Solid | 8015 NM | |
| 890-3900-6 | SS06 | Total/NA | Solid | 8015 NM | |

## HPLC/IC

### Leach Batch: 44667

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-3900-1 | SS01 | Soluble | Solid | DI Leach | |
| 890-3900-2 | SS02 | Soluble | Solid | DI Leach | |
| 890-3900-3 | SS03 | Soluble | Solid | DI Leach | |
| 890-3900-4 | SS04 | Soluble | Solid | DI Leach | |
| 890-3900-5 | SS05 | Soluble | Solid | DI Leach | |
| 890-3900-6 | SS06 | Soluble | Solid | DI Leach | |
| MB 880-44667/1-A | Method Blank | Soluble | Solid | DI Leach | |
| LCS 880-44667/2-A | Lab Control Sample | Soluble | Solid | DI Leach | |
| LCSD 880-44667/3-A | Lab Control Sample Dup | Soluble | Solid | DI Leach | |
| 890-3900-1 MS | SS01 | Soluble | Solid | DI Leach | |
| 890-3900-1 MSD | SS01 | Soluble | Solid | DI Leach | |

### Analysis Batch: 44725

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-3900-1 | SS01 | Soluble | Solid | 300.0 | 44667 |
| 890-3900-2 | SS02 | Soluble | Solid | 300.0 | 44667 |
| 890-3900-3 | SS03 | Soluble | Solid | 300.0 | 44667 |
| 890-3900-4 | SS04 | Soluble | Solid | 300.0 | 44667 |
| 890-3900-5 | SS05 | Soluble | Solid | 300.0 | 44667 |

# QC Association Summary

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3900-1
SDG: 03C1558134

## HPLC/IC (Continued)

### Analysis Batch: 44725 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-3900-6 | SS06 | Soluble | Solid | 300.0 | 44667 |
| MB 880-44667/1-A | Method Blank | Soluble | Solid | 300.0 | 44667 |
| LCS 880-44667/2-A | Lab Control Sample | Soluble | Solid | 300.0 | 44667 |
| LCSD 880-44667/3-A | Lab Control Sample Dup | Soluble | Solid | 300.0 | 44667 |
| 890-3900-1 MS | SS01 | Soluble | Solid | 300.0 | 44667 |
| 890-3900-1 MSD | SS01 | Soluble | Solid | 300.0 | 44667 |

# Lab Chronicle

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3900-1
SDG: 03C1558134

## Client Sample ID: SS01
**Date Collected: 01/19/23 10:50**
**Date Received: 01/19/23 13:11**

## Lab Sample ID: 890-3900-1
**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 | | | 4.96 g | 5 mL | 45052 | 01/30/23 12:49 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 44988 | 01/30/23 23:51 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 45142 | 01/31/23 14:02 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 45426 | 02/03/23 17:31 | AJ | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.02 g | 10 mL | 45210 | 02/01/23 13:05 | DM | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 45299 | 02/03/23 16:00 | AJ | EET MID |
| Soluble | Leach | DI Leach | | | 4.97 g | 50 mL | 44667 | 01/24/23 15:27 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 5 | | | 44725 | 01/26/23 03:52 | CH | EET MID |

## Client Sample ID: SS02
**Date Collected: 01/19/23 10:55**
**Date Received: 01/19/23 13:11**

## Lab Sample ID: 890-3900-2
**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 | 45052 | 01/30/23 12:49 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 44988 | 01/31/23 00:12 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 45142 | 01/31/23 14:02 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 45426 | 02/03/23 17:31 | AJ | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.03 g | 10 mL | 45210 | 02/01/23 13:05 | DM | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 45299 | 02/03/23 16:22 | AJ | EET MID |
| Soluble | Leach | DI Leach | | | 5 g | 50 mL | 44667 | 01/24/23 15:27 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 5 | | | 44725 | 01/26/23 04:07 | CH | EET MID |

## Client Sample ID: SS03
**Date Collected: 01/19/23 10:00**
**Date Received: 01/19/23 13:11**

## Lab Sample ID: 890-3900-3
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.05 g | 5 mL | 45052 | 01/30/23 12:49 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 44988 | 01/31/23 00:32 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 45142 | 01/31/23 14:02 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 45426 | 02/03/23 17:31 | AJ | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.02 g | 10 mL | 45210 | 02/01/23 13:05 | DM | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 45299 | 02/03/23 16:43 | AJ | EET MID |
| Soluble | Leach | DI Leach | | | 5.03 g | 50 mL | 44667 | 01/24/23 15:27 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 5 | | | 44725 | 01/26/23 04:11 | CH | EET MID |

## Client Sample ID: SS04
**Date Collected: 01/19/23 10:35**
**Date Received: 01/19/23 13:11**

## Lab Sample ID: 890-3900-4
**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 | 45052 | 01/30/23 12:49 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 44988 | 01/31/23 00:53 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 45142 | 01/31/23 14:02 | SM | EET MID |

# Lab Chronicle

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3900-1
SDG: 03C1558134

## Client Sample ID: SS04

**Date Collected: 01/19/23 10:35**
**Date Received: 01/19/23 13:11**

**Lab Sample ID: 890-3900-4**
**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 | | | 45426 | 02/03/23 20:05 | AJ | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.03 g | 10 mL | 45210 | 02/01/23 13:05 | DM | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 45299 | 02/03/23 17:05 | AJ | EET MID |
| Soluble | Leach | DI Leach | | | 4.95 g | 50 mL | 44667 | 01/24/23 15:27 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 44725 | 01/26/23 04:16 | CH | EET MID |

## Client Sample ID: SS05

**Date Collected: 01/19/23 10:10**
**Date Received: 01/19/23 13:11**

**Lab Sample ID: 890-3900-5**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.03 g | 5 mL | 45052 | 01/30/23 12:49 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 44988 | 01/31/23 01:13 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 45142 | 01/31/23 14:02 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 45426 | 02/03/23 20:05 | AJ | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 45210 | 02/01/23 13:05 | DM | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 45299 | 02/03/23 17:26 | AJ | EET MID |
| Soluble | Leach | DI Leach | | | 5.01 g | 50 mL | 44667 | 01/24/23 15:27 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 44725 | 01/26/23 04:21 | CH | EET MID |

## Client Sample ID: SS06

**Date Collected: 01/19/23 10:15**
**Date Received: 01/19/23 13:11**

**Lab Sample ID: 890-3900-6**
**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 | | | 4.97 g | 5 mL | 45052 | 01/30/23 12:49 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 44988 | 01/31/23 01:34 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 45142 | 01/31/23 14:02 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 45426 | 02/03/23 20:05 | AJ | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.02 g | 10 mL | 45210 | 02/01/23 13:05 | DM | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 45299 | 02/03/23 17:48 | AJ | EET MID |
| Soluble | Leach | DI Leach | | | 4.99 g | 50 mL | 44667 | 01/24/23 15:27 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 44725 | 01/26/23 04:36 | 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: PLU 27 Brushy Draw 163H

Job ID: 890-3900-1
SDG: 03C1558134

## Laboratory: Eurofins Midland

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

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

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

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

# Method Summary

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3900-1
SDG: 03C1558134

| 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: PLU 27 Brushy Draw 163H

Job ID: 890-3900-1
SDG: 03C1558134

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Depth |
|---|---|---|---|---|---|
| 890-3900-1 | SS01 | Solid | 01/19/23 10:50 | 01/19/23 13:11 | 0.5' |
| 890-3900-2 | SS02 | Solid | 01/19/23 10:55 | 01/19/23 13:11 | 0.5' |
| 890-3900-3 | SS03 | Solid | 01/19/23 10:00 | 01/19/23 13:11 | 0.5' |
| 890-3900-4 | SS04 | Solid | 01/19/23 10:35 | 01/19/23 13:11 | 0.5' |
| 890-3900-5 | SS05 | Solid | 01/19/23 10:10 | 01/19/23 13:11 | 0.5' |
| 890-3900-6 | SS06 | Solid | 01/19/23 10:15 | 01/19/23 13:11 | 0.5' |

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# Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

| | | | |
|---|---|---|---|
| Project Manager: | Tacoma Morrissey | Bill to: (if different) | Garrett Green |
| Company Name: | Ensolum, LLC | Company Name: | XTO Energy |
| Address: | 3122 Nat'l Parks Hwy | Address: | 3104 E Greene St |
| City, State ZIP: | Carlsbad, NM 88220 | City, State ZIP: | Carlsbad, NM 88220 |
| Phone: | 337-257-8307 Email: | | tmorrissey@ensolum.com |

**Work Order Comments**

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

| | | | |
|---|---|---|---|
| Project Name: | PLU 27 Brushy Draw 163H | Turn Around | |
| Project Number: | 03C1558134 | ☑ Routine ☐ Rush | |
| Project Location: | 32.10159, -103.87212 | Due Date: | |
| Sampler's Name: | Meredith Roberts | TAT starts the day received by the lab, if received by 4:30pm | |
| PO #: | | | |

| SAMPLE RECEIPT | | | |
|---|---|---|---|
| Temp Blank: | (Yes) No | Wet Ice: | (Yes) No |
| Samples Received Intact: | (Yes) No | Thermometer ID: | TNN007 |
| Cooler Custody Seals: | Yes No (N/A) | Correction Factor: | -0.2 |
| Sample Custody Seals: | Yes No (N/A) | Temperature Reading: | 1.8 |
| Total Containers: | | Corrected Temperature: | 1.6 |

**Preservative Codes**

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

| Sample Identification | Matrix | Date Sampled | Time Sampled | Depth | Grab/ Comp | # of Cont | Pres. Code | BTEX | Chlorides | TPH | Sample Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SS01 | S | 1/19/23 | 1050 | 0.5' | G | 1 | | X | X | X | Incident #: nAPP2226337852 |
| SS02 | | | 1055 | | | | | | | | |
| SS03 | | | 1000 | | | | | | | | |
| SS04 | | | 1035 | | | | | | | | Cost Center: 1667031001 |
| SS05 | | | 1010 | | | | | | | | |
| SS06 | | | 1015 | | | | | | | | |

ANALYSIS REQUEST

890-3900 Chain of Custody

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

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

| Relinquished by: (Signature) | Received by: (Signature) | Date/Time | Relinquished by: (Signature) | Received by: (Signature) | Date/Time |
|---|---|---|---|---|---|
| 1 | | 1-19-23 1311 | 2 | | |
| 3 | | | 4 | | |
| 5 | | | 6 | | |

Revised Date: 08/25/2020 Rev. 2020.2

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

# Chain of Custody Record

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| Client Information (Sub Contract Lab) | Sampler | Lab PM: Kramer, Jessica | Carrier Tracking No(s) | COC No: 890-1107 1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: Jessica.Kramer@et.eurofinsus.com | State of Origin: New Mexico | Page: Page 1 of 1 |
| Company: Eurofins Environment Testing South Centr | | Accreditations Required (See note): NELAP - Texas | | Job #: 890-3900-1 |
| Address: 1211 W Florida Ave, | Due Date Requested: 1/25/2023 | | | |
| City: Midland | TAT Requested (days): | | | |
| State, Zip: TX, 79701 | PO #: | | | |
| Phone: 432-704-5440(Tel) | WO #: | | | |
| Email: | Project #: 89000093 | | | |
| Project Name: PLU 27 Brushy Draw 163H | SSOW#: | | | |
| Site | | | | |

**Analysis Requested**

**Preservation Codes:**
A HCL, B NaOH, C Zn Acetate, D Nitric Acid, E NaHSO4, F MeOH, G Amchlor, H Ascorbic Acid, I Ice, J DI Water, K EDTA, L EDA, M Hexane, N None, O AsNaO2, P Na2O4S, Q Na2SO3, R Na2S2O3, S H2SO4, T TSP Dodecahydrate, U Acetone, V MCAA, W pH 4-5, Y Trizma, Z other (specify)
Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 8015MOD_NM/8015NM_S_Prep (MOD) Full TPH | 8015MOD_Calc | 300_ORGFM_28D/DI_LEACH Chloride | 8021B/5035FP_Calc (MOD) BTEX | Total_BTEX_GCV | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | | | |
| SS01 (890-3900-1) | 1/19/23 | 10 50 Mountain | | Solid | | | X | X | X | X | X | 1 | |
| SS02 (890-3900-2) | 1/19/23 | 10 55 Mountain | | Solid | | | X | X | X | X | X | 1 | |
| SS03 (890-3900-3) | 1/19/23 | 10 00 Mountain | | Solid | | | X | X | X | X | X | 1 | |
| SS04 (890-3900-4) | 1/19/23 | 10 35 Mountain | | Solid | | | X | X | X | X | X | 1 | |
| SS05 (890-3900-5) | 1/19/23 | 10 10 Mountain | | Solid | | | X | X | X | X | X | 1 | |
| SS06 (890-3900-6) | 1/19/23 | 10 15 Mountain | | Solid | | | X | X | X | X | X | 1 | |

Note Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central LLC places the ownership of method analyte & accreditation compliance upon our subcontract laboratories This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Environment Testing South Central LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Central LLC attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central LLC

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested I II III IV Other (specify) Primary Deliverable Rank. 2 | Special Instructions/QC Requirements |

| Empty Kit Relinquished by | Date | Time | Method of Shipment: |
|---|---|---|---|

| Relinquished by | Date/Time | Company | Received by | Date/Time: | Company |
|---|---|---|---|---|---|
| Relinquished by | Date/Time | Company | Received by | Date/Time | Company |
| Relinquished by | Date/Time | Company | Received by | Date/Time | Company |

| Custody Seals Intact. Δ Yes Δ No | Custody Seal No | Cooler Temperature(s) °C and Other Remarks. |
|---|---|---|

# Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3900-1
SDG Number: 03C1558134

**Login Number: 3900**
**List Number: 1**
**Creator: Stutzman, Amanda**

**List Source: Eurofins Carlsbad**

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

# Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3900-1
SDG Number: 03C1558134

**Login Number: 3900**
**List Number: 2**
**Creator: Kramer, Jessica**

**List Source: Eurofins Midland**
**List Creation: 01/23/23 07:42 AM**

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

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# ANALYTICAL REPORT

## PREPARED FOR

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

Generated 2/10/2023 12:08:05 PM

## JOB DESCRIPTION

PLU 27 Brushy Draw 163H
SDG NUMBER 03C1558134

## JOB NUMBER

890-3980-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.





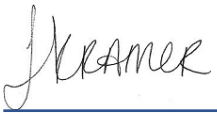
my EOL

# Eurofins Carlsbad

## Job Notes

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
2/10/2023 12:08:05 PM

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

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Laboratory Job ID: 890-3980-1
SDG: 03C1558134

# Table of Contents

# Definitions/Glossary

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3980-1
SDG: 03C1558134

## Qualifiers

### GC VOA

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

### HPLC/IC

| Qualifier | Qualifier Description |
|---|---|
| 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: PLU 27 Brushy Draw 163H

Job ID: 890-3980-1
SDG: 03C1558134

## Job ID: 890-3980-1

**Laboratory: Eurofins Carlsbad**

**Narrative**

**Job Narrative**
**890-3980-1**

**Receipt**
The samples were received on 1/30/2023 1:07 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.2°C

**Receipt Exceptions**
The following samples were received and analyzed from an unpreserved bulk soil jar: PH01 (890-3980-1), PH01A (890-3980-2), PH02 (890-3980-3), PH02A (890-3980-4), PH03 (890-3980-5) and PH03A (890-3980-6).

**GC VOA**
Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-45854 and analytical batch 880-45814 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 880-45843 and analytical batch 880-45841 was outside control limits. Sample non-homogeneity is suspected.

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

**GC Semi VOA**
Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-45739 and analytical batch 880-45729 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

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

# Client Sample Results

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3980-1
SDG: 03C1558134

## Client Sample ID: PH01

**Date Collected: 01/30/23 10:05**
**Date Received: 01/30/23 13:07**
**Sample Depth: 1'**

**Lab Sample ID: 890-3980-1**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U *- *1 | 0.00202 | | mg/Kg | | 02/09/23 09:11 | 02/09/23 22:24 | 1 |
| Toluene | <0.00202 | U | 0.00202 | | mg/Kg | | 02/09/23 09:11 | 02/09/23 22:24 | 1 |
| Ethylbenzene | <0.00202 | U | 0.00202 | | mg/Kg | | 02/09/23 09:11 | 02/09/23 22:24 | 1 |
| m-Xylene & p-Xylene | <0.00403 | U | 0.00403 | | mg/Kg | | 02/09/23 09:11 | 02/09/23 22:24 | 1 |
| o-Xylene | <0.00202 | U | 0.00202 | | mg/Kg | | 02/09/23 09:11 | 02/09/23 22:24 | 1 |
| Xylenes, Total | <0.00403 | U | 0.00403 | | mg/Kg | | 02/09/23 09:11 | 02/09/23 22:24 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *105* | | *70 - 130* | *02/09/23 09:11* | *02/09/23 22:24* | *1* |
| *1,4-Difluorobenzene (Surr)* | *90* | | *70 - 130* | *02/09/23 09:11* | *02/09/23 22:24* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00403 | U | 0.00403 | | mg/Kg | | | 02/10/23 11:22 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.8 | U | 49.8 | | mg/Kg | | | 02/09/23 09:45 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.8 | U | 49.8 | | mg/Kg | | 02/08/23 08:39 | 02/08/23 18:34 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.8 | U | 49.8 | | mg/Kg | | 02/08/23 08:39 | 02/08/23 18:34 | 1 |
| OII Range Organics (Over C28-C36) | <49.8 | U | 49.8 | | mg/Kg | | 02/08/23 08:39 | 02/08/23 18:34 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *92* | | *70 - 130* | *02/08/23 08:39* | *02/08/23 18:34* | *1* |
| *o-Terphenyl* | *97* | | *70 - 130* | *02/08/23 08:39* | *02/08/23 18:34* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **483** | | 4.97 | | mg/Kg | | | 02/03/23 22:05 | 1 |

## Client Sample ID: PH01A

**Date Collected: 01/30/23 10:20**
**Date Received: 01/30/23 13:07**
**Sample Depth: 4'**

**Lab Sample ID: 890-3980-2**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U *- *1 | 0.00199 | | mg/Kg | | 02/09/23 09:11 | 02/09/23 22:44 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/09/23 09:11 | 02/09/23 22:44 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/09/23 09:11 | 02/09/23 22:44 | 1 |
| m-Xylene & p-Xylene | <0.00398 | U | 0.00398 | | mg/Kg | | 02/09/23 09:11 | 02/09/23 22:44 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/09/23 09:11 | 02/09/23 22:44 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 02/09/23 09:11 | 02/09/23 22:44 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *113* | | *70 - 130* | *02/09/23 09:11* | *02/09/23 22:44* | *1* |

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# Client Sample Results

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3980-1
SDG: 03C1558134

## Client Sample ID: PH01A

**Date Collected: 01/30/23 10:20**
**Date Received: 01/30/23 13:07**
**Sample Depth: 4'**

## Lab Sample ID: 890-3980-2

**Matrix: Solid**

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

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,4-Difluorobenzene (Surr)* | *85* | | *70 - 130* | *02/09/23 09:11* | *02/09/23 22:44* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00398 | U | 0.00398 | mg/Kg | | | 02/10/23 11:22 | 1 |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.0 | U | 50.0 | mg/Kg | | | 02/09/23 09:45 | 1 |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | mg/Kg | | 02/08/23 08:39 | 02/08/23 18:55 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | mg/Kg | | 02/08/23 08:39 | 02/08/23 18:55 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | mg/Kg | | 02/08/23 08:39 | 02/08/23 18:55 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *98* | | *70 - 130* | *02/08/23 08:39* | *02/08/23 18:55* | *1* |
| *o-Terphenyl* | *108* | | *70 - 130* | *02/08/23 08:39* | *02/08/23 18:55* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Chloride** | **319** | | 5.02 | mg/Kg | | | 02/03/23 22:12 | 1 |

## Client Sample ID: PH02

**Date Collected: 01/30/23 10:40**
**Date Received: 01/30/23 13:07**
**Sample Depth: 1'**

## Lab Sample ID: 890-3980-3

**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U *- *1 | 0.00199 | mg/Kg | | 02/09/23 09:11 | 02/09/23 23:05 | 1 |
| Toluene | <0.00199 | U | 0.00199 | mg/Kg | | 02/09/23 09:11 | 02/09/23 23:05 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | mg/Kg | | 02/09/23 09:11 | 02/09/23 23:05 | 1 |
| m-Xylene & p-Xylene | <0.00398 | U | 0.00398 | mg/Kg | | 02/09/23 09:11 | 02/09/23 23:05 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | mg/Kg | | 02/09/23 09:11 | 02/09/23 23:05 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | mg/Kg | | 02/09/23 09:11 | 02/09/23 23:05 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *79* | | *70 - 130* | *02/09/23 09:11* | *02/09/23 23:05* | *1* |
| *1,4-Difluorobenzene (Surr)* | *78* | | *70 - 130* | *02/09/23 09:11* | *02/09/23 23:05* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00398 | U | 0.00398 | mg/Kg | | | 02/10/23 11:22 | 1 |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.9 | U | 49.9 | mg/Kg | | | 02/09/23 09:45 | 1 |

# Client Sample Results

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3980-1
SDG: 03C1558134

## Client Sample ID: PH02

**Date Collected: 01/30/23 10:40**
**Date Received: 01/30/23 13:07**
**Sample Depth: 1'**

**Lab Sample ID: 890-3980-3**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U | 49.9 | | mg/Kg | | 02/08/23 08:39 | 02/08/23 19:16 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 02/08/23 08:39 | 02/08/23 19:16 | 1 |
| OII Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 02/08/23 08:39 | 02/08/23 19:16 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *93* | | *70 - 130* | *02/08/23 08:39* | *02/08/23 19:16* | *1* |
| *o-Terphenyl* | *97* | | *70 - 130* | *02/08/23 08:39* | *02/08/23 19:16* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **128** | | 5.01 | | mg/Kg | | | 02/03/23 22:18 | 1 |

## Client Sample ID: PH02A

**Date Collected: 01/30/23 10:45**
**Date Received: 01/30/23 13:07**
**Sample Depth: 2'**

**Lab Sample ID: 890-3980-4**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/09/23 08:32 | 02/09/23 21:21 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/09/23 08:32 | 02/09/23 21:21 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/09/23 08:32 | 02/09/23 21:21 | 1 |
| m-Xylene & p-Xylene | <0.00398 | U | 0.00398 | | mg/Kg | | 02/09/23 08:32 | 02/09/23 21:21 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/09/23 08:32 | 02/09/23 21:21 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 02/09/23 08:32 | 02/09/23 21:21 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *112* | | *70 - 130* | *02/09/23 08:32* | *02/09/23 21:21* | *1* |
| *1,4-Difluorobenzene (Surr)* | *90* | | *70 - 130* | *02/09/23 08:32* | *02/09/23 21:21* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00398 | U | 0.00398 | | mg/Kg | | | 02/10/23 12:40 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.0 | U | 50.0 | | mg/Kg | | | 02/09/23 09:45 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 02/08/23 08:39 | 02/08/23 19:37 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 02/08/23 08:39 | 02/08/23 19:37 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 02/08/23 08:39 | 02/08/23 19:37 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *89* | | *70 - 130* | *02/08/23 08:39* | *02/08/23 19:37* | *1* |
| *o-Terphenyl* | *92* | | *70 - 130* | *02/08/23 08:39* | *02/08/23 19:37* | *1* |

# Client Sample Results

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3980-1
SDG: 03C1558134

## Client Sample ID: PH02A

**Lab Sample ID: 890-3980-4**
**Matrix: Solid**
**Date Collected: 01/30/23 10:45**
**Date Received: 01/30/23 13:07**
**Sample Depth: 2'**

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 158 | | 4.98 | | mg/Kg | | | 02/03/23 22:24 | 1 |

## Client Sample ID: PH03

**Lab Sample ID: 890-3980-5**
**Matrix: Solid**
**Date Collected: 01/30/23 10:55**
**Date Received: 01/30/23 13:07**
**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 | | 02/09/23 08:32 | 02/09/23 21:47 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/09/23 08:32 | 02/09/23 21:47 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/09/23 08:32 | 02/09/23 21:47 | 1 |
| m-Xylene & p-Xylene | <0.00398 | U | 0.00398 | | mg/Kg | | 02/09/23 08:32 | 02/09/23 21:47 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/09/23 08:32 | 02/09/23 21:47 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 02/09/23 08:32 | 02/09/23 21:47 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *113* | | *70 - 130* | *02/09/23 08:32* | *02/09/23 21:47* | *1* |
| *1,4-Difluorobenzene (Surr)* | *90* | | *70 - 130* | *02/09/23 08:32* | *02/09/23 21:47* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00398 | U | 0.00398 | | mg/Kg | | | 02/10/23 12:40 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.0 | U | 50.0 | | mg/Kg | | | 02/09/23 09:45 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 02/08/23 08:39 | 02/08/23 19:58 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 02/08/23 08:39 | 02/08/23 19:58 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 02/08/23 08:39 | 02/08/23 19:58 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *91* | | *70 - 130* | *02/08/23 08:39* | *02/08/23 19:58* | *1* |
| *o-Terphenyl* | *97* | | *70 - 130* | *02/08/23 08:39* | *02/08/23 19:58* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 672 | | 4.95 | | mg/Kg | | | 02/04/23 01:54 | 1 |

# Client Sample Results

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3980-1
SDG: 03C1558134

## Client Sample ID: PH03A

**Date Collected: 01/30/23 11:00**
**Date Received: 01/30/23 13:07**
**Sample Depth: 1'**

## Lab Sample ID: 890-3980-6

**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 | | 02/09/23 08:32 | 02/09/23 22:13 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/09/23 08:32 | 02/09/23 22:13 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/09/23 08:32 | 02/09/23 22:13 | 1 |
| m-Xylene & p-Xylene | <0.00399 | U | 0.00399 | | mg/Kg | | 02/09/23 08:32 | 02/09/23 22:13 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/09/23 08:32 | 02/09/23 22:13 | 1 |
| Xylenes, Total | <0.00399 | U | 0.00399 | | mg/Kg | | 02/09/23 08:32 | 02/09/23 22:13 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *119* | | *70 - 130* | *02/09/23 08:32* | *02/09/23 22:13* | *1* |
| *1,4-Difluorobenzene (Surr)* | *99* | | *70 - 130* | *02/09/23 08:32* | *02/09/23 22:13* | *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 | | | 02/10/23 12:40 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.9 | U | 49.9 | | mg/Kg | | | 02/09/23 09:45 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U | 49.9 | | mg/Kg | | 02/08/23 08:39 | 02/08/23 20:19 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 02/08/23 08:39 | 02/08/23 20:19 | 1 |
| OII Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 02/08/23 08:39 | 02/08/23 20:19 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | | | | *02/08/23 08:39* | *02/08/23 20:19* | *1* |
| *o-Terphenyl* | | | | *02/08/23 08:39* | *02/08/23 20:19* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **341** | | 5.00 | | mg/Kg | | | 02/04/23 02:00 | 1 |

# Surrogate Summary

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3980-1
SDG: 03C1558134

## 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) | | | | | | | | |
| 880-24391-A-1-D MS | Matrix Spike | 107 | 103 | | | | | | | | |
| 880-24391-A-1-E MSD | Matrix Spike Duplicate | 109 | 97 | | | | | | | | |
| 890-3980-1 | PH01 | 105 | 90 | | | | | | | | |
| 890-3980-1 MS | PH01 | 122 | 97 | | | | | | | | |
| 890-3980-1 MSD | PH01 | 107 | 102 | | | | | | | | |
| 890-3980-2 | PH01A | 113 | 85 | | | | | | | | |
| 890-3980-3 | PH02 | 79 | 78 | | | | | | | | |
| 890-3980-4 | PH02A | 112 | 90 | | | | | | | | |
| 890-3980-5 | PH03 | 113 | 90 | | | | | | | | |
| 890-3980-6 | PH03A | 119 | 99 | | | | | | | | |
| LCS 880-45843/1-A | Lab Control Sample | 117 | 94 | | | | | | | | |
| LCS 880-45854/1-A | Lab Control Sample | 123 | 91 | | | | | | | | |
| LCSD 880-45843/2-A | Lab Control Sample Dup | 109 | 90 | | | | | | | | |
| LCSD 880-45854/2-A | Lab Control Sample Dup | 112 | 100 | | | | | | | | |
| MB 880-45779/5-A | Method Blank | 74 | 91 | | | | | | | | |
| MB 880-45843/5-A | Method Blank | 76 | 89 | | | | | | | | |
| MB 880-45854/5-A | Method Blank | 74 | 91 | | | | | | | | |

**Surrogate Legend**

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

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

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

| | | Percent Surrogate Recovery (Acceptance Limits) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1CO1 | OTPH1 | | | | | | | | |
| Lab Sample ID | Client Sample ID | (70-130) | (70-130) | | | | | | | | |
| 880-24450-A-1-D MS | Matrix Spike | 113 | 109 | | | | | | | | |
| 880-24450-A-1-E MSD | Matrix Spike Duplicate | 113 | 105 | | | | | | | | |
| 890-3980-1 | PH01 | 92 | 97 | | | | | | | | |
| 890-3980-2 | PH01A | 98 | 108 | | | | | | | | |
| 890-3980-3 | PH02 | 93 | 97 | | | | | | | | |
| 890-3980-4 | PH02A | 89 | 92 | | | | | | | | |
| 890-3980-5 | PH03 | 91 | 97 | | | | | | | | |
| LCS 880-45739/2-A | Lab Control Sample | 114 | 110 | | | | | | | | |
| LCSD 880-45739/3-A | Lab Control Sample Dup | 120 | 112 | | | | | | | | |
| MB 880-45739/1-A | Method Blank | 123 | 133 S1+ | | | | | | | | |

**Surrogate Legend**

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

## 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 | | | | | | | | | | |
| 890-3980-6 | PH03A | | | | | | | | | | |

**Surrogate Legend**

Eurofins Carlsbad

# Surrogate Summary

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3980-1
SDG: 03C1558134

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

# QC Sample Results

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3980-1
SDG: 03C1558134

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

**Lab Sample ID: MB 880-45779/5-A**
**Matrix: Solid**
**Analysis Batch: 45814**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 45779**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/08/23 11:21 | 02/09/23 10:46 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/08/23 11:21 | 02/09/23 10:46 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/08/23 11:21 | 02/09/23 10:46 | 1 |
| m-Xylene & p-Xylene | <0.00400 | U | 0.00400 | | mg/Kg | | 02/08/23 11:21 | 02/09/23 10:46 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/08/23 11:21 | 02/09/23 10:46 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 02/08/23 11:21 | 02/09/23 10:46 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *74* | | *70 - 130* | *02/08/23 11:21* | *02/09/23 10:46* | *1* |
| *1,4-Difluorobenzene (Surr)* | *91* | | *70 - 130* | *02/08/23 11:21* | *02/09/23 10:46* | *1* |

**Lab Sample ID: MB 880-45843/5-A**
**Matrix: Solid**
**Analysis Batch: 45841**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 45843**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/09/23 08:32 | 02/09/23 11:26 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/09/23 08:32 | 02/09/23 11:26 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/09/23 08:32 | 02/09/23 11:26 | 1 |
| m-Xylene & p-Xylene | <0.00400 | U | 0.00400 | | mg/Kg | | 02/09/23 08:32 | 02/09/23 11:26 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/09/23 08:32 | 02/09/23 11:26 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 02/09/23 08:32 | 02/09/23 11:26 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *76* | | *70 - 130* | *02/09/23 08:32* | *02/09/23 11:26* | *1* |
| *1,4-Difluorobenzene (Surr)* | *89* | | *70 - 130* | *02/09/23 08:32* | *02/09/23 11:26* | *1* |

**Lab Sample ID: LCS 880-45843/1-A**
**Matrix: Solid**
**Analysis Batch: 45841**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 45843**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.1048 | | mg/Kg | | 105 | 70 - 130 | | |
| Toluene | | | 0.100 | 0.1134 | | mg/Kg | | 113 | 70 - 130 | | |
| Ethylbenzene | | | 0.100 | 0.1161 | | mg/Kg | | 116 | 70 - 130 | | |
| m-Xylene & p-Xylene | | | 0.200 | 0.2257 | | mg/Kg | | 113 | 70 - 130 | | |
| o-Xylene | | | 0.100 | 0.1143 | | mg/Kg | | 114 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *117* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *94* | | *70 - 130* |

**Lab Sample ID: LCSD 880-45843/2-A**
**Matrix: Solid**
**Analysis Batch: 45841**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 45843**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.09960 | | mg/Kg | | 100 | 70 - 130 | 5 | 35 |

# QC Sample Results

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3980-1
SDG: 03C1558134

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

**Lab Sample ID: LCSD 880-45843/2-A**
**Matrix: Solid**
**Analysis Batch: 45841**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 45843**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | | | 0.100 | 0.1123 | | mg/Kg | | 112 | 70 - 130 | 1 | 35 |
| Ethylbenzene | | | 0.100 | 0.1141 | | mg/Kg | | 114 | 70 - 130 | 2 | 35 |
| m-Xylene & p-Xylene | | | 0.200 | 0.2246 | | mg/Kg | | 112 | 70 - 130 | 0 | 35 |
| o-Xylene | | | 0.100 | 0.1135 | | mg/Kg | | 113 | 70 - 130 | 1 | 35 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *109* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *90* | | *70 - 130* |

**Lab Sample ID: 880-24391-A-1-D MS**
**Matrix: Solid**
**Analysis Batch: 45841**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 45843**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U F2 | 0.100 | 0.1222 | | mg/Kg | | 122 | 70 - 130 | | |
| Toluene | <0.00200 | U | 0.100 | 0.1137 | | mg/Kg | | 113 | 70 - 130 | | |
| Ethylbenzene | <0.00200 | U | 0.100 | 0.1193 | | mg/Kg | | 119 | 70 - 130 | | |
| m-Xylene & p-Xylene | <0.00401 | U | 0.201 | 0.2326 | | mg/Kg | | 116 | 70 - 130 | | |
| o-Xylene | <0.00200 | U | 0.100 | 0.1162 | | mg/Kg | | 116 | 70 - 130 | | |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *107* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *103* | | *70 - 130* |

**Lab Sample ID: 880-24391-A-1-E MSD**
**Matrix: Solid**
**Analysis Batch: 45841**

**Client Sample ID: Matrix Spike Duplicate**
**Prep Type: Total/NA**
**Prep Batch: 45843**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U F2 | 0.0990 | 0.08102 | F2 | mg/Kg | | 82 | 70 - 130 | 41 | 35 |
| Toluene | <0.00200 | U | 0.0990 | 0.08050 | | mg/Kg | | 81 | 70 - 130 | 34 | 35 |
| Ethylbenzene | <0.00200 | U | 0.0990 | 0.08495 | | mg/Kg | | 86 | 70 - 130 | 34 | 35 |
| m-Xylene & p-Xylene | <0.00401 | U | 0.198 | 0.1651 | | mg/Kg | | 83 | 70 - 130 | 34 | 35 |
| o-Xylene | <0.00200 | U | 0.0990 | 0.08441 | | mg/Kg | | 85 | 70 - 130 | 32 | 35 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *109* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *97* | | *70 - 130* |

**Lab Sample ID: MB 880-45854/5-A**
**Matrix: Solid**
**Analysis Batch: 45814**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 45854**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/09/23 09:11 | 02/09/23 22:02 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/09/23 09:11 | 02/09/23 22:02 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/09/23 09:11 | 02/09/23 22:02 | 1 |
| m-Xylene & p-Xylene | <0.00400 | U | 0.00400 | | mg/Kg | | 02/09/23 09:11 | 02/09/23 22:02 | 1 |

# QC Sample Results

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3980-1
SDG: 03C1558134

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

**Lab Sample ID: MB 880-45854/5-A**
**Matrix: Solid**
**Analysis Batch: 45814**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 45854**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/09/23 09:11 | 02/09/23 22:02 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 02/09/23 09:11 | 02/09/23 22:02 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *74* | | *70 - 130* | *02/09/23 09:11* | *02/09/23 22:02* | *1* |
| *1,4-Difluorobenzene (Surr)* | *91* | | *70 - 130* | *02/09/23 09:11* | *02/09/23 22:02* | *1* |

**Lab Sample ID: LCS 880-45854/1-A**
**Matrix: Solid**
**Analysis Batch: 45814**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 45854**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.06258 | *- | mg/Kg | | 63 | 70 - 130 | | |
| Toluene | | | 0.100 | 0.07513 | | mg/Kg | | 75 | 70 - 130 | | |
| Ethylbenzene | | | 0.100 | 0.09617 | | mg/Kg | | 96 | 70 - 130 | | |
| m-Xylene & p-Xylene | | | 0.200 | 0.2024 | | mg/Kg | | 101 | 70 - 130 | | |
| o-Xylene | | | 0.100 | 0.1045 | | mg/Kg | | 104 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *123* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *91* | | *70 - 130* |

**Lab Sample ID: LCSD 880-45854/2-A**
**Matrix: Solid**
**Analysis Batch: 45814**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 45854**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.1001 | *1 | mg/Kg | | 100 | 70 - 130 | 46 | 35 |
| Toluene | | | 0.100 | 0.09577 | | mg/Kg | | 96 | 70 - 130 | 24 | 35 |
| Ethylbenzene | | | 0.100 | 0.1011 | | mg/Kg | | 101 | 70 - 130 | 5 | 35 |
| m-Xylene & p-Xylene | | | 0.200 | 0.2113 | | mg/Kg | | 106 | 70 - 130 | 4 | 35 |
| o-Xylene | | | 0.100 | 0.1197 | | mg/Kg | | 120 | 70 - 130 | 14 | 35 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *112* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *100* | | *70 - 130* |

**Lab Sample ID: 890-3980-1 MS**
**Matrix: Solid**
**Analysis Batch: 45814**

**Client Sample ID: PH01**
**Prep Type: Total/NA**
**Prep Batch: 45854**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U *- *1 | 0.101 | 0.07321 | | mg/Kg | | 73 | 70 - 130 | | |
| Toluene | <0.00202 | U | 0.101 | 0.07644 | | mg/Kg | | 75 | 70 - 130 | | |
| Ethylbenzene | <0.00202 | U | 0.101 | 0.09168 | | mg/Kg | | 91 | 70 - 130 | | |
| m-Xylene & p-Xylene | <0.00403 | U | 0.202 | 0.1915 | | mg/Kg | | 95 | 70 - 130 | | |
| o-Xylene | <0.00202 | U | 0.101 | 0.09409 | | mg/Kg | | 93 | 70 - 130 | | |

# QC Sample Results

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3980-1
SDG: 03C1558134

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

**Lab Sample ID: 890-3980-1 MS**
**Matrix: Solid**
**Analysis Batch: 45814**

**Client Sample ID: PH01**
**Prep Type: Total/NA**
**Prep Batch: 45854**

| Surrogate | MS %Recovery | MS Qualifier | Limits |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *122* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *97* | | *70 - 130* |

**Lab Sample ID: 890-3980-1 MSD**
**Matrix: Solid**
**Analysis Batch: 45814**

**Client Sample ID: PH01**
**Prep Type: Total/NA**
**Prep Batch: 45854**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U *- *1 | 0.0998 | 0.08811 | | mg/Kg | | 88 | 70 - 130 | 18 | 35 |
| Toluene | <0.00202 | U | 0.0998 | 0.08281 | | mg/Kg | | 82 | 70 - 130 | 8 | 35 |
| Ethylbenzene | <0.00202 | U | 0.0998 | 0.08693 | | mg/Kg | | 87 | 70 - 130 | 5 | 35 |
| m-Xylene & p-Xylene | <0.00403 | U | 0.200 | 0.1823 | | mg/Kg | | 91 | 70 - 130 | 5 | 35 |
| o-Xylene | <0.00202 | U | 0.0998 | 0.09559 | | mg/Kg | | 96 | 70 - 130 | 2 | 35 |

| Surrogate | MSD %Recovery | MSD Qualifier | Limits |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *107* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *102* | | *70 - 130* |

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

**Lab Sample ID: MB 880-45739/1-A**
**Matrix: Solid**
**Analysis Batch: 45729**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 45739**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U | 49.9 | | mg/Kg | | 02/08/23 08:39 | 02/08/23 08:39 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 02/08/23 08:39 | 02/08/23 08:39 | 1 |
| OII Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 02/08/23 08:39 | 02/08/23 08:39 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *123* | | *70 - 130* | *02/08/23 08:39* | *02/08/23 08:39* | *1* |
| *o-Terphenyl* | *133* | *S1+* | *70 - 130* | *02/08/23 08:39* | *02/08/23 08:39* | *1* |

**Lab Sample ID: LCS 880-45739/2-A**
**Matrix: Solid**
**Analysis Batch: 45729**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 45739**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 999 | 832.3 | | mg/Kg | | 83 | 70 - 130 | | |
| Diesel Range Organics (Over C10-C28) | | | 999 | 863.7 | | mg/Kg | | 86 | 70 - 130 | | |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| *1-Chlorooctane* | *114* | | *70 - 130* |
| *o-Terphenyl* | *110* | | *70 - 130* |

# QC Sample Results

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3980-1
SDG: 03C1558134

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

**Lab Sample ID: LCSD 880-45739/3-A**
**Matrix: Solid**
**Analysis Batch: 45729**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 45739**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 999 | 844.6 | | mg/Kg | | 85 | 70 - 130 | 1 | 20 |
| Diesel Range Organics (Over C10-C28) | | | 999 | 898.1 | | mg/Kg | | 90 | 70 - 130 | 4 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane* | *120* | | *70 - 130* |
| *o-Terphenyl* | *112* | | *70 - 130* |

**Lab Sample ID: 880-24450-A-1-D MS**
**Matrix: Solid**
**Analysis Batch: 45729**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 45739**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U F2 | 1000 | 727.1 | | mg/Kg | | 71 | 70 - 130 |
| Diesel Range Organics (Over C10-C28) | 381 | F1 | 1000 | 842.5 | F1 | mg/Kg | | 46 | 70 - 130 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane* | *113* | | *70 - 130* |
| *o-Terphenyl* | *109* | | *70 - 130* |

**Lab Sample ID: 880-24450-A-1-E MSD**
**Matrix: Solid**
**Analysis Batch: 45729**

**Client Sample ID: Matrix Spike Duplicate**
**Prep Type: Total/NA**
**Prep Batch: 45739**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U F2 | 997 | 1227 | F2 | mg/Kg | | 121 | 70 - 130 | 51 | 20 |
| Diesel Range Organics (Over C10-C28) | 381 | F1 | 997 | 735.9 | F1 | mg/Kg | | 36 | 70 - 130 | 14 | 20 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane* | *113* | | *70 - 130* |
| *o-Terphenyl* | *105* | | *70 - 130* |

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 880-45276/1-A**
**Matrix: Solid**
**Analysis Batch: 45421**

**Client Sample ID: Method Blank**
**Prep Type: Soluble**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <5.00 | U | 5.00 | | mg/Kg | | | 02/03/23 19:19 | 1 |

# QC Sample Results

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3980-1
SDG: 03C1558134

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: LCS 880-45276/2-A**
**Matrix: Solid**
**Analysis Batch: 45421**

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

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 250 | 273.0 | | mg/Kg | | 109 | 90 - 110 | | |

**Lab Sample ID: LCSD 880-45276/3-A**
**Matrix: Solid**
**Analysis Batch: 45421**

**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 | 261.5 | | mg/Kg | | 105 | 90 - 110 | 4 | 20 |

**Lab Sample ID: 890-3994-A-6-B MS**
**Matrix: Solid**
**Analysis Batch: 45421**

**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 | 27.3 | | 248 | 297.3 | | mg/Kg | | 109 | 90 - 110 | | |

**Lab Sample ID: 890-3994-A-6-C MSD**
**Matrix: Solid**
**Analysis Batch: 45421**

**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 | 27.3 | | 248 | 295.4 | | mg/Kg | | 108 | 90 - 110 | 1 | 20 |

**Lab Sample ID: MB 880-45279/1-A**
**Matrix: Solid**
**Analysis Batch: 45423**

**Client Sample ID: Method Blank**
**Prep Type: Soluble**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <5.00 | U | 5.00 | | mg/Kg | | | 02/03/23 22:55 | 1 |

**Lab Sample ID: LCS 880-45279/2-A**
**Matrix: Solid**
**Analysis Batch: 45423**

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

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 250 | 255.7 | | mg/Kg | | 102 | 90 - 110 | | |

**Lab Sample ID: LCSD 880-45279/3-A**
**Matrix: Solid**
**Analysis Batch: 45423**

**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 | 256.1 | | mg/Kg | | 102 | 90 - 110 | 0 | 20 |

**Lab Sample ID: 890-3993-A-11-B MS**
**Matrix: Solid**
**Analysis Batch: 45423**

**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 | <4.98 | U | 249 | 267.3 | | mg/Kg | | 107 | 90 - 110 | | |

# QC Sample Results

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3980-1
SDG: 03C1558134

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: 890-3993-A-11-C MSD**
**Matrix: Solid**
**Analysis Batch: 45423**

**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 | <4.98 | U | 249 | 267.3 | | mg/Kg | | 107 | 90 - 110 | 0 | 20 |

# QC Association Summary

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3980-1
SDG: 03C1558134

## GC VOA

### Prep Batch: 45779

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| MB 880-45779/5-A | Method Blank | Total/NA | Solid | 5035 | |

### Analysis Batch: 45814

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-3980-1 | PH01 | Total/NA | Solid | 8021B | 45854 |
| 890-3980-2 | PH01A | Total/NA | Solid | 8021B | 45854 |
| 890-3980-3 | PH02 | Total/NA | Solid | 8021B | 45854 |
| MB 880-45779/5-A | Method Blank | Total/NA | Solid | 8021B | 45779 |
| MB 880-45854/5-A | Method Blank | Total/NA | Solid | 8021B | 45854 |
| LCS 880-45854/1-A | Lab Control Sample | Total/NA | Solid | 8021B | 45854 |
| LCSD 880-45854/2-A | Lab Control Sample Dup | Total/NA | Solid | 8021B | 45854 |
| 890-3980-1 MS | PH01 | Total/NA | Solid | 8021B | 45854 |
| 890-3980-1 MSD | PH01 | Total/NA | Solid | 8021B | 45854 |

### Analysis Batch: 45841

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-3980-4 | PH02A | Total/NA | Solid | 8021B | 45843 |
| 890-3980-5 | PH03 | Total/NA | Solid | 8021B | 45843 |
| 890-3980-6 | PH03A | Total/NA | Solid | 8021B | 45843 |
| MB 880-45843/5-A | Method Blank | Total/NA | Solid | 8021B | 45843 |
| LCS 880-45843/1-A | Lab Control Sample | Total/NA | Solid | 8021B | 45843 |
| LCSD 880-45843/2-A | Lab Control Sample Dup | Total/NA | Solid | 8021B | 45843 |
| 880-24391-A-1-D MS | Matrix Spike | Total/NA | Solid | 8021B | 45843 |
| 880-24391-A-1-E MSD | Matrix Spike Duplicate | Total/NA | Solid | 8021B | 45843 |

### Prep Batch: 45843

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-3980-4 | PH02A | Total/NA | Solid | 5035 | |
| 890-3980-5 | PH03 | Total/NA | Solid | 5035 | |
| 890-3980-6 | PH03A | Total/NA | Solid | 5035 | |
| MB 880-45843/5-A | Method Blank | Total/NA | Solid | 5035 | |
| LCS 880-45843/1-A | Lab Control Sample | Total/NA | Solid | 5035 | |
| LCSD 880-45843/2-A | Lab Control Sample Dup | Total/NA | Solid | 5035 | |
| 880-24391-A-1-D MS | Matrix Spike | Total/NA | Solid | 5035 | |
| 880-24391-A-1-E MSD | Matrix Spike Duplicate | Total/NA | Solid | 5035 | |

### Prep Batch: 45854

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-3980-1 | PH01 | Total/NA | Solid | 5035 | |
| 890-3980-2 | PH01A | Total/NA | Solid | 5035 | |
| 890-3980-3 | PH02 | Total/NA | Solid | 5035 | |
| MB 880-45854/5-A | Method Blank | Total/NA | Solid | 5035 | |
| LCS 880-45854/1-A | Lab Control Sample | Total/NA | Solid | 5035 | |
| LCSD 880-45854/2-A | Lab Control Sample Dup | Total/NA | Solid | 5035 | |
| 890-3980-1 MS | PH01 | Total/NA | Solid | 5035 | |
| 890-3980-1 MSD | PH01 | Total/NA | Solid | 5035 | |

### Analysis Batch: 45988

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-3980-1 | PH01 | Total/NA | Solid | Total BTEX | |
| 890-3980-2 | PH01A | Total/NA | Solid | Total BTEX | |

# QC Association Summary

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3980-1
SDG: 03C1558134

## GC VOA (Continued)

### Analysis Batch: 45988 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-3980-3 | PH02 | Total/NA | Solid | Total BTEX | |
| 890-3980-4 | PH02A | Total/NA | Solid | Total BTEX | |
| 890-3980-5 | PH03 | Total/NA | Solid | Total BTEX | |
| 890-3980-6 | PH03A | Total/NA | Solid | Total BTEX | |

## GC Semi VOA

### Analysis Batch: 45729

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-3980-1 | PH01 | Total/NA | Solid | 8015B NM | 45739 |
| 890-3980-2 | PH01A | Total/NA | Solid | 8015B NM | 45739 |
| 890-3980-3 | PH02 | Total/NA | Solid | 8015B NM | 45739 |
| 890-3980-4 | PH02A | Total/NA | Solid | 8015B NM | 45739 |
| 890-3980-5 | PH03 | Total/NA | Solid | 8015B NM | 45739 |
| 890-3980-6 | PH03A | Total/NA | Solid | 8015B NM | 45739 |
| MB 880-45739/1-A | Method Blank | Total/NA | Solid | 8015B NM | 45739 |
| LCS 880-45739/2-A | Lab Control Sample | Total/NA | Solid | 8015B NM | 45739 |
| LCSD 880-45739/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015B NM | 45739 |
| 880-24450-A-1-D MS | Matrix Spike | Total/NA | Solid | 8015B NM | 45739 |
| 880-24450-A-1-E MSD | Matrix Spike Duplicate | Total/NA | Solid | 8015B NM | 45739 |

### Prep Batch: 45739

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-3980-1 | PH01 | Total/NA | Solid | 8015NM Prep | |
| 890-3980-2 | PH01A | Total/NA | Solid | 8015NM Prep | |
| 890-3980-3 | PH02 | Total/NA | Solid | 8015NM Prep | |
| 890-3980-4 | PH02A | Total/NA | Solid | 8015NM Prep | |
| 890-3980-5 | PH03 | Total/NA | Solid | 8015NM Prep | |
| 890-3980-6 | PH03A | Total/NA | Solid | 8015NM Prep | |
| MB 880-45739/1-A | Method Blank | Total/NA | Solid | 8015NM Prep | |
| LCS 880-45739/2-A | Lab Control Sample | Total/NA | Solid | 8015NM Prep | |
| LCSD 880-45739/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015NM Prep | |
| 880-24450-A-1-D MS | Matrix Spike | Total/NA | Solid | 8015NM Prep | |
| 880-24450-A-1-E MSD | Matrix Spike Duplicate | Total/NA | Solid | 8015NM Prep | |

### Analysis Batch: 45860

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-3980-1 | PH01 | Total/NA | Solid | 8015 NM | |
| 890-3980-2 | PH01A | Total/NA | Solid | 8015 NM | |
| 890-3980-3 | PH02 | Total/NA | Solid | 8015 NM | |
| 890-3980-4 | PH02A | Total/NA | Solid | 8015 NM | |
| 890-3980-5 | PH03 | Total/NA | Solid | 8015 NM | |
| 890-3980-6 | PH03A | Total/NA | Solid | 8015 NM | |

## HPLC/IC

### Leach Batch: 45276

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-3980-1 | PH01 | Soluble | Solid | DI Leach | |
| 890-3980-2 | PH01A | Soluble | Solid | DI Leach | |
| 890-3980-3 | PH02 | Soluble | Solid | DI Leach | |
| 890-3980-4 | PH02A | Soluble | Solid | DI Leach | |

# QC Association Summary

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3980-1
SDG: 03C1558134

## HPLC/IC (Continued)

### Leach Batch: 45276 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| MB 880-45276/1-A | Method Blank | Soluble | Solid | DI Leach | |
| LCS 880-45276/2-A | Lab Control Sample | Soluble | Solid | DI Leach | |
| LCSD 880-45276/3-A | Lab Control Sample Dup | Soluble | Solid | DI Leach | |
| 890-3994-A-6-B MS | Matrix Spike | Soluble | Solid | DI Leach | |
| 890-3994-A-6-C MSD | Matrix Spike Duplicate | Soluble | Solid | DI Leach | |

### Leach Batch: 45279

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-3980-5 | PH03 | Soluble | Solid | DI Leach | |
| 890-3980-6 | PH03A | Soluble | Solid | DI Leach | |
| MB 880-45279/1-A | Method Blank | Soluble | Solid | DI Leach | |
| LCS 880-45279/2-A | Lab Control Sample | Soluble | Solid | DI Leach | |
| LCSD 880-45279/3-A | Lab Control Sample Dup | Soluble | Solid | DI Leach | |
| 890-3993-A-11-B MS | Matrix Spike | Soluble | Solid | DI Leach | |
| 890-3993-A-11-C MSD | Matrix Spike Duplicate | Soluble | Solid | DI Leach | |

### Analysis Batch: 45421

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-3980-1 | PH01 | Soluble | Solid | 300.0 | 45276 |
| 890-3980-2 | PH01A | Soluble | Solid | 300.0 | 45276 |
| 890-3980-3 | PH02 | Soluble | Solid | 300.0 | 45276 |
| 890-3980-4 | PH02A | Soluble | Solid | 300.0 | 45276 |
| MB 880-45276/1-A | Method Blank | Soluble | Solid | 300.0 | 45276 |
| LCS 880-45276/2-A | Lab Control Sample | Soluble | Solid | 300.0 | 45276 |
| LCSD 880-45276/3-A | Lab Control Sample Dup | Soluble | Solid | 300.0 | 45276 |
| 890-3994-A-6-B MS | Matrix Spike | Soluble | Solid | 300.0 | 45276 |
| 890-3994-A-6-C MSD | Matrix Spike Duplicate | Soluble | Solid | 300.0 | 45276 |

### Analysis Batch: 45423

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-3980-5 | PH03 | Soluble | Solid | 300.0 | 45279 |
| 890-3980-6 | PH03A | Soluble | Solid | 300.0 | 45279 |
| MB 880-45279/1-A | Method Blank | Soluble | Solid | 300.0 | 45279 |
| LCS 880-45279/2-A | Lab Control Sample | Soluble | Solid | 300.0 | 45279 |
| LCSD 880-45279/3-A | Lab Control Sample Dup | Soluble | Solid | 300.0 | 45279 |
| 890-3993-A-11-B MS | Matrix Spike | Soluble | Solid | 300.0 | 45279 |
| 890-3993-A-11-C MSD | Matrix Spike Duplicate | Soluble | Solid | 300.0 | 45279 |

# Lab Chronicle

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3980-1
SDG: 03C1558134

## Client Sample ID: PH01

**Date Collected: 01/30/23 10:05**
**Date Received: 01/30/23 13:07**

## Lab Sample ID: 890-3980-1

**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 | | | 4.96 g | 5 mL | 45854 | 02/09/23 09:11 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 45814 | 02/09/23 22:24 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 45988 | 02/10/23 11:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 45860 | 02/09/23 09:45 | AJ | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.04 g | 10 mL | 45739 | 02/08/23 08:39 | AM | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 45729 | 02/08/23 18:34 | AJ | EET MID |
| Soluble | Leach | DI Leach | | | 5.03 g | 50 mL | 45276 | 02/02/23 15:16 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 45421 | 02/03/23 22:05 | CH | EET MID |

## Client Sample ID: PH01A

**Date Collected: 01/30/23 10:20**
**Date Received: 01/30/23 13:07**

## Lab Sample ID: 890-3980-2

**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 | 45854 | 02/09/23 09:11 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 45814 | 02/09/23 22:44 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 45988 | 02/10/23 11:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 45860 | 02/09/23 09:45 | AJ | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 45739 | 02/08/23 08:39 | AM | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 45729 | 02/08/23 18:55 | AJ | EET MID |
| Soluble | Leach | DI Leach | | | 4.98 g | 50 mL | 45276 | 02/02/23 15:16 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 45421 | 02/03/23 22:12 | CH | EET MID |

## Client Sample ID: PH02

**Date Collected: 01/30/23 10:40**
**Date Received: 01/30/23 13:07**

## Lab Sample ID: 890-3980-3

**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 | 45854 | 02/09/23 09:11 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 45814 | 02/09/23 23:05 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 45988 | 02/10/23 11:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 45860 | 02/09/23 09:45 | AJ | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.03 g | 10 mL | 45739 | 02/08/23 08:39 | AM | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 45729 | 02/08/23 19:16 | AJ | EET MID |
| Soluble | Leach | DI Leach | | | 4.99 g | 50 mL | 45276 | 02/02/23 15:16 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 45421 | 02/03/23 22:18 | CH | EET MID |

## Client Sample ID: PH02A

**Date Collected: 01/30/23 10:45**
**Date Received: 01/30/23 13:07**

## Lab Sample ID: 890-3980-4

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.02 g | 5 mL | 45843 | 02/09/23 08:32 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 45841 | 02/09/23 21:21 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 45988 | 02/10/23 12:40 | SM | EET MID |

# Lab Chronicle

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3980-1
SDG: 03C1558134

## Client Sample ID: PH02A

**Date Collected: 01/30/23 10:45**
**Date Received: 01/30/23 13:07**

## Lab Sample ID: 890-3980-4

**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 | | | 45860 | 02/09/23 09:45 | AJ | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 45739 | 02/08/23 08:39 | AM | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 45729 | 02/08/23 19:37 | AJ | EET MID |
| Soluble | Leach | DI Leach | | | 5.02 g | 50 mL | 45276 | 02/02/23 15:16 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 45421 | 02/03/23 22:24 | CH | EET MID |

## Client Sample ID: PH03

**Date Collected: 01/30/23 10:55**
**Date Received: 01/30/23 13:07**

## Lab Sample ID: 890-3980-5

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.03 g | 5 mL | 45843 | 02/09/23 08:32 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 45841 | 02/09/23 21:47 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 45988 | 02/10/23 12:40 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 45860 | 02/09/23 09:45 | AJ | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.00 g | 10 mL | 45739 | 02/08/23 08:39 | AM | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 45729 | 02/08/23 19:58 | AJ | EET MID |
| Soluble | Leach | DI Leach | | | 5.05 g | 50 mL | 45279 | 02/02/23 15:26 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 45423 | 02/04/23 01:54 | CH | EET MID |

## Client Sample ID: PH03A

**Date Collected: 01/30/23 11:00**
**Date Received: 01/30/23 13:07**

## Lab Sample ID: 890-3980-6

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.01 g | 5 mL | 45843 | 02/09/23 08:32 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 45841 | 02/09/23 22:13 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 45988 | 02/10/23 12:40 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 45860 | 02/09/23 09:45 | AJ | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.02 g | 10 mL | 45739 | 02/08/23 08:39 | AM | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 45729 | 02/08/23 20:19 | AJ | EET MID |
| Soluble | Leach | DI Leach | | | 5 g | 50 mL | 45279 | 02/02/23 15:26 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 45423 | 02/04/23 02:00 | CH | EET MID |

**Laboratory References:**

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

# Accreditation/Certification Summary

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3980-1
SDG: 03C1558134

## Laboratory: Eurofins Midland

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

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

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

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

# Method Summary

Client: Ensolum
Project/Site: PLU 27 Brushy Draw 163H

Job ID: 890-3980-1
SDG: 03C1558134

| 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: PLU 27 Brushy Draw 163H

Job ID: 890-3980-1
SDG: 03C1558134

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Depth |
|---|---|---|---|---|---|
| 890-3980-1 | PH01 | Solid | 01/30/23 10:05 | 01/30/23 13:07 | 1' |
| 890-3980-2 | PH01A | Solid | 01/30/23 10:20 | 01/30/23 13:07 | 4' |
| 890-3980-3 | PH02 | Solid | 01/30/23 10:40 | 01/30/23 13:07 | 1' |
| 890-3980-4 | PH02A | Solid | 01/30/23 10:45 | 01/30/23 13:07 | 2' |
| 890-3980-5 | PH03 | Solid | 01/30/23 10:55 | 01/30/23 13:07 | 0.5' |
| 890-3980-6 | PH03A | Solid | 01/30/23 11:00 | 01/30/23 13:07 | 1' |

eurofins | Environment Testing Xenco

# Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

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

**Work Order Comments**

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

| | | | |
|---|---|---|---|
| Project Name: | PLU27 BrushyDraw16SH | Turn Around | |
| Project Number: | 03C1558134 | ☑ Routine ☐ Rush | |
| Project Location: | 32.10159, -103.87212 | Due Date: | |
| Sampler's Name: | Meredith Roberts | TAT starts the day received by the lab, if received by 4:30pm | |
| PO #: | | | |

| SAMPLE RECEIPT | | | |
|---|---|---|---|
| Temp Blank: | Yes No | Wet Ice: | Yes No |
| Samples Received Intact: | Yes No | Thermometer ID: | TM057 |
| Cooler Custody Seals: | Yes No N/A | Correction Factor: | -0.2 |
| Sample Custody Seals: | Yes No N/A | Temperature Reading: | 3.4 |
| Total Containers: | | Corrected Temperature: | 3.2 |

**ANALYSIS REQUEST**

Pres. Code / Parameters: BTEX, Chlorides, TPH

890-3980 Chain of Custody

**Preservative Codes**

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

| Sample Identification | Matrix | Date Sampled | Time Sampled | Depth | Grab/ Comp | # of Cont | BTEX | Chlorides | TPH |
|---|---|---|---|---|---|---|---|---|---|
| PH01 | S | 1/30/23 | 1005 | 1' | G | 1 | X | X | X |
| PH01A | | | 1020 | 4' | | | | | |
| PH02 | | | 1040 | 1' | | | | | |
| PH02A | | | 1045 | 2' | | | | | |
| PH03 | | | 1055 | 0.5' | | | | | |
| PH03A | ↓ | ↓ | 1100 | 1' | ↓ | ↓ | ↓ | ↓ | ↓ |

MR

**Sample Comments**

Incident #:
NAPP2226337852

Cost Center:
1667031001

API:
30-015-46247

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



| | Relinquished by: (Signature) | Received by: (Signature) | Date/Time | Relinquished by: (Signature) | Received by: (Signature) | Date/Time |
|---|---|---|---|---|---|---|
| 1 | | | 1-30-23 1307 | 2 | | |
| 3 | | | | 4 | | |
| 5 | | | | 6 | | |

Revised Date: 08/25/2020 Rev 2020.2

# Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3980-1
SDG Number: 03C1558134

**Login Number: 3980**
**List Number: 1**
**Creator: Stutzman, Amanda**

**List Source: Eurofins Carlsbad**

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

# Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3980-1
SDG Number: 03C1558134

**Login Number: 3980**
**List Number: 2**
**Creator: Rodriguez, Leticia**

**List Source: Eurofins Midland**
**List Creation: 02/03/23 01:00 PM**

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

eurofins | Environment Testing



# ANALYTICAL REPORT

## PREPARED FOR

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

Generated 4/3/2023 3:08:37 PM

## JOB DESCRIPTION

PLU 27 BD 163H
SDG NUMBER 03C1558134

## JOB NUMBER

890-4368-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.





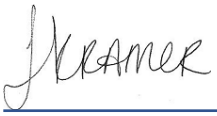
my EOL

# Eurofins Carlsbad

## Job Notes

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
4/3/2023 3:08:37 PM

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

Client: Ensolum
Project/Site: PLU 27 BD 163H

Laboratory Job ID: 890-4368-1
SDG: 03C1558134

# Table of Contents

# Definitions/Glossary

Client: Ensolum Job ID: 890-4368-1
Project/Site: PLU 27 BD 163H SDG: 03C1558134

## Qualifiers

### GC VOA

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

### GC Semi VOA

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

### HPLC/IC

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

## Glossary

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

# Case Narrative

Client: Ensolum
Project/Site: PLU 27 BD 163H

Job ID: 890-4368-1
SDG: 03C1558134

## Job ID: 890-4368-1

**Laboratory: Eurofins Carlsbad**

**Narrative**

**Job Narrative**
**890-4368-1**

**Receipt**
The samples were received on 3/20/2023 2:34 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 2.4°C

**Receipt Exceptions**
The following samples were received and analyzed from an unpreserved bulk soil jar: SS07 (890-4368-1) and SS08 (890-4368-2).

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

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

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

# Client Sample Results

Client: Ensolum
Project/Site: PLU 27 BD 163H

Job ID: 890-4368-1
SDG: 03C1558134

## Client Sample ID: SS07

**Date Collected: 03/20/23 11:30**
**Date Received: 03/20/23 14:34**
**Sample Depth: 0.5**

**Lab Sample ID: 890-4368-1**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00201 | U | 0.00201 | | mg/Kg | | 03/27/23 15:35 | 03/31/23 17:14 | 1 |
| Toluene | <0.00201 | U | 0.00201 | | mg/Kg | | 03/27/23 15:35 | 03/31/23 17:14 | 1 |
| Ethylbenzene | <0.00201 | U | 0.00201 | | mg/Kg | | 03/27/23 15:35 | 03/31/23 17:14 | 1 |
| m-Xylene & p-Xylene | <0.00402 | U | 0.00402 | | mg/Kg | | 03/27/23 15:35 | 03/31/23 17:14 | 1 |
| o-Xylene | <0.00201 | U | 0.00201 | | mg/Kg | | 03/27/23 15:35 | 03/31/23 17:14 | 1 |
| Xylenes, Total | <0.00402 | U | 0.00402 | | mg/Kg | | 03/27/23 15:35 | 03/31/23 17:14 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *109* | | *70 - 130* | *03/27/23 15:35* | *03/31/23 17:14* | *1* |
| *1,4-Difluorobenzene (Surr)* | *83* | | *70 - 130* | *03/27/23 15:35* | *03/31/23 17:14* | *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 | | | 04/03/23 15:17 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.0 | U | 50.0 | | mg/Kg | | | 03/28/23 09:09 | 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 | | 03/24/23 16:55 | 03/27/23 17:11 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 03/24/23 16:55 | 03/27/23 17:11 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 03/24/23 16:55 | 03/27/23 17:11 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *105* | | *70 - 130* | *03/24/23 16:55* | *03/27/23 17:11* | *1* |
| *o-Terphenyl* | *102* | | *70 - 130* | *03/24/23 16:55* | *03/27/23 17:11* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **242** | | 5.02 | | mg/Kg | | | 03/29/23 14:33 | 1 |

## Client Sample ID: SS08

**Date Collected: 03/20/23 11:35**
**Date Received: 03/20/23 14:34**
**Sample Depth: 0.5**

**Lab Sample ID: 890-4368-2**
**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 | | 03/27/23 15:35 | 03/31/23 17:35 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/27/23 15:35 | 03/31/23 17:35 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/27/23 15:35 | 03/31/23 17:35 | 1 |
| m-Xylene & p-Xylene | <0.00401 | U | 0.00401 | | mg/Kg | | 03/27/23 15:35 | 03/31/23 17:35 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/27/23 15:35 | 03/31/23 17:35 | 1 |
| Xylenes, Total | <0.00401 | U | 0.00401 | | mg/Kg | | 03/27/23 15:35 | 03/31/23 17:35 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *108* | | *70 - 130* | *03/27/23 15:35* | *03/31/23 17:35* | *1* |

Eurofins Carlsbad

# Client Sample Results

Client: Ensolum
Project/Site: PLU 27 BD 163H

Job ID: 890-4368-1
SDG: 03C1558134

**Client Sample ID: SS08**
**Date Collected: 03/20/23 11:35**
**Date Received: 03/20/23 14:34**
**Sample Depth: 0.5**

**Lab Sample ID: 890-4368-2**
**Matrix: Solid**

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

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,4-Difluorobenzene (Surr)* | *95* | | *70 - 130* | *03/27/23 15:35* | *03/31/23 17:35* | *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 | | | 04/03/23 15:17 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.0 | U | 50.0 | | mg/Kg | | | 03/28/23 09:09 | 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 | | 03/24/23 16:55 | 03/27/23 17:33 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 03/24/23 16:55 | 03/27/23 17:33 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 03/24/23 16:55 | 03/27/23 17:33 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *96* | | *70 - 130* | *03/24/23 16:55* | *03/27/23 17:33* | *1* |
| *o-Terphenyl* | *91* | | *70 - 130* | *03/24/23 16:55* | *03/27/23 17:33* | *1* |

## Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **386** | | 4.97 | | mg/Kg | | | 03/29/23 14:38 | 1 |

# Surrogate Summary

Client: Ensolum
Project/Site: PLU 27 BD 163H

Job ID: 890-4368-1
SDG: 03C1558134

## 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) | | | | | | | | | | |
| 880-26270-A-24-C MS | Matrix Spike | 101 | 93 | | | | | | | | | | |
| 880-26270-A-24-D MSD | Matrix Spike Duplicate | 99 | 92 | | | | | | | | | | |
| 890-4368-1 | SS07 | 109 | 83 | | | | | | | | | | |
| 890-4368-2 | SS08 | 108 | 95 | | | | | | | | | | |
| LCS 880-49655/1-A | Lab Control Sample | 103 | 90 | | | | | | | | | | |
| LCSD 880-49655/2-A | Lab Control Sample Dup | 107 | 93 | | | | | | | | | | |
| MB 880-49655/5-A | Method Blank | 109 | 81 | | | | | | | | | | |

**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) | | | | | | | | | | |
| 890-4361-A-1-B MS | Matrix Spike | 108 | 87 | | | | | | | | | | |
| 890-4361-A-1-C MSD | Matrix Spike Duplicate | 108 | 87 | | | | | | | | | | |
| 890-4368-1 | SS07 | 105 | 102 | | | | | | | | | | |
| 890-4368-2 | SS08 | 96 | 91 | | | | | | | | | | |
| LCS 880-49457/2-A | Lab Control Sample | 93 | 83 | | | | | | | | | | |
| LCSD 880-49457/3-A | Lab Control Sample Dup | 90 | 81 | | | | | | | | | | |
| MB 880-49457/1-A | Method Blank | 120 | 118 | | | | | | | | | | |

**Surrogate Legend**

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

# QC Sample Results

Client: Ensolum
Project/Site: PLU 27 BD 163H

Job ID: 890-4368-1
SDG: 03C1558134

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

**Lab Sample ID: MB 880-49655/5-A**
**Matrix: Solid**
**Analysis Batch: 50000**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 49655**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/27/23 15:35 | 03/31/23 12:20 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/27/23 15:35 | 03/31/23 12:20 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/27/23 15:35 | 03/31/23 12:20 | 1 |
| m-Xylene & p-Xylene | <0.00400 | U | 0.00400 | | mg/Kg | | 03/27/23 15:35 | 03/31/23 12:20 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/27/23 15:35 | 03/31/23 12:20 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 03/27/23 15:35 | 03/31/23 12:20 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *109* | | *70 - 130* | *03/27/23 15:35* | *03/31/23 12:20* | *1* |
| *1,4-Difluorobenzene (Surr)* | *81* | | *70 - 130* | *03/27/23 15:35* | *03/31/23 12:20* | *1* |

**Lab Sample ID: LCS 880-49655/1-A**
**Matrix: Solid**
**Analysis Batch: 50000**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 49655**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.09465 | | mg/Kg | | 95 | 70 - 130 | | |
| Toluene | | | 0.100 | 0.1032 | | mg/Kg | | 103 | 70 - 130 | | |
| Ethylbenzene | | | 0.100 | 0.09947 | | mg/Kg | | 99 | 70 - 130 | | |
| m-Xylene & p-Xylene | | | 0.200 | 0.2044 | | mg/Kg | | 102 | 70 - 130 | | |
| o-Xylene | | | 0.100 | 0.1016 | | mg/Kg | | 102 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *103* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *90* | | *70 - 130* |

**Lab Sample ID: LCSD 880-49655/2-A**
**Matrix: Solid**
**Analysis Batch: 50000**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 49655**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.09685 | | mg/Kg | | 97 | 70 - 130 | 2 | 35 |
| Toluene | | | 0.100 | 0.1004 | | mg/Kg | | 100 | 70 - 130 | 3 | 35 |
| Ethylbenzene | | | 0.100 | 0.09407 | | mg/Kg | | 94 | 70 - 130 | 6 | 35 |
| m-Xylene & p-Xylene | | | 0.200 | 0.1922 | | mg/Kg | | 96 | 70 - 130 | 6 | 35 |
| o-Xylene | | | 0.100 | 0.09803 | | mg/Kg | | 98 | 70 - 130 | 4 | 35 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *107* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *93* | | *70 - 130* |

**Lab Sample ID: 880-26270-A-24-C MS**
**Matrix: Solid**
**Analysis Batch: 50000**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 49655**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.0998 | 0.08771 | | mg/Kg | | 87 | 70 - 130 | | |
| Toluene | <0.00200 | U | 0.0998 | 0.09080 | | mg/Kg | | 91 | 70 - 130 | | |

# QC Sample Results

Client: Ensolum
Project/Site: PLU 27 BD 163H

Job ID: 890-4368-1
SDG: 03C1558134

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

**Lab Sample ID: 880-26270-A-24-C MS**
**Matrix: Solid**
**Analysis Batch: 50000**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 49655**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | <0.00200 | U | 0.0998 | 0.08553 | | mg/Kg | | 86 | 70 - 130 |
| m-Xylene & p-Xylene | <0.00401 | U | 0.200 | 0.1741 | | mg/Kg | | 87 | 70 - 130 |
| o-Xylene | <0.00200 | U | 0.0998 | 0.08713 | | mg/Kg | | 87 | 70 - 130 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *101* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *93* | | *70 - 130* |

**Lab Sample ID: 880-26270-A-24-D MSD**
**Matrix: Solid**
**Analysis Batch: 50000**

**Client Sample ID: Matrix Spike Duplicate**
**Prep Type: Total/NA**
**Prep Batch: 49655**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.100 | 0.08920 | | mg/Kg | | 89 | 70 - 130 | 2 | 35 |
| Toluene | <0.00200 | U | 0.100 | 0.09214 | | mg/Kg | | 92 | 70 - 130 | 1 | 35 |
| Ethylbenzene | <0.00200 | U | 0.100 | 0.08622 | | mg/Kg | | 86 | 70 - 130 | 1 | 35 |
| m-Xylene & p-Xylene | <0.00401 | U | 0.200 | 0.1757 | | mg/Kg | | 88 | 70 - 130 | 1 | 35 |
| o-Xylene | <0.00200 | U | 0.100 | 0.08782 | | mg/Kg | | 88 | 70 - 130 | 1 | 35 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *99* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *92* | | *70 - 130* |

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

**Lab Sample ID: MB 880-49457/1-A**
**Matrix: Solid**
**Analysis Batch: 49559**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 49457**

| 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 | | 03/24/23 16:55 | 03/27/23 08:47 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | mg/Kg | | 03/24/23 16:55 | 03/27/23 08:47 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | mg/Kg | | 03/24/23 16:55 | 03/27/23 08:47 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *120* | | *70 - 130* | *03/24/23 16:55* | *03/27/23 08:47* | *1* |
| *o-Terphenyl* | *118* | | *70 - 130* | *03/24/23 16:55* | *03/27/23 08:47* | *1* |

**Lab Sample ID: LCS 880-49457/2-A**
**Matrix: Solid**
**Analysis Batch: 49559**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 49457**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | 1000 | 1022 | | mg/Kg | | 102 | 70 - 130 |
| Diesel Range Organics (Over C10-C28) | 1000 | 876.8 | | mg/Kg | | 88 | 70 - 130 |

Eurofins Carlsbad

# QC Sample Results

Client: Ensolum
Project/Site: PLU 27 BD 163H

Job ID: 890-4368-1
SDG: 03C1558134

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

**Lab Sample ID: LCS 880-49457/2-A**
**Matrix: Solid**
**Analysis Batch: 49559**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 49457**

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane | 93 | | 70 - 130 |
| o-Terphenyl | 83 | | 70 - 130 |

**Lab Sample ID: LCSD 880-49457/3-A**
**Matrix: Solid**
**Analysis Batch: 49559**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 49457**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 861.9 | | mg/Kg | | 86 | 70 - 130 | 17 | 20 |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 864.3 | | mg/Kg | | 86 | 70 - 130 | 1 | 20 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane | 90 | | 70 - 130 |
| o-Terphenyl | 81 | | 70 - 130 |

**Lab Sample ID: 890-4361-A-1-B MS**
**Matrix: Solid**
**Analysis Batch: 49559**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 49457**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 997 | 1038 | | mg/Kg | | 100 | 70 - 130 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 997 | 721.8 | | mg/Kg | | 70 | 70 - 130 |

| Surrogate | MS %Recovery | MS Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane | 108 | | 70 - 130 |
| o-Terphenyl | 87 | | 70 - 130 |

**Lab Sample ID: 890-4361-A-1-C MSD**
**Matrix: Solid**
**Analysis Batch: 49559**

**Client Sample ID: Matrix Spike Duplicate**
**Prep Type: Total/NA**
**Prep Batch: 49457**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 998 | 1062 | | mg/Kg | | 102 | 70 - 130 | 2 | 20 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 998 | 727.0 | | mg/Kg | | 70 | 70 - 130 | 1 | 20 |

| Surrogate | MSD %Recovery | MSD Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane | 108 | | 70 - 130 |
| o-Terphenyl | 87 | | 70 - 130 |

# QC Sample Results

Client: Ensolum
Project/Site: PLU 27 BD 163H

Job ID: 890-4368-1
SDG: 03C1558134

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 880-49798/1-A**
**Matrix: Solid**
**Analysis Batch: 49899**

**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 | | | 03/29/23 13:20 | 1 |

**Lab Sample ID: LCS 880-49798/2-A**
**Matrix: Solid**
**Analysis Batch: 49899**

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

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 250 | 235.8 | | mg/Kg | | 94 | 90 - 110 | | |

**Lab Sample ID: LCSD 880-49798/3-A**
**Matrix: Solid**
**Analysis Batch: 49899**

**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 | 237.6 | | mg/Kg | | 95 | 90 - 110 | 1 | 20 |

**Lab Sample ID: 890-4368-2 MS**
**Matrix: Solid**
**Analysis Batch: 49899**

**Client Sample ID: SS08**
**Prep Type: Soluble**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 386 | | 248 | 614.9 | | mg/Kg | | 93 | 90 - 110 | | |

**Lab Sample ID: 890-4368-2 MSD**
**Matrix: Solid**
**Analysis Batch: 49899**

**Client Sample ID: SS08**
**Prep Type: Soluble**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 386 | | 248 | 617.8 | | mg/Kg | | 94 | 90 - 110 | 0 | 20 |

# QC Association Summary

Client: Ensolum
Project/Site: PLU 27 BD 163H

Job ID: 890-4368-1
SDG: 03C1558134

## GC VOA

### Prep Batch: 49655

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-4368-1 | SS07 | Total/NA | Solid | 5035 | |
| 890-4368-2 | SS08 | Total/NA | Solid | 5035 | |
| MB 880-49655/5-A | Method Blank | Total/NA | Solid | 5035 | |
| LCS 880-49655/1-A | Lab Control Sample | Total/NA | Solid | 5035 | |
| LCSD 880-49655/2-A | Lab Control Sample Dup | Total/NA | Solid | 5035 | |
| 880-26270-A-24-C MS | Matrix Spike | Total/NA | Solid | 5035 | |
| 880-26270-A-24-D MSD | Matrix Spike Duplicate | Total/NA | Solid | 5035 | |

### Analysis Batch: 50000

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-4368-1 | SS07 | Total/NA | Solid | 8021B | 49655 |
| 890-4368-2 | SS08 | Total/NA | Solid | 8021B | 49655 |
| MB 880-49655/5-A | Method Blank | Total/NA | Solid | 8021B | 49655 |
| LCS 880-49655/1-A | Lab Control Sample | Total/NA | Solid | 8021B | 49655 |
| LCSD 880-49655/2-A | Lab Control Sample Dup | Total/NA | Solid | 8021B | 49655 |
| 880-26270-A-24-C MS | Matrix Spike | Total/NA | Solid | 8021B | 49655 |
| 880-26270-A-24-D MSD | Matrix Spike Duplicate | Total/NA | Solid | 8021B | 49655 |

### Analysis Batch: 50215

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-4368-1 | SS07 | Total/NA | Solid | Total BTEX | |
| 890-4368-2 | SS08 | Total/NA | Solid | Total BTEX | |

## GC Semi VOA

### Prep Batch: 49457

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-4368-1 | SS07 | Total/NA | Solid | 8015NM Prep | |
| 890-4368-2 | SS08 | Total/NA | Solid | 8015NM Prep | |
| MB 880-49457/1-A | Method Blank | Total/NA | Solid | 8015NM Prep | |
| LCS 880-49457/2-A | Lab Control Sample | Total/NA | Solid | 8015NM Prep | |
| LCSD 880-49457/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015NM Prep | |
| 890-4361-A-1-B MS | Matrix Spike | Total/NA | Solid | 8015NM Prep | |
| 890-4361-A-1-C MSD | Matrix Spike Duplicate | Total/NA | Solid | 8015NM Prep | |

### Analysis Batch: 49559

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-4368-1 | SS07 | Total/NA | Solid | 8015B NM | 49457 |
| 890-4368-2 | SS08 | Total/NA | Solid | 8015B NM | 49457 |
| MB 880-49457/1-A | Method Blank | Total/NA | Solid | 8015B NM | 49457 |
| LCS 880-49457/2-A | Lab Control Sample | Total/NA | Solid | 8015B NM | 49457 |
| LCSD 880-49457/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015B NM | 49457 |
| 890-4361-A-1-B MS | Matrix Spike | Total/NA | Solid | 8015B NM | 49457 |
| 890-4361-A-1-C MSD | Matrix Spike Duplicate | Total/NA | Solid | 8015B NM | 49457 |

### Analysis Batch: 49693

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-4368-1 | SS07 | Total/NA | Solid | 8015 NM | |
| 890-4368-2 | SS08 | Total/NA | Solid | 8015 NM | |

# QC Association Summary

Client: Ensolum
Project/Site: PLU 27 BD 163H

Job ID: 890-4368-1
SDG: 03C1558134

## HPLC/IC

### Leach Batch: 49798

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-4368-1 | SS07 | Soluble | Solid | DI Leach | |
| 890-4368-2 | SS08 | Soluble | Solid | DI Leach | |
| MB 880-49798/1-A | Method Blank | Soluble | Solid | DI Leach | |
| LCS 880-49798/2-A | Lab Control Sample | Soluble | Solid | DI Leach | |
| LCSD 880-49798/3-A | Lab Control Sample Dup | Soluble | Solid | DI Leach | |
| 890-4368-2 MS | SS08 | Soluble | Solid | DI Leach | |
| 890-4368-2 MSD | SS08 | Soluble | Solid | DI Leach | |

### Analysis Batch: 49899

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-4368-1 | SS07 | Soluble | Solid | 300.0 | 49798 |
| 890-4368-2 | SS08 | Soluble | Solid | 300.0 | 49798 |
| MB 880-49798/1-A | Method Blank | Soluble | Solid | 300.0 | 49798 |
| LCS 880-49798/2-A | Lab Control Sample | Soluble | Solid | 300.0 | 49798 |
| LCSD 880-49798/3-A | Lab Control Sample Dup | Soluble | Solid | 300.0 | 49798 |
| 890-4368-2 MS | SS08 | Soluble | Solid | 300.0 | 49798 |
| 890-4368-2 MSD | SS08 | Soluble | Solid | 300.0 | 49798 |

# Lab Chronicle

Client: Ensolum
Project/Site: PLU 27 BD 163H

Job ID: 890-4368-1
SDG: 03C1558134

## Client Sample ID: SS07

**Date Collected: 03/20/23 11:30**
**Date Received: 03/20/23 14:34**

## Lab Sample ID: 890-4368-1

**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 | 49655 | 03/27/23 15:35 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 50000 | 03/31/23 17:14 | SM | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 50215 | 04/03/23 15:17 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 49693 | 03/28/23 09:09 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 49457 | 03/24/23 16:55 | AJ | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 49559 | 03/27/23 17:11 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.98 g | 50 mL | 49798 | 03/29/23 09:38 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 1 | 50 mL | 50 mL | 49899 | 03/29/23 14:33 | SMC | EET MID |

## Client Sample ID: SS08

**Date Collected: 03/20/23 11:35**
**Date Received: 03/20/23 14:34**

## Lab Sample ID: 890-4368-2

**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 | 49655 | 03/27/23 15:35 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 50000 | 03/31/23 17:35 | SM | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 50215 | 04/03/23 15:17 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 49693 | 03/28/23 09:09 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.00 g | 10 mL | 49457 | 03/24/23 16:55 | AJ | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 49559 | 03/27/23 17:33 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.03 g | 50 mL | 49798 | 03/29/23 09:38 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 1 | 50 mL | 50 mL | 49899 | 03/29/23 14:38 | 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: PLU 27 BD 163H

Job ID: 890-4368-1
SDG: 03C1558134

## Laboratory: Eurofins Midland

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

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

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

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

# Method Summary

Client: Ensolum
Project/Site: PLU 27 BD 163H

Job ID: 890-4368-1
SDG: 03C1558134

| 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: PLU 27 BD 163H

Job ID: 890-4368-1
SDG: 03C1558134

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Depth |
|---|---|---|---|---|---|
| 890-4368-1 | SS07 | Solid | 03/20/23 11:30 | 03/20/23 14:34 | 0.5 |
| 890-4368-2 | SS08 | Solid | 03/20/23 11:35 | 03/20/23 14:34 | 0.5 |

eurofins | Environment Testing Xenco

# Chain of Custody

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

Work Order No: _____

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| | | | |
|---|---|---|---|
| Project Manager: | Tacoma Morrissey | Bill to: (if different) | Garrett Green |
| Company Name: | Ensolum | Company Name: | XTO Energy |
| Address: | 3122 National Parks Hwy | Address: | 3104 E. Green St |
| City, State ZIP: | Carlsbad, NM 88220 | City, State ZIP: | Carlsbad, NM 88220 |
| Phone: | 303-887-2946 Email: | 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: | PLU 27 BD 1H03H | Turn Around | |
| Project Number: | 03C-155-8134 | ☒ Routine ☐ Rush | |
| Project Location: | 32.10159, -103.87212 | Due Date: | 5 days |
| Sampler's Name: | Mariana O'Dell | TAT starts the day received by the lab, if received by 4:30pm | |
| PO #: | | | |

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

ANALYSIS REQUEST

| Sample Identification | Matrix | Date Sampled | Time Sampled | Depth | Grab/ Comp | # of Cont | Pres. Code | Parameters: Chlorides | TPH | BTEX |
|---|---|---|---|---|---|---|---|---|---|---|
| SS07 | S | 03/20/23 | 11:30 | 0.5' | G | 1 | | ↓ | ↓ | ↓ |
| SS08 | S | ↓ | 11:35 | ↓ | ↓ | 1 | | ↓ | ↓ | ↓ |

890-4368 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 #:
nAPP2226337852

Cost center:
1606703100I

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 | Mariana O'Dell | Amanda Stutz | 3/20/23 1434 | | | |
| 3 | | | | 4 | | |
| 5 | | | | 6 | | |

Revised Date: 08/25/2020 Rev. 2020.2

# Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4368-1
SDG Number: 03C1558134

**Login Number: 4368**
**List Number: 1**
**Creator: Stutzman, Amanda**

**List Source: Eurofins Carlsbad**

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

# Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4368-1
SDG Number: 03C1558134

**Login Number: 4368**
**List Number: 2**
**Creator: Rodriguez, Leticia**

**List Source: Eurofins Midland**
**List Creation: 03/22/23 11:06 AM**

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

ENSOLUM

# APPENDIX E

## NMOCD Notifications

| | |
|---|---|
| **From:** | Hamlet, Robert, EMNRD |
| **To:** | Collins, Melanie |
| **Cc:** | DelawareSpills /SM; Green, Garrett J; Ashley Ager; Tacoma Morrissey; Bratcher, Michael, EMNRD; Nobui, Jennifer, EMNRD; Harimon, Jocelyn, EMNRD |
| **Subject:** | XTO Extension Request - PLU 27 Brushy Draw 163H – Incident Number nAPP2226337852 |
| **Date:** | Wednesday, November 30, 2022 3:48:47 PM |
| **Attachments:** | image003.png |

[ **EXTERNAL EMAIL**]

RE: Incident #**NAPP2226337852**

**Melanie**,

Your request for an extension to **March 6th, 2023** is approved. Please include this e-mail correspondence in the remediation and/or closure report.

**Robert Hamlet** ● Environmental Specialist - Advanced
Environmental Bureau
EMNRD - Oil Conservation Division
506 W. Texas Ave.| Artesia, NM 88210
575.909.0302 | robert.hamlet@state.nm.us
http://www.emnrd.state.nm.us/OCD/

**From:** Collins, Melanie <melanie.collins@exxonmobil.com>
**Sent:** Wednesday, November 30, 2022 11:46 AM
**To:** Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>
**Cc:** DelawareSpills /SM <DelawareSpills@exxonmobil.com>; Green, Garrett J <garrett.green@exxonmobil.com>; Ashley Ager <aager@ensolum.com>; Tacoma Morrissey <tmorrissey@ensolum.com>
**Subject:** [EXTERNAL] XTO Extension Request - PLU 27 Brushy Draw 163H – Incident Number nAPP2226337852

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

All,

**PLU 27 Brushy Draw 163H – Incident Number nAPP2226337852**
XTO is requesting an extension for the current deadline of December 6, 2022 for submitting a

remediation work plan or closure request required in 19.15.29.12.B.(1) NMAC at the PLU 27 Brushy Draw 163H (Incident Number nAPP2226337852). The release occurred on September 7, 2022 during frac operations. Site assessment and remediation activities can not be completed until the frac operations are complete and the Site can be safely accessed. XTO operations will continue to provide status updates and will alert the remediation team once the Site is cleared for remediation activities. In order to complete remediation activities and submit a remediation work plan or closure request, XTO is requesting a 90-day extension until March 6, 2023.

Thank you,

*Melanie Collins*

Environmental Technician
melanie.collins@exxonmobil.com
432-556-3756

## Tacoma Morrissey

**From:** Green, Garrett J <garrett.green@exxonmobil.com>
**Sent:** Thursday, January 26, 2023 8:17 AM
**To:** ocd.enviro@emnrd.nm.gov; Bratcher, Michael, EMNRD; Hamlet, Robert, EMNRD; Harimon, Jocelyn, EMNRD
**Cc:** DelawareSpills /SM; Tacoma Morrissey
**Subject:** XTO - Sampling Notification (Week of 1/30/23 - 2/3/23)

[ **EXTERNAL EMAIL**]

All,

XTO plans to complete final sampling activities at the following sites the week of Jan 30, 2023.

- PLU 27 BD 163H / nAPP2226337852
- PLU 16 TWR 126H / nAPP2233339417
- Tiger Compressor Station / nAPP2235638568
- PLU C 2 Recycle Facility / nAPP2235646436

Thank you,

**Garrett Green**
Environmental Coordinator
Delaware Business Unit
(575) 200-0729
Garrett.Green@ExxonMobil.com

XTO Energy, Inc.
3104 E. Greene Street | Carlsbad, NM 88220 | M: (575)200-0729

| | |
|---|---|
| **From:** | Hamlet, Robert, EMNRD |
| **To:** | Green, Garrett J |
| **Cc:** | DelawareSpills /SM; Tacoma Morrissey; Bratcher, Michael, EMNRD; Nobui, Jennifer, EMNRD; Harimon, Jocelyn, EMNRD |
| **Subject:** | (Final Extension) - XTO - PLU 27 Brushy Draw 163H – Incident Number nAPP2226337852 |
| **Date:** | Friday, March 3, 2023 10:19:09 AM |

[ **EXTERNAL EMAIL**]

RE: Incident #**NAPP2226337852**

**Garrett**,

Your request for an extension to **May 5th, 2023** is approved. This will be the **final extension** for this release. Site assessment and remediation activities could not be completed until the frac operations were complete and the Site could be safely accessed. Please include this e-mail correspondence in the remediation and/or closure report.

**Robert Hamlet** ● Environmental Specialist - Advanced
Environmental Bureau
EMNRD - Oil Conservation Division
506 W. Texas Ave.| Artesia, NM 88210
575.909.0302 | robert.hamlet@state.nm.us
http://www.emnrd.state.nm.us/OCD/

**From:** Green, Garrett J <garrett.green@exxonmobil.com>
**Sent:** Friday, March 3, 2023 8:28 AM
**To:** Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@emnrd.nm.gov>
**Cc:** DelawareSpills /SM <DelawareSpills@exxonmobil.com>; Tacoma Morrissey <tmorrissey@ensolum.com>
**Subject:** [EXTERNAL] PLU 27 Brushy Draw 163H – Incident Number nAPP2226337852

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

All,

**PLU 27 Brushy Draw 163H – Incident Number nAPP2226337852**
XTO is requesting an extension for the current deadline of March 6, 2023 for submitting a

remediation work plan or closure request required in 19.15.29.12.B.(1) NMAC at the PLU 27 Brushy Draw 163H (Incident Number nAPP2226337852). The release occurred on September 7, 2022 during frac operations. Site assessment and remediation activities could not be completed until the frac operations were complete and the Site could be safely accessed. As soon as the Site was accessible, in late January 2023, XTO completed Site assessment and delineation activities to assess the release extent. All remediation activities are complete, however, XTO has scheduled drilling a soil boring to confirm depth to groundwater in the region. Due to permitting and drillers schedules, the soil boring is not scheduled until late March. As such, in order to complete the soil boring and submit a remediation work plan or closure request, XTO is requesting a 60-day extension until May 5, 2023.

Thank you,

**Garrett Green**
Environmental Coordinator
Delaware Business Unit
(575) 200-0729
Garrett.Green@ExxonMobil.com

XTO Energy, Inc.
3104 E. Greene Street | Carlsbad, NM 88220 | M: (575)200-0729

## Tacoma Morrissey

**From:** Green, Garrett J <garrett.green@exxonmobil.com>
**Sent:** Thursday, March 16, 2023 10:53 AM
**To:** Tacoma Morrissey; Ben Belill
**Cc:** DelawareSpills /SM
**Subject:** FW: XTO - Sampling Notification (Week of 3/20/23 - 3/24/23)

[ **EXTERNAL EMAIL**]

---

**From:** Green, Garrett J
**Sent:** Thursday, March 16, 2023 9:52 AM
**To:** 'Enviro, OCD, EMNRD' <OCD.Enviro@emnrd.nm.gov>; 'Bratcher, Michael, EMNRD' <mike.bratcher@emnrd.nm.gov>; 'Harimon, Jocelyn, EMNRD' <Jocelyn.Harimon@emnrd.nm.gov>; 'Hamlet, Robert, EMNRD' <Robert.Hamlet@emnrd.nm.gov>
**Subject:** XTO - Sampling Notification (Week of 3/20/23 - 3/24/23)

All,

XTO plans to complete final sampling activities at the additional site the week of Mar 20, 2023.

-
- PLU 27 BD 163 / nAPP2226337852
- PLU CVX JV BS 008H / NAB1602154960
- PLU 420H / nAB1834656162
- Perla Verde 31 State battery/ nAPP2303444414
- BEU Hackberry / nAB1726335399
- Remuda 500 CTB / nAPP2303854000 & nAPP2306544797
- Indian Deep Com 7/ NAPP2301152626
- Nash Unit 36 / nAPP2224236187

Thank you,

**Garrett Green**
Environmental Coordinator
Delaware Business Unit
(575) 200-0729
Garrett.Green@ExxonMobil.com

XTO Energy, Inc.
3104 E. Greene Street | Carlsbad, NM 88220 | M: (575)200-0729

ENSOLUM

# APPENDIX F

## SDS for Friction Reducer

PFP INDUSTRIES

# SAFETY DATA SHEET

**Issuing Date** 01-Aug-2019 **Revision Date** 01-Aug-2019 **Revision Number** 1

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Product identifier**

**Product Name** POLYglide Xcel-200

**Other means of identification**

**Product Code(s)** 10497

**Synonyms** None

**Recommended use of the chemical and restrictions on use**

**Recommended Use** No information available

**Uses advised against** No information available

**Details of the supplier of the safety data sheet**

**Supplier Address**
PfP Industries
29738 Goynes Rd.
Katy, TX 77493

**Manufacturer Address**
PfP Industries
29738 Goynes Rd.
Katy, TX 77493

**Emergency telephone number**

**Company Phone Number** 281-371-2000

**Emergency Telephone** Chemtrec 1-800-424-9300

## 2. HAZARDS IDENTIFICATION

**Classification**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| | |
|---|---|
| Flammable liquids | Category 4 |

**Hazards not otherwise classified (HNOC)**
Not applicable

**Label elements**

**Warning**

Combustible liquid

| **Appearance** Opaque | **Physical state** Liquid | **Odor** Mineral Oil |
|---|---|---|

**Precautionary Statements - Prevention**
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
Wear protective gloves/protective clothing/eye protection/face protection

**Precautionary Statements - Response**

In case of fire: Use CO2, dry chemical, or foam for extinction

**Precautionary Statements - Storage**
Store in a well-ventilated place. Keep cool

**Precautionary Statements - Disposal**
Dispose of contents/container to an approved waste disposal plant

**Other Information**
May be harmful in contact with skin
Harmful to aquatic life

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Substance**

| Chemical name | CAS No | Weight-% | Trade secret |
|---|---|---|---|
| Petroleum distillates, hydrotreated light | 64742-47-8 | 40 - 70 | |

*The exact percentage (concentration) of composition has been withheld as a trade secret.

## 4. FIRST AID MEASURES

**Description of first aid measures**

**Inhalation** Remove to fresh air.

**Eye contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing.

**Skin contact** Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

**Ingestion** Clean mouth with water and drink afterwards plenty of water.

**Self-protection of the first aider** Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Wear personal protective clothing (see section 8).

**Most important symptoms and effects, both acute and delayed**

**Symptoms** No information available.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media** Dry chemical. Carbon dioxide (CO2). Water spray. Alcohol resistant foam.

**Unsuitable extinguishing media** CAUTION: Use of water spray when fighting fire may be inefficient.

**Specific hazards arising from the chemical** Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray.

**Explosion data**
**Sensitivity to Mechanical Impact** None.
**Sensitivity to Static Discharge** None.

**Special protective equipment for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Take precautionary measures against static discharges. Do not touch or walk through spilled material.

**Environmental precautions**

**Environmental precautions** Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so.

**Methods and material for containment and cleaning up**

**Methods for containment** Stop leak if you can do it without risk. Do not touch or walk through spilled material. Dike far ahead of liquid spill for later disposal.

**Methods for cleaning up** Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

## 7. HANDLING AND STORAGE

**Precautions for safe handling**

**Advice on safe handling** Use personal protection equipment. Do not breathe vapor or mist. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Use with local exhaust ventilation.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Store in accordance with the particular national regulations. Store in accordance with local regulations.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters**

**Exposure Limits** The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

**Appropriate engineering controls**

**Engineering controls** Showers
Eyewash stations
Ventilation systems.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Tight sealing safety goggles.

**Skin and body protection** No special protective equipment required.

**Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**General hygiene considerations** Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

| | |
|---|---|
| **Physical state** | Liquid |
| **Appearance** | Opaque |
| **Color** | Milky white to yellow |
| **Odor** | Mineral Oil |
| **Odor threshold** | No information available |

| Property | Values | Remarks • Method |
|---|---|---|
| **pH** | No data available | None known |
| **Melting point / freezing point** | No data available | None known |
| **Boiling point / boiling range** | No data available | None known |
| **Flash point** | >= 67 °C / 153 °F | |
| **Evaporation rate** | No data available | None known |
| **Flammability (solid, gas)** | No data available | None known |
| **Flammability Limit in Air** | | None known |
| **Upper flammability limit:** | No data available | |
| **Lower flammability limit:** | No data available | |
| **Vapor pressure** | No data available | None known |
| **Vapor density** | No data available | None known |
| **Relative density** | 0.97 - 1.03 | |
| **Water solubility** | Miscible in water | |
| **Solubility in other solvents** | No data available | None known |
| **Partition coefficient** | No data available | None known |
| **Autoignition temperature** | No data available | None known |
| **Decomposition temperature** | No data available | None known |
| **Kinematic viscosity** | ≥150 mm²/s | |
| **Dynamic viscosity** | No data available | None known |
| **Explosive properties** | No information available | |
| **Oxidizing properties** | No information available | |

**Other Information**

| | |
|---|---|
| **Softening point** | No information available |
| **Molecular weight** | No information available |
| **VOC Content (%)** | No information available |
| **Liquid Density** | No information available |
| **Bulk density** | No information available |

## 10. STABILITY AND REACTIVITY

| | |
|---|---|
| **Reactivity** | No information available. |
| **Chemical stability** | Stable under normal conditions. |
| **Possibility of hazardous reactions** | None under normal processing. |
| **Conditions to avoid** | Heat, flames and sparks. |
| **Incompatible materials** | None known based on information supplied. |
| **Hazardous decomposition products** | None known based on information supplied. |

## 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

**Product Information**

| | |
|---|---|
| **Inhalation** | Specific test data for the substance or mixture is not available. |
| **Eye contact** | Specific test data for the substance or mixture is not available. |
| **Skin contact** | Specific test data for the substance or mixture is not available. |
| **Ingestion** | Specific test data for the substance or mixture is not available. |

**Symptoms related to the physical, chemical and toxicological characteristics**

**Symptoms** No information available.

**Numerical measures of toxicity**

**Acute toxicity**

**The following values are calculated based on chapter 3.1 of the GHS document.**

| | |
|---|---|
| **ATEmix (oral)** | 5,005.00 mg/kg |
| **ATEmix (dermal)** | 2,002.00 mg/kg |
| **ATEmix (inhalation-dust/mist)** | 5.20 mg/l |

**Component Information**

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---|---|---|---|
| Petroleum distillates, hydrotreated light 64742-47-8 | > 5000 mg/kg ( Rat ) | > 2000 mg/kg ( Rabbit ) | > 5.2 mg/L ( Rat ) 4 h |

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation** No information available.

**Serious eye damage/eye irritation** No information available.

**Respiratory or skin sensitization** No information available.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** No information available.

**Reproductive toxicity** No information available.

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Aspiration hazard** No information available.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

| Chemical name | Algae/aquatic plants | Fish | Toxicity to microorganisms | Crustacea |
|---|---|---|---|---|
| Petroleum distillates, hydrotreated light 64742-47-8 | - | 2.4: 96 h Oncorhynchus mykiss mg/L LC50 static 45: 96 h Pimephales promelas mg/L LC50 flow-through 2.2: 96 h Lepomis macrochirus mg/L LC50 static | - | 4720: 96 h Den-dronereides heteropoda mg/L LC50 |

**Persistence and degradability** No information available.

**Bioaccumulation** There is no data for this product.

**Other adverse effects** No information available.

## 13. DISPOSAL CONSIDERATIONS

**Waste treatment methods**

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

## 14. TRANSPORT INFORMATION

**DOT** Not regulated. Product does not sustain combustion (49 CFR 173.120(b)(3))

## 15. REGULATORY INFORMATION

**International Inventories**

| | |
|---|---|
| **TSCA** | Complies |
| **DSL/NDSL** | Complies |
| **EINECS/ELINCS** | Complies |
| **ENCS** | Does not comply |
| **IECSC** | Complies |
| **KECL** | Complies |

| | |
|---|---|
| **PICCS** | Complies |
| **AICS** | Complies |

**Legend:**
**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
**ENCS** - Japan Existing and New Chemical Substances
**IECSC** - China Inventory of Existing Chemical Substances
**KECL** - Korean Existing and Evaluated Chemical Substances
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances
**AICS** - Australian Inventory of Chemical Substances

**US Federal Regulations**

**SARA 313**
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

| | |
|---|---|
| **Acute health hazard** | No |
| **Chronic Health Hazard** | No |
| **Fire hazard** | Yes |
| **Sudden release of pressure hazard** | No |
| **Reactive Hazard** | No |

**CWA (Clean Water Act)**
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**CERCLA**
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**US State Regulations**

**California Proposition 65**
This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

**US State Regulations** This product does not contain any substances regulated by state right-to-know regulations

**U.S. EPA Label Information**

**EPA Pesticide Registration Number** Not applicable

## 16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| NFPA | Health hazards | 2 | Flammability | 2 | Instability | 0 | Physical and chemical properties - |
| HMIS | Health hazards | 2 | Flammability | 2 | Physical hazards | 0 | Personal protection X |

| | |
|---|---|
| **Issuing Date** | 01-Aug-2019 |
| **Revision Date** | 01-Aug-2019 |
| **Revision Note** | No information available. |

**Disclaimer**

**The data supplied herein is for use only in connection with occupational safety and health. The information provided in this Safety Data Sheet is believed to be correct as of the date issued. Updates to this information may be obtained by contacting (either reference contact location or website). PfP Industries MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. This information is not meant to be an all-inclusive document on worldwide hazard communication regulations. Each user of the material described herein must evaluate the conditions of use and design, many of which will be solely within the user's knowledge and control, and the appropriate protective actions, including proper notification and training of employees, necessary to prevent employee exposures, property damage or release to the environment.**

**End of Safety Data Sheet**

**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 213073

## CONDITIONS

| | |
|---|---|
| Operator:<br>XTO ENERGY, INC<br>6401 Holiday Hill Road<br>Midland, TX 79707 | OGRID:<br>5380 |
| | Action Number:<br>213073 |
| | Action Type:<br>[C-141] Release Corrective Action (C-141) |

**CONDITIONS**

| Created By | Condition | Condition Date |
|---|---|---|
| rhamlet | We have received your closure report and final C-141 for Incident #NAPP2226337852 PLU 27 BRUSHY DRAW 163H, thank you. This closure is approved. | 9/20/2023 |