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 | NAPP2322348507 |
| District RP | |
| Facility ID | |
| Application ID | |

# Release Notification

## Responsible Party

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

## Location of Release Source

Latitude 32.346467 Longitude -103.832156
*(NAD 83 in decimal degrees to 5 decimal places)*

| | |
|---|---|
| Site Name James Ranch Unit 19 Tank Battery | Site Type Tank Battery |
| Date Release Discovered 07/30/2023 | API# *(if applicable)* |

| Unit Letter | Section | Township | Range | County |
|---|---|---|---|---|
| J | 36 | 22S | 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) 30.00 | Volume Recovered (bbls) 30.00 |
| ☐ 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) | Volume/Weight Released (provide units) | Volume/Weight Recovered (provide units) |

Cause of Release: Fluids released to impermeable containment due to a failed check valve on the proving box of the LACT unit. Vacuum truck was dispatched and recovered all fluids from the LACT and tank containments. A third party contractor has been retained for remediation purposes.

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | NAPP2322348507 |
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| | |
|---|---|
| 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>A equal to or greater than 25 barrels. |

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Yes, by Melanie Collins to ocd.enviro@emnrd.nm.gov, Robert.Hamlet@emnrd.nm.gov, mike.bratcher@emnrd.nm.gov, and Jocelyn.Harimon@emnrd.nm.gov on 07/31/2023 via email.

## Initial Response

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

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

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

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

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

Printed Name: Garrett Green
Title: SSHE Coordinator
Signature: 
Date: 8/11/2023
email: garrett.green@exxonmobil.com
Telephone: 575-200-0729

**OCD Only**

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

| | | |
|---|---|---|
| **Location:** | **James Ranch Unit 19 Tank Battery** | |
| **Spill Date:** | **7/30/2023** | |
| **Area 1** | | |
| Approximate Area = | 168.43 | cu.ft. |
| VOLUME OF LEAK | | |
| Total Crude Oil = | 30.00 | bbls |
| Total Produced Water = | 0.00 | bbls |
| **TOTAL VOLUME OF LEAK** | | |
| **Total Crude Oil =** | **30.00** | **bbls** |
| **Total Produced Water =** | **0.00** | **bbls** |
| **TOTAL VOLUME RECOVERED** | | |
| **Total Crude Oil =** | **30.00** | **bbls** |
| **Total Produced Water =** | **0.00** | **bbls** |

| | |
|---|---|
| Incident ID | NAPP2322348507 |
| District RP | |
| Facility ID | |
| Application ID | |

# Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | NAPP2322348507 |
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I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Garrett Green Title: HSSE Coordinator

Signature:  Date: Oct 26 2023

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

**OCD Only**

Received by: Shelly Wells Date: 10/26/2023

| | |
|---|---|
| Incident ID | NAPP2322348507 |
| 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: HSSE Coordinator

Signature: Date: Oct 26 2023

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

**OCD Only**

Received by: Shelly Wells Date: 10/26/2023

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

October 25, 2023

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

**Re: Closure Request**
**James Ranch Unit 19 Tank Battery**
**Incident Number NAPP2322348507**
**Eddy County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared this *Closure Request* to document assessment and soil sampling activities performed at the James Ranch Unit 19 Tank Battery (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 crude oil within lined containment at the Site. Based on field observations, field screening activities, and laboratory analytical results, XTO is submitting this *Closure Request* and requesting closure for Incident Number NAPP2322348507.

## SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit J, Section 36, Township 22 South, Range 30 East, in Eddy County, New Mexico (32.346467°, -103.832156°) and is associated with oil and gas exploration and production operations on New Mexico State Trust Land managed by the New Mexico State Land Office (NMSLO).

On July 30, 2023, a failed check valve on the proving box of the Lease Automatic Custody Transfer (LACT) unit caused 30.0 barrels (bbls) of crude oil to release into the lined containment. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; all 30 bbls of crude oil were recovered from within the lined containment. A liner integrity inspection was conducted by XTO personnel following the fluid recovery and upon inspection, the liner was determined to be insufficient. XTO reported the release immediately to the New Mexico Oil Conservation Division (NMOCD) via email on July 31, 2023, and subsequently submitted a Release Notification Form C-141 (Form C-141) on August 11, 2023. The release was assigned Incident Number NAPP2322348507.

## SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess the applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization. Potential Site receptors are identified on Figure 1.

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on a soil boring drilled for determination of regional groundwater depth. Between January 18 and January 21, 2020, soil boring C-04387-POD1, permitted by New Mexico Office of the State Engineer (OSE) and located approximately 0.19 miles west of the Site, was drilled utilizing a truck-mounted sonic drill rig. The boring was drilled to a total depth of 110 feet bgs. A field geologist logged and described

soils continuously. No moisture or groundwater was encountered during drilling activities. The borehole was left open for over 72 hours to allow for the potential slow infill of groundwater. After the 72-hour waiting period without observing groundwater, it was confirmed that groundwater at that location was greater than 110 feet bgs. The borehole was properly abandoned with drill cuttings and hydrated bentonite chips. The Well Record and Log is included in Appendix A. All wells used to evaluate depth to groundwater are presented on Figure 1.

The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, significant water course, or wetland. The Site is greater than 1,000 feet from a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (medium potential karst designation area).

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

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

## CULTURAL RESOURCE SURVEY

Since the release remained on pad, an assessment of cultural properties had already been completed prior to the construction of the well pad and as such, the Cultural Properties Protection Rule (CPP) has been followed. No additional cultural resource surveys were completed in connection with this release.

## SITE ASSESSMENT ACTIVITIES

On September 6, 2023, Site assessment activities were conducted to evaluate the release extent based on information provided on the Form C-141 and visual observations. Ensolum personnel advanced one borehole (BH01) via hand auger at the location of the tear in the liner identified during the liner integrity inspection. Two discrete delineation soil samples were collected from the borehole at depths of approximately 0.5 feet and 1-foot bgs. Soil from the borehole was field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. Field screening results and observations from the borehole were documented on a lithologic/soil sampling log, which is included as Appendix B. The borehole was backfilled with soil removed and an XTO contractor repaired the tear in the liner. Four additional assessment samples (SS01 through SS04) were collected around the lined containment at a depth of 0.5 feet bgs to confirm the release did not leave the lined containment. The borehole and soil sample locations are depicted on Figure 2. Photographic documentation was conducted during the Site visit. 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 been equilibrated to the 6 degrees Celsius required for shipment and long-term storage but are considered to have been received in acceptable condition by the laboratory.

## LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for the delineation soil samples from borehole BH01 indicated all COC concentrations were compliant with the Site Closure Criteria. Laboratory analytical results for soil samples SS01 through SS04, collected around the containment, and BH01A, the soil sample collected at the terminal depth of the borehole, were compliant with the Site Closure Criteria and compliant with the most stringent Table I Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical report is included as Appendix D.

## CLOSURE REQUEST

Following the failed liner integrity inspection at the Site, Ensolum personnel advanced one borehole (BH01) at the location of the tear in the liner to assess for the presence or absence of impacted soil resulting from the July 2023 crude oil release within lined containment. Two delineation soil samples were collected from borehole BH01, at depths of approximately 0.5 feet and 1-foot bgs. Laboratory analytical results for the delineation soil samples indicated all COC concentrations were compliant with the Site Closure Criteria. Additionally, laboratory analytical results for soil samples SS01 through SS04, as well as BH01A, collected within and around the containment, were compliant with the most stringent Table I Closure Criteria. The release was contained laterally by the lined containment and all release fluids were recovered during initial response activities. The tear in the liner was subsequently repaired.

The release remained on the well pad that is currently in operation for oil and gas production purposes. As such, the release area is not expected to be reclaimed until the oil and gas well is plugged and abandoned (P&A'd) and the well pad is reclaimed. The Reclamation Plan for this release will default to the NMSLO-approved Reclamation Plan for the well pad per 19.2.100.67 NMAC.

Based on initial response efforts, depth to groundwater greater than 100 feet bgs, and soil sample laboratory analytical results compliant with the Closure Criteria directly beneath the tear in the liner, XTO believes the remedial actions taken have been protective of human health, the environment, and groundwater. As such, XTO respectfully requests closure for Incident Number NAPP2322348507.

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

Sincerely,
**Ensolum, LLC**

Meredith Roberts
Staff Geologist

Daniel R. Moir, PG
Senior Managing Geologist

cc: Garrett Green, XTO
Tommee Lambert, XTO
NMSLO

Appendices:

| | |
|---|---|
| Figure 1 | Site Receptor Map |
| Figure 2 | Delineation Soil Sample Locations |
| Table 1 | Soil Sample Analytical Results |
| Appendix A | Well Record and Log |
| Appendix B | Lithologic Soil Sampling Logs |
| Appendix C | Photographic Log |
| Appendix D | Laboratory Analytical Reports & Chain-of-Custody Documentation |
| Appendix E | NMOCD Notifications |

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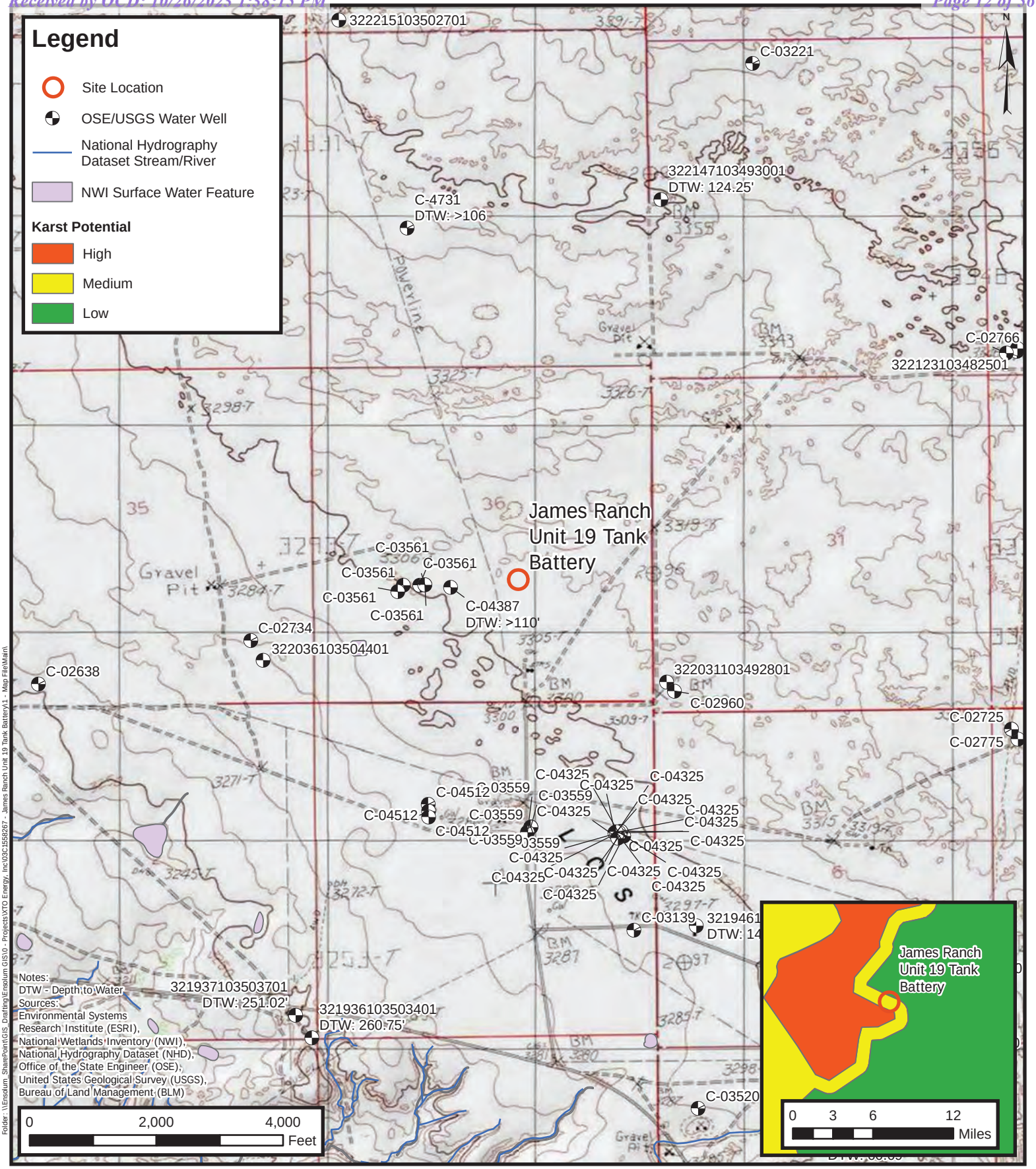
# FIGURES

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Environmental, Engineering and Hydrogeologic Consultants

# Site Receptor Map

XTO Energy, Inc
James Ranch Unit 19 Tank Battery
Incident Number: NAPP2322348507
Unit J, Sec 36, T22S, R30E
Eddy County, New Mexico

**FIGURE 1**


Folder: \\Ensolum_SharePoint\GIS_Drafting\Ensolum GIS\10 - Projects\XTO Energy, Inc\03C1558267 - James Ranch Unit 19 Tank Battery\1 - Map File\Main\

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# Delineation Soil Sample Locations

XTO Energy, Inc
James Ranch Unit 19 Tank Battery
Incident Number: NAPP2322348507
Unit J, Sec 36, T22S, R30E
Eddy County, New Mexico

**FIGURE 2**

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# TABLES

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# TABLE 1
## SOIL SAMPLE ANALYTICAL RESULTS
## James Ranch Unit 19 Tank Battery
## 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 | 09/06/2023 | 0.5 | <0.00200 | 0.00615 | <50.2 | <50.2 | <50.2 | <50.2 | <50.2 | 112 |
| SS02 | 09/06/2023 | 0.5 | <0.00201 | <0.00402 | <49.9 | <49.9 | <49.9 | <49.9 | <49.9 | 90.6 |
| SS03 | 09/06/2023 | 0.5 | <0.00200 | <0.00401 | <49.6 | <49.6 | <49.6 | <49.6 | <49.6 | 68.8 |
| SS04 | 09/06/2023 | 0.5 | <0.00199 | <0.00398 | <49.5 | <49.5 | <49.5 | <49.5 | <49.5 | 81.9 |
| BH01 | 09/06/2023 | 0.5 | <0.00199 | <0.00398 | <50.3 | <50.3 | <50.3 | <50.3 | <50.3 | 637 |
| BH01A | 09/06/2023 | 1 | <0.00199 | <0.00398 | <50.5 | <50.5 | <50.5 | <50.5 | <50.5 | 230 |

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

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

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

NMAC: New Mexico Administrative Code

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# APPENDIX A

## Well Record and Log

| LT Environmental, Inc.<br>508 West Stevens Street<br>Carlsbad, New Mexico 88220<br>Compliance · Engineering · Remediation | Identifier: BH01 (C-04387) | Date: 1/18-1/21/20 |
|---|---|---|
| | Project Name: JRU 29 | RP Number: 2RP-3302, 2RP-3726, 2RP-4040, 2RP-3082 |
| **LITHOLOGIC / SOIL SAMPLING LOG** | Logged By: BB, FS, WM | Method: Sonic Drill |
| Lat/Long: 32.346278,-103.835913 | Field Screening: NA | Hole Diameter: 6" / Total Depth: 110' |

Comments:
No field screenings, lithology remarks only

| Moisture Content | Chloride (ppm) | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Depth | Soil/Rock Type | Lithology/Remarks |
|---|---|---|---|---|---|---|---|---|
| D | | | N | | 0 | 0' | CCHE | CALICHE, tan-off white, fill |
| | | | | | | 0.5' | SP | SAND, dry, reddish brown, poorly graded, fine-very fine, soft no odor, no stain |
| D | | | N | | | 5' | CCHE | CALICHE, dry, tan-off white, few subangular gravel, trace fine sand, no odor, no stain |
| D | | | N | | 10' | 12.5' | SP-SM | silty SAND, dry, reddish brown, poorly graded, fine grained, few tan-off white subangular gravel, no stain, no odor |
| D | | | N | | 20' | 23' | ML-S | SILTSTONE, dry, reddish brown, moderatley consolidated, 2mm caliche inclusions, trace off-white subangular gravel, no stain, no odor |
| D | | | N | | 30' | | | |
| M | | | N | | | 37' | | moist |
| | | | | | 40' | | | |
| D | | | N | | | 45' | | dry |
| | | | | | 50' | | | |
| D | | | N | | | | | |
| | | | | | | 58' | CL-S | CLAYSTONE, dry, reddish brown, low plasticity, cohesive, well consolidated with some silty dolomite inclusions (1-2mm), no stain, no odor |
| D | | | N | | 60' | | | |
| D | | | N | | | | | |
| | | | | | 70' | | | |
| D | | | N | | | | | |
| | | | | | 80' | | | |
| D | | | N | | | | | |
| D | | | N | | 90' | | | |
| D | | | N | | | | | |
| | | | | | 100' | | | |
| M | | | N | | | 102' | | moist |
| M | | | N | | 110' | | | Total Depth 110 feet bgs |

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# APPENDIX B

## Lithologic Soil Sampling Logs

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

| | |
|---|---|
| Sample Name: BH01 | Date: 9/6/2023 |
| Site Name: James Ranch Unit 19 Tank Battery | |
| Incident Number: NAPP2322646789 | |
| Job Number: 03C1558267 | |

**LITHOLOGIC / SOIL SAMPLING LOG**

| | | |
|---|---|---|
| | Logged By: MR | Method: Hand Auger |
| Coordinates: 32.346160, -103.832568 | Hole Diameter: 4" | Total Depth: 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% correction factor was added to all chloride screenings.

| Moisture Content | Chloride (ppm) | Vapor (ppm) | Staining | Sample ID | Sample Depth (ft | Depth (ft bgs) | USCS/Rock Symbol | Lithologic Descriptions |
|---|---|---|---|---|---|---|---|---|
| | | | | | | 0 | CCHE | 0-1 CALICHE, medium brown, coarse grained, poorly sorted, sub-rounded to sub-angular grains. No stain, no odor, moist. |
| M | 162 | 0.9 | N | BH01 | 0.5 | | | |
| M | 192 | 0.7 | N | BH01A | 1 | 1 | | |
| | | | | | | TD | | Total Depth @ 1' bgs. |

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# APPENDIX C

## Photographic Log

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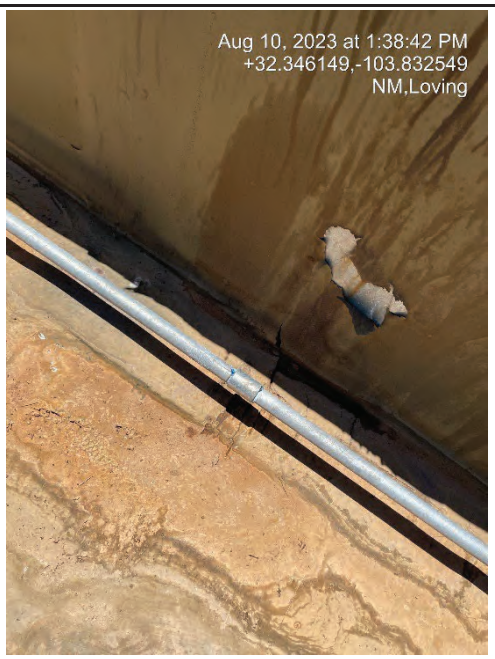
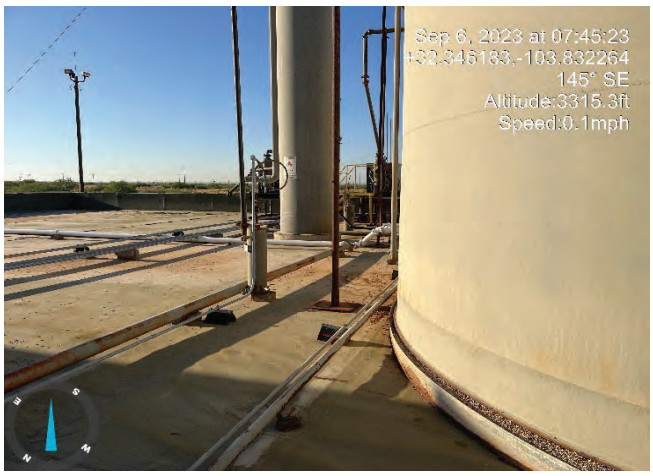
**Photographic Log**
XTO Energy, Inc
James Ranch Unit 19 Tank Battery
Incident Number NAPP2322348507




Photograph 1 Date: 08/10/2023
Description: Liner inspection activities, tear in liner.
View: Southwest


Photograph 2 Date: 08/10/2023
Description: Liner inspection activities.
View: Southeast


Photograph 3 Date: 09/06/2023
Description: Delineation activities, tank battery area.
View: West

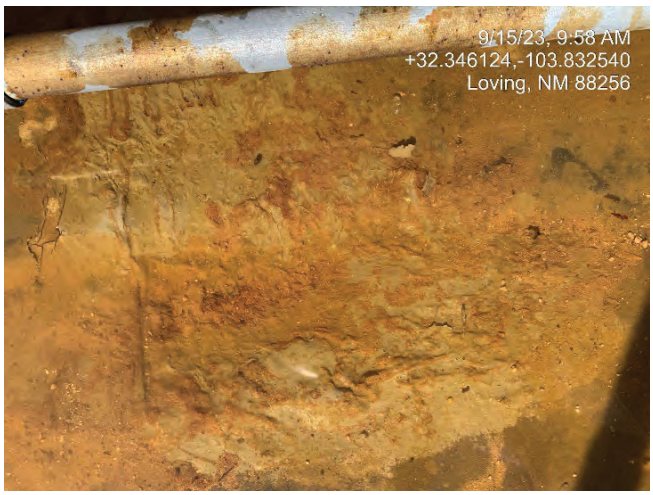



Photograph 4 Date: 09/06/2023
Description: Delineation activities, tank battery area.
View: Southeast

ENSOLUM

**Photographic Log**
XTO Energy, Inc
James Ranch Unit 19 Tank Battery
Incident Number NAPP2322348507


Photograph 5 Date: 09/06/2023
Description: Delineation activities, BH01.
View: Southwest




Photograph 6 Date: 09/15/2023
Description: Patched liner following delineation.
View: West

ENSOLUM

# APPENDIX D

## Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing



# ANALYTICAL REPORT

## PREPARED FOR

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

Generated 9/13/2023 12:49:25 PM

## JOB DESCRIPTION

James Ranch Unit 19 Tank Battery
SDG NUMBER 03C1558267

## JOB NUMBER

890-5210-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

# Eurofins Carlsbad

## Job Notes

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

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

## Authorization

Generated
9/13/2023 12:49:25 PM

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

Client: Ensolum
Project/Site: James Ranch Unit 19 Tank Battery

Laboratory Job ID: 890-5210-1
SDG: 03C1558267

# Table of Contents

# Definitions/Glossary

Client: Ensolum
Project/Site: James Ranch Unit 19 Tank Battery

Job ID: 890-5210-1
SDG: 03C1558267

## Qualifiers

### GC VOA

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

### GC Semi VOA

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

### HPLC/IC

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

## Glossary

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

# Case Narrative

Client: Ensolum
Project/Site: James Ranch Unit 19 Tank Battery

Job ID: 890-5210-1
SDG: 03C1558267

## Job ID: 890-5210-1

### Laboratory: Eurofins Carlsbad

**Narrative**

**Job Narrative**
**890-5210-1**

**Receipt**
The samples were received on 9/6/2023 3:19 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.6°C

**Receipt Exceptions**
The following samples were received and analyzed from an unpreserved bulk soil jar: BH01 (890-5210-1), BH01A (890-5210-2), SS01 (890-5210-3), SS02 (890-5210-4), SS03 (890-5210-5) and SS04 (890-5210-6).

**GC VOA**
Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-62082 and analytical batch 880-62040 was outside the upper control limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: BH01 (890-5210-1), SS01 (890-5210-3), SS04 (890-5210-6) and (880-32833-A-8-A MB). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (MB 880-62041/5-A). Evidence of matrix interferences is not obvious.

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

**GC Semi VOA**
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-62104 and analytical batch 880-62025 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: SS02 (890-5210-4). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-62025/31) and (CCV 880-62025/47). Evidence of matrix interferences is not obvious.

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

**HPLC/IC**
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-62151 and 880-62151 and analytical batch 880-62323 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: James Ranch Unit 19 Tank Battery

Job ID: 890-5210-1
SDG: 03C1558267

## Client Sample ID: BH01

**Date Collected: 09/06/23 08:50**
**Date Received: 09/06/23 15:19**
**Sample Depth: 0.5**

**Lab Sample ID: 890-5210-1**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 09/08/23 11:01 | 09/08/23 23:02 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 09/08/23 11:01 | 09/08/23 23:02 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 09/08/23 11:01 | 09/08/23 23:02 | 1 |
| m-Xylene & p-Xylene | <0.00398 | U | 0.00398 | | mg/Kg | | 09/08/23 11:01 | 09/08/23 23:02 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 09/08/23 11:01 | 09/08/23 23:02 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 09/08/23 11:01 | 09/08/23 23:02 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *69* | *S1-* | *70 - 130* | *09/08/23 11:01* | *09/08/23 23:02* | *1* |
| *1,4-Difluorobenzene (Surr)* | *103* | | *70 - 130* | *09/08/23 11:01* | *09/08/23 23:02* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00398 | U | 0.00398 | | mg/Kg | | | 09/11/23 13:03 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.3 | U | 50.3 | | mg/Kg | | | 09/11/23 09:54 | 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 | <50.3 | U | 50.3 | | mg/Kg | | 09/08/23 15:19 | 09/08/23 22:49 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.3 | U | 50.3 | | mg/Kg | | 09/08/23 15:19 | 09/08/23 22:49 | 1 |
| OII Range Organics (Over C28-C36) | <50.3 | U | 50.3 | | mg/Kg | | 09/08/23 15:19 | 09/08/23 22:49 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *126* | | *70 - 130* | *09/08/23 15:19* | *09/08/23 22:49* | *1* |
| *o-Terphenyl* | *111* | | *70 - 130* | *09/08/23 15:19* | *09/08/23 22:49* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **637** | | 25.0 | | mg/Kg | | | 09/12/23 19:29 | 5 |

## Client Sample ID: BH01A

**Date Collected: 09/06/23 08:55**
**Date Received: 09/06/23 15:19**
**Sample Depth: 1**

**Lab Sample ID: 890-5210-2**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 09/08/23 11:01 | 09/08/23 23:23 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 09/08/23 11:01 | 09/08/23 23:23 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 09/08/23 11:01 | 09/08/23 23:23 | 1 |
| m-Xylene & p-Xylene | <0.00398 | U | 0.00398 | | mg/Kg | | 09/08/23 11:01 | 09/08/23 23:23 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 09/08/23 11:01 | 09/08/23 23:23 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 09/08/23 11:01 | 09/08/23 23:23 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *77* | | *70 - 130* | *09/08/23 11:01* | *09/08/23 23:23* | *1* |

# Client Sample Results

Client: Ensolum
Project/Site: James Ranch Unit 19 Tank Battery

Job ID: 890-5210-1
SDG: 03C1558267

## Client Sample ID: BH01A

**Lab Sample ID: 890-5210-2**
**Matrix: Solid**

**Date Collected: 09/06/23 08:55**
**Date Received: 09/06/23 15:19**
**Sample Depth: 1**

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

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,4-Difluorobenzene (Surr)* | *75* | | *70 - 130* | *09/08/23 11:01* | *09/08/23 23:23* | *1* |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00398 | U | 0.00398 | mg/Kg | | | 09/11/23 13:03 | 1 |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.5 | U | 50.5 | mg/Kg | | | 09/11/23 09:54 | 1 |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.5 | U | 50.5 | mg/Kg | | 09/08/23 15:19 | 09/08/23 23:12 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.5 | U | 50.5 | mg/Kg | | 09/08/23 15:19 | 09/08/23 23:12 | 1 |
| OII Range Organics (Over C28-C36) | <50.5 | U | 50.5 | mg/Kg | | 09/08/23 15:19 | 09/08/23 23:12 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *115* | | *70 - 130* | *09/08/23 15:19* | *09/08/23 23:12* | *1* |
| *o-Terphenyl* | *102* | | *70 - 130* | *09/08/23 15:19* | *09/08/23 23:12* | *1* |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Chloride** | **230** | | 5.05 | mg/Kg | | | 09/12/23 19:36 | 1 |

## Client Sample ID: SS01

**Lab Sample ID: 890-5210-3**
**Matrix: Solid**

**Date Collected: 09/06/23 09:00**
**Date Received: 09/06/23 15:19**
**Sample Depth: 0.5**

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | mg/Kg | | 09/08/23 11:01 | 09/08/23 23:43 | 1 |
| **Toluene** | **0.00241** | | 0.00200 | mg/Kg | | 09/08/23 11:01 | 09/08/23 23:43 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | mg/Kg | | 09/08/23 11:01 | 09/08/23 23:43 | 1 |
| m-Xylene & p-Xylene | <0.00399 | U | 0.00399 | mg/Kg | | 09/08/23 11:01 | 09/08/23 23:43 | 1 |
| **o-Xylene** | **0.00374** | | 0.00200 | mg/Kg | | 09/08/23 11:01 | 09/08/23 23:43 | 1 |
| Xylenes, Total | <0.00399 | U | 0.00399 | mg/Kg | | 09/08/23 11:01 | 09/08/23 23:43 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *65* | *S1-* | *70 - 130* | *09/08/23 11:01* | *09/08/23 23:43* | *1* |
| *1,4-Difluorobenzene (Surr)* | *88* | | *70 - 130* | *09/08/23 11:01* | *09/08/23 23:43* | *1* |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Total BTEX** | **0.00615** | | 0.00399 | mg/Kg | | | 09/11/23 13:03 | 1 |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.2 | U | 50.2 | mg/Kg | | | 09/11/23 09:54 | 1 |

# Client Sample Results

Client: Ensolum
Project/Site: James Ranch Unit 19 Tank Battery

Job ID: 890-5210-1
SDG: 03C1558267

## Client Sample ID: SS01

**Lab Sample ID: 890-5210-3**
**Matrix: Solid**
**Date Collected: 09/06/23 09:00**
**Date Received: 09/06/23 15:19**
**Sample Depth: 0.5**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.2 | U | 50.2 | | mg/Kg | | 09/08/23 15:19 | 09/08/23 23:35 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.2 | U | 50.2 | | mg/Kg | | 09/08/23 15:19 | 09/08/23 23:35 | 1 |
| Oil Range Organics (Over C28-C36) | <50.2 | U | 50.2 | | mg/Kg | | 09/08/23 15:19 | 09/08/23 23:35 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *124* | | *70 - 130* | *09/08/23 15:19* | *09/08/23 23:35* | *1* |
| *o-Terphenyl* | *111* | | *70 - 130* | *09/08/23 15:19* | *09/08/23 23:35* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 112 | | 5.03 | | mg/Kg | | | 09/12/23 19:43 | 1 |

## Client Sample ID: SS02

**Lab Sample ID: 890-5210-4**
**Matrix: Solid**
**Date Collected: 09/06/23 09:05**
**Date Received: 09/06/23 15:19**
**Sample Depth: 0.5**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00201 | U | 0.00201 | | mg/Kg | | 09/08/23 11:01 | 09/09/23 00:04 | 1 |
| Toluene | <0.00201 | U | 0.00201 | | mg/Kg | | 09/08/23 11:01 | 09/09/23 00:04 | 1 |
| Ethylbenzene | <0.00201 | U | 0.00201 | | mg/Kg | | 09/08/23 11:01 | 09/09/23 00:04 | 1 |
| m-Xylene & p-Xylene | <0.00402 | U | 0.00402 | | mg/Kg | | 09/08/23 11:01 | 09/09/23 00:04 | 1 |
| o-Xylene | <0.00201 | U | 0.00201 | | mg/Kg | | 09/08/23 11:01 | 09/09/23 00:04 | 1 |
| Xylenes, Total | <0.00402 | U | 0.00402 | | mg/Kg | | 09/08/23 11:01 | 09/09/23 00:04 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *86* | | *70 - 130* | *09/08/23 11:01* | *09/09/23 00:04* | *1* |
| *1,4-Difluorobenzene (Surr)* | *86* | | *70 - 130* | *09/08/23 11:01* | *09/09/23 00:04* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00402 | U | 0.00402 | | mg/Kg | | | 09/11/23 13:03 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.9 | U | 49.9 | | mg/Kg | | | 09/11/23 09:54 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U | 49.9 | | mg/Kg | | 09/08/23 15:19 | 09/08/23 23:58 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 09/08/23 15:19 | 09/08/23 23:58 | 1 |
| Oil Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 09/08/23 15:19 | 09/08/23 23:58 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *132* | *S1+* | *70 - 130* | *09/08/23 15:19* | *09/08/23 23:58* | *1* |
| *o-Terphenyl* | *116* | | *70 - 130* | *09/08/23 15:19* | *09/08/23 23:58* | *1* |

# Client Sample Results

Client: Ensolum
Project/Site: James Ranch Unit 19 Tank Battery

Job ID: 890-5210-1
SDG: 03C1558267

## Client Sample ID: SS02

**Lab Sample ID: 890-5210-4**
**Matrix: Solid**
**Date Collected: 09/06/23 09:05**
**Date Received: 09/06/23 15:19**
**Sample Depth: 0.5**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 90.6 | | 4.99 | | mg/Kg | | | 09/12/23 20:03 | 1 |

## Client Sample ID: SS03

**Lab Sample ID: 890-5210-5**
**Matrix: Solid**
**Date Collected: 09/06/23 09:10**
**Date Received: 09/06/23 15:19**
**Sample Depth: 0.5**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/08/23 11:01 | 09/09/23 00:24 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/08/23 11:01 | 09/09/23 00:24 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/08/23 11:01 | 09/09/23 00:24 | 1 |
| m-Xylene & p-Xylene | <0.00401 | U | 0.00401 | | mg/Kg | | 09/08/23 11:01 | 09/09/23 00:24 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/08/23 11:01 | 09/09/23 00:24 | 1 |
| Xylenes, Total | <0.00401 | U | 0.00401 | | mg/Kg | | 09/08/23 11:01 | 09/09/23 00:24 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *81* | | *70 - 130* | *09/08/23 11:01* | *09/09/23 00:24* | *1* |
| *1,4-Difluorobenzene (Surr)* | *89* | | *70 - 130* | *09/08/23 11:01* | *09/09/23 00:24* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00401 | U | 0.00401 | | mg/Kg | | | 09/11/23 13:03 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.6 | U | 49.6 | | mg/Kg | | | 09/11/23 09:54 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.6 | U | 49.6 | | mg/Kg | | 09/08/23 15:19 | 09/09/23 00:20 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.6 | U | 49.6 | | mg/Kg | | 09/08/23 15:19 | 09/09/23 00:20 | 1 |
| OII Range Organics (Over C28-C36) | <49.6 | U | 49.6 | | mg/Kg | | 09/08/23 15:19 | 09/09/23 00:20 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *128* | | *70 - 130* | *09/08/23 15:19* | *09/09/23 00:20* | *1* |
| *o-Terphenyl* | *113* | | *70 - 130* | *09/08/23 15:19* | *09/09/23 00:20* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 68.8 | | 4.97 | | mg/Kg | | | 09/12/23 20:09 | 1 |

# Client Sample Results

Client: Ensolum
Project/Site: James Ranch Unit 19 Tank Battery

Job ID: 890-5210-1
SDG: 03C1558267

## Client Sample ID: SS04

**Date Collected: 09/06/23 09:15**
**Date Received: 09/06/23 15:19**
**Sample Depth: 0.5**

## Lab Sample ID: 890-5210-6

**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 09/08/23 11:01 | 09/09/23 00:45 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 09/08/23 11:01 | 09/09/23 00:45 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 09/08/23 11:01 | 09/09/23 00:45 | 1 |
| m-Xylene & p-Xylene | <0.00398 | U | 0.00398 | | mg/Kg | | 09/08/23 11:01 | 09/09/23 00:45 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 09/08/23 11:01 | 09/09/23 00:45 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 09/08/23 11:01 | 09/09/23 00:45 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *92* | | *70 - 130* | *09/08/23 11:01* | *09/09/23 00:45* | *1* |
| *1,4-Difluorobenzene (Surr)* | *66* | *S1-* | *70 - 130* | *09/08/23 11:01* | *09/09/23 00:45* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00398 | U | 0.00398 | | mg/Kg | | | 09/11/23 13:03 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.5 | U | 49.5 | | mg/Kg | | | 09/11/23 09:53 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.5 | U | 49.5 | | mg/Kg | | 09/08/23 15:19 | 09/09/23 00:43 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.5 | U | 49.5 | | mg/Kg | | 09/08/23 15:19 | 09/09/23 00:43 | 1 |
| OII Range Organics (Over C28-C36) | <49.5 | U | 49.5 | | mg/Kg | | 09/08/23 15:19 | 09/09/23 00:43 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *120* | | *70 - 130* | *09/08/23 15:19* | *09/09/23 00:43* | *1* |
| *o-Terphenyl* | *108* | | *70 - 130* | *09/08/23 15:19* | *09/09/23 00:43* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **81.9** | | 5.02 | | mg/Kg | | | 09/12/23 20:16 | 1 |

# Surrogate Summary

Client: Ensolum
Project/Site: James Ranch Unit 19 Tank Battery

Job ID: 890-5210-1
SDG: 03C1558267

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

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

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | BFB1 (70-130) | DFBZ1 (70-130) |
| 880-32833-A-8-A MB | Method Blank | 65 S1- | 101 |
| 890-5210-1 | BH01 | 69 S1- | 103 |
| 890-5210-1 MS | BH01 | 113 | 113 |
| 890-5210-1 MSD | BH01 | 110 | 96 |
| 890-5210-2 | BH01A | 77 | 75 |
| 890-5210-3 | SS01 | 65 S1- | 88 |
| 890-5210-4 | SS02 | 86 | 86 |
| 890-5210-5 | SS03 | 81 | 89 |
| 890-5210-6 | SS04 | 92 | 66 S1- |
| LCS 880-62082/1-A | Lab Control Sample | 122 | 111 |
| LCSD 880-62082/2-A | Lab Control Sample Dup | 110 | 113 |
| MB 880-62082/5-A | Method Blank | 62 S1- | 99 |

**Surrogate Legend**

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

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

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

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | 1CO1 (70-130) | OTPH1 (70-130) |
| 880-32940-A-27-E MS | Matrix Spike | 126 | 97 |
| 880-32940-A-27-F MSD | Matrix Spike Duplicate | 126 | 97 |
| 890-5210-1 | BH01 | 126 | 111 |
| 890-5210-2 | BH01A | 115 | 102 |
| 890-5210-3 | SS01 | 124 | 111 |
| 890-5210-4 | SS02 | 132 S1+ | 116 |
| 890-5210-5 | SS03 | 128 | 113 |
| 890-5210-6 | SS04 | 120 | 108 |
| LCS 880-62104/2-A | Lab Control Sample | 97 | 99 |
| LCSD 880-62104/3-A | Lab Control Sample Dup | 99 | 94 |
| MB 880-62104/1-A | Method Blank | 160 S1+ | 148 S1+ |

**Surrogate Legend**

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

# QC Sample Results

Client: Ensolum
Project/Site: James Ranch Unit 19 Tank Battery

Job ID: 890-5210-1
SDG: 03C1558267

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

### Lab Sample ID: 880-32833-A-8-A MB
Matrix: Solid
Analysis Batch: 62040

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 62041

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/08/23 08:55 | 09/08/23 17:11 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/08/23 08:55 | 09/08/23 17:11 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/08/23 08:55 | 09/08/23 17:11 | 1 |
| m-Xylene & p-Xylene | <0.00400 | U | 0.00400 | | mg/Kg | | 09/08/23 08:55 | 09/08/23 17:11 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/08/23 08:55 | 09/08/23 17:11 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 09/08/23 08:55 | 09/08/23 17:11 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *69* | *S1-* | *70 - 130* | *0/ 8028 3 02,99* | *0/ 8028 3 17,11* | *1* |
| *1,4-Difluorobenzene (Surr)* | *101* | | *70 - 130* | *0/ 8028 3 02,99* | *0/ 8028 3 17,11* | *1* |

### Lab Sample ID: MB 880-62082/5-A
Matrix: Solid
Analysis Batch: 62040

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 62082

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/08/23 11:01 | 09/08/23 22:40 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/08/23 11:01 | 09/08/23 22:40 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/08/23 11:01 | 09/08/23 22:40 | 1 |
| m-Xylene & p-Xylene | <0.00400 | U | 0.00400 | | mg/Kg | | 09/08/23 11:01 | 09/08/23 22:40 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/08/23 11:01 | 09/08/23 22:40 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 09/08/23 11:01 | 09/08/23 22:40 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *6:* | *S1-* | *70 - 130* | *0/ 8028 3 11,01* | *0/ 8028 3 : : ,40* | *1* |
| *1,4-Difluorobenzene (Surr)* | */ /* | | *70 - 130* | *0/ 8028 3 11,01* | *0/ 8028 3 : : ,40* | *1* |

### Lab Sample ID: LCS 880-62082/1-A
Matrix: Solid
Analysis Batch: 62040

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 62082

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.09941 | | mg/Kg | | 99 | 70 - 130 | | |
| Toluene | | | 0.100 | 0.1014 | | mg/Kg | | 101 | 70 - 130 | | |
| Ethylbenzene | | | 0.100 | 0.1016 | | mg/Kg | | 102 | 70 - 130 | | |
| m-Xylene & p-Xylene | | | 0.200 | 0.2210 | | mg/Kg | | 111 | 70 - 130 | | |
| o-Xylene | | | 0.100 | 0.1157 | | mg/Kg | | 116 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *1: :* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *111* | | *70 - 130* |

### Lab Sample ID: LCSD 880-62082/2-A
Matrix: Solid
Analysis Batch: 62040

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 62082

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.09561 | | mg/Kg | | 96 | 70 - 130 | 4 | 35 |

# QC Sample Results

Client: Ensolum
Project/Site: James Ranch Unit 19 Tank Battery

Job ID: 890-5210-1
SDG: 03C1558267

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

**Lab Sample ID: LCSD 880-62082/2-A**
**Matrix: Solid**
**Analysis Batch: 62040**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 62082**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | | | 0.100 | 0.09614 | | mg/Kg | | 96 | 70 - 130 | 5 | 35 |
| Ethylbenzene | | | 0.100 | 0.09614 | | mg/Kg | | 96 | 70 - 130 | 6 | 35 |
| m-Xylene & p-Xylene | | | 0.200 | 0.2067 | | mg/Kg | | 103 | 70 - 130 | 7 | 35 |
| o-Xylene | | | 0.100 | 0.1039 | | mg/Kg | | 104 | 70 - 130 | 11 | 35 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *110* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *113* | | *70 - 130* |

**Lab Sample ID: 890-5210-1 MS**
**Matrix: Solid**
**Analysis Batch: 62040**

**Client Sample ID: BH01**
**Prep Type: Total/NA**
**Prep Batch: 62082**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.0998 | 0.08017 | | mg/Kg | | 80 | 70 - 130 |
| Toluene | <0.00199 | U | 0.0998 | 0.08157 | | mg/Kg | | 82 | 70 - 130 |
| Ethylbenzene | <0.00199 | U | 0.0998 | 0.08150 | | mg/Kg | | 82 | 70 - 130 |
| m-Xylene & p-Xylene | <0.00398 | U | 0.200 | 0.1714 | | mg/Kg | | 86 | 70 - 130 |
| o-Xylene | <0.00199 | U | 0.0998 | 0.08588 | | mg/Kg | | 86 | 70 - 130 |

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

**Lab Sample ID: 890-5210-1 MSD**
**Matrix: Solid**
**Analysis Batch: 62040**

**Client Sample ID: BH01**
**Prep Type: Total/NA**
**Prep Batch: 62082**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.100 | 0.08514 | | mg/Kg | | 85 | 70 - 130 | 6 | 35 |
| Toluene | <0.00199 | U | 0.100 | 0.08931 | | mg/Kg | | 89 | 70 - 130 | 9 | 35 |
| Ethylbenzene | <0.00199 | U | 0.100 | 0.08778 | | mg/Kg | | 88 | 70 - 130 | 7 | 35 |
| m-Xylene & p-Xylene | <0.00398 | U | 0.200 | 0.1806 | | mg/Kg | | 90 | 70 - 130 | 5 | 35 |
| o-Xylene | <0.00199 | U | 0.100 | 0.09035 | | mg/Kg | | 90 | 70 - 130 | 5 | 35 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *110* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *76* | | *70 - 130* |

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

**Lab Sample ID: MB 880-62104/1-A**
**Matrix: Solid**
**Analysis Batch: 62025**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 62104**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 09/08/23 15:19 | 09/08/23 20:37 | 1 |

# QC Sample Results

Client: Ensolum
Project/Site: James Ranch Unit 19 Tank Battery

Job ID: 890-5210-1
SDG: 03C1558267

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

**Lab Sample ID: MB 880-62104/1-A**
**Matrix: Solid**
**Analysis Batch: 62025**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 62104**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 09/08/23 15:19 | 09/08/23 20:37 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 09/08/23 15:19 | 09/08/23 20:37 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-h cloroot a5ne* | *160* | *S1T* | *70 - 130* | *0/ 8028 3 19,1/* | *0/ 8028 3 : 0,37* | *1* |
| *o-perycen+l* | *142* | *S1T* | *70 - 130* | *0/ 8028 3 19,1/* | *0/ 8028 3 : 0,37* | *1* |

**Lab Sample ID: LCS 880-62104/2-A**
**Matrix: Solid**
**Analysis Batch: 62025**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 62104**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 1039 | | mg/Kg | | 104 | 70 - 130 | | |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 1048 | | mg/Kg | | 105 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1-h cloroot a5ne* | */ 7* | | *70 - 130* |
| *o-perycen+l* | *//* | | *70 - 130* |

**Lab Sample ID: LCSD 880-62104/3-A**
**Matrix: Solid**
**Analysis Batch: 62025**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 62104**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 981.8 | | mg/Kg | | 98 | 70 - 130 | 6 | 20 |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 985.2 | | mg/Kg | | 99 | 70 - 130 | 6 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *1-h cloroot a5ne* | *//* | | *70 - 130* |
| *o-perycen+l* | */ 4* | | *70 - 130* |

**Lab Sample ID: 880-32940-A-27-E MS**
**Matrix: Solid**
**Analysis Batch: 62025**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 62104**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.4 | U | 993 | 911.7 | | mg/Kg | | 88 | 70 - 130 | | |
| Diesel Range Organics (Over C10-C28) | 56.9 | | 993 | 1092 | | mg/Kg | | 104 | 70 - 130 | | |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *1-h cloroot a5ne* | *1: 6* | | *70 - 130* |
| *o-perycen+l* | */ 7* | | *70 - 130* |

# QC Sample Results

Client: Ensolum
Project/Site: James Ranch Unit 19 Tank Battery

Job ID: 890-5210-1
SDG: 03C1558267

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

**Lab Sample ID: 880-32940-A-27-F MSD**
**Matrix: Solid**
**Analysis Batch: 62025**

**Client Sample ID: Matrix Spike Duplicate**
**Prep Type: Total/NA**
**Prep Batch: 62104**

| 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 | <50.4 | U | 993 | 911.4 | | mg/Kg | | 88 | 70 - 130 | 0 | 20 |
| Diesel Range Organics (Over C10-C28) | 56.9 | | 993 | 1095 | | mg/Kg | | 105 | 70 - 130 | 0 | 20 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *1-chlorooctane* | *116* | | *70 - 130* |
| *o-terphenyl* | *97* | | *70 - 130* |

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 880-62151/1-A**
**Matrix: Solid**
**Analysis Batch: 62323**

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

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <5.00 | U | 5.00 | | mg/Kg | | | 09/12/23 18:43 | 1 |

**Lab Sample ID: LCS 880-62151/2-A**
**Matrix: Solid**
**Analysis Batch: 62323**

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

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 250 | 241.1 | | mg/Kg | | 96 | 90 - 110 | | |

**Lab Sample ID: LCSD 880-62151/3-A**
**Matrix: Solid**
**Analysis Batch: 62323**

**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 | 239.6 | | mg/Kg | | 96 | 90 - 110 | 1 | 20 |

**Lab Sample ID: 880-32953-A-1-E MS**
**Matrix: Solid**
**Analysis Batch: 62323**

**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 | 96900 | F1 | 24800 | 117800 | F1 | mg/Kg | | 85 | 90 - 110 | | |

**Lab Sample ID: 880-32953-A-1-F MSD**
**Matrix: Solid**
**Analysis Batch: 62323**

**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 | 96900 | F1 | 24800 | 117600 | F1 | mg/Kg | | 84 | 90 - 110 | 0 | 20 |

# QC Sample Results

Client: Ensolum
Project/Site: James Ranch Unit 19 Tank Battery

Job ID: 890-5210-1
SDG: 03C1558267

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

**Lab Sample ID: 890-5211-A-3-F MS**
**Matrix: Solid**
**Analysis Batch: 62323**

**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 | 4190 | F1 | 1250 | 5310 | | mg/Kg | | 90 | 90 - 110 |

**Lab Sample ID: 890-5211-A-3-G MSD**
**Matrix: Solid**
**Analysis Batch: 62323**

**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 | 4190 | F1 | 1250 | 5307 | F1 | mg/Kg | | 89 | 90 - 110 | 0 | 20 |

# QC Association Summary

Client: Ensolum
Project/Site: James Ranch Unit 19 Tank Battery

Job ID: 890-5210-1
SDG: 03C1558267

## GC VOA

### Analysis Batch: 62040

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5210-1 | BH01 | Total/NA | Solid | 8021B | 62082 |
| 890-5210-2 | BH01A | Total/NA | Solid | 8021B | 62082 |
| 890-5210-3 | SS01 | Total/NA | Solid | 8021B | 62082 |
| 890-5210-4 | SS02 | Total/NA | Solid | 8021B | 62082 |
| 890-5210-5 | SS03 | Total/NA | Solid | 8021B | 62082 |
| 890-5210-6 | SS04 | Total/NA | Solid | 8021B | 62082 |
| 880-32833-A-8-A MB | Method Blank | Total/NA | Solid | 8021B | 62041 |
| MB 880-62082/5-A | Method Blank | Total/NA | Solid | 8021B | 62082 |
| LCS 880-62082/1-A | Lab Control Sample | Total/NA | Solid | 8021B | 62082 |
| LCSD 880-62082/2-A | Lab Control Sample Dup | Total/NA | Solid | 8021B | 62082 |
| 890-5210-1 MS | BH01 | Total/NA | Solid | 8021B | 62082 |
| 890-5210-1 MSD | BH01 | Total/NA | Solid | 8021B | 62082 |

### Prep Batch: 62041

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-32833-A-8-A MB | Method Blank | Total/NA | Solid | 5030B | |

### Prep Batch: 62082

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5210-1 | BH01 | Total/NA | Solid | 5035 | |
| 890-5210-2 | BH01A | Total/NA | Solid | 5035 | |
| 890-5210-3 | SS01 | Total/NA | Solid | 5035 | |
| 890-5210-4 | SS02 | Total/NA | Solid | 5035 | |
| 890-5210-5 | SS03 | Total/NA | Solid | 5035 | |
| 890-5210-6 | SS04 | Total/NA | Solid | 5035 | |
| MB 880-62082/5-A | Method Blank | Total/NA | Solid | 5035 | |
| LCS 880-62082/1-A | Lab Control Sample | Total/NA | Solid | 5035 | |
| LCSD 880-62082/2-A | Lab Control Sample Dup | Total/NA | Solid | 5035 | |
| 890-5210-1 MS | BH01 | Total/NA | Solid | 5035 | |
| 890-5210-1 MSD | BH01 | Total/NA | Solid | 5035 | |

### Analysis Batch: 62181

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5210-1 | BH01 | Total/NA | Solid | Total BTEX | |
| 890-5210-2 | BH01A | Total/NA | Solid | Total BTEX | |
| 890-5210-3 | SS01 | Total/NA | Solid | Total BTEX | |
| 890-5210-4 | SS02 | Total/NA | Solid | Total BTEX | |
| 890-5210-5 | SS03 | Total/NA | Solid | Total BTEX | |
| 890-5210-6 | SS04 | Total/NA | Solid | Total BTEX | |

## GC Semi VOA

### Analysis Batch: 62025

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5210-1 | BH01 | Total/NA | Solid | 8015B NM | 62104 |
| 890-5210-2 | BH01A | Total/NA | Solid | 8015B NM | 62104 |
| 890-5210-3 | SS01 | Total/NA | Solid | 8015B NM | 62104 |
| 890-5210-4 | SS02 | Total/NA | Solid | 8015B NM | 62104 |
| 890-5210-5 | SS03 | Total/NA | Solid | 8015B NM | 62104 |
| 890-5210-6 | SS04 | Total/NA | Solid | 8015B NM | 62104 |
| MB 880-62104/1-A | Method Blank | Total/NA | Solid | 8015B NM | 62104 |

# QC Association Summary

Client: Ensolum
Project/Site: James Ranch Unit 19 Tank Battery

Job ID: 890-5210-1
SDG: 03C1558267

## GC Semi VOA (Continued)

### Analysis Batch: 62025 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| LCS 880-62104/2-A | Lab Control Sample | Total/NA | Solid | 8015B NM | 62104 |
| LCSD 880-62104/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015B NM | 62104 |
| 880-32940-A-27-E MS | Matrix Spike | Total/NA | Solid | 8015B NM | 62104 |
| 880-32940-A-27-F MSD | Matrix Spike Duplicate | Total/NA | Solid | 8015B NM | 62104 |

### Prep Batch: 62104

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5210-1 | BH01 | Total/NA | Solid | 8015NM Prep | |
| 890-5210-2 | BH01A | Total/NA | Solid | 8015NM Prep | |
| 890-5210-3 | SS01 | Total/NA | Solid | 8015NM Prep | |
| 890-5210-4 | SS02 | Total/NA | Solid | 8015NM Prep | |
| 890-5210-5 | SS03 | Total/NA | Solid | 8015NM Prep | |
| 890-5210-6 | SS04 | Total/NA | Solid | 8015NM Prep | |
| MB 880-62104/1-A | Method Blank | Total/NA | Solid | 8015NM Prep | |
| LCS 880-62104/2-A | Lab Control Sample | Total/NA | Solid | 8015NM Prep | |
| LCSD 880-62104/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015NM Prep | |
| 880-32940-A-27-E MS | Matrix Spike | Total/NA | Solid | 8015NM Prep | |
| 880-32940-A-27-F MSD | Matrix Spike Duplicate | Total/NA | Solid | 8015NM Prep | |

### Analysis Batch: 62142

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5210-1 | BH01 | Total/NA | Solid | 8015 NM | |
| 890-5210-2 | BH01A | Total/NA | Solid | 8015 NM | |
| 890-5210-3 | SS01 | Total/NA | Solid | 8015 NM | |
| 890-5210-4 | SS02 | Total/NA | Solid | 8015 NM | |
| 890-5210-5 | SS03 | Total/NA | Solid | 8015 NM | |
| 890-5210-6 | SS04 | Total/NA | Solid | 8015 NM | |

## HPLC/IC

### Leach Batch: 62151

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5210-1 | BH01 | Soluble | Solid | DI Leach | |
| 890-5210-2 | BH01A | Soluble | Solid | DI Leach | |
| 890-5210-3 | SS01 | Soluble | Solid | DI Leach | |
| 890-5210-4 | SS02 | Soluble | Solid | DI Leach | |
| 890-5210-5 | SS03 | Soluble | Solid | DI Leach | |
| 890-5210-6 | SS04 | Soluble | Solid | DI Leach | |
| MB 880-62151/1-A | Method Blank | Soluble | Solid | DI Leach | |
| LCS 880-62151/2-A | Lab Control Sample | Soluble | Solid | DI Leach | |
| LCSD 880-62151/3-A | Lab Control Sample Dup | Soluble | Solid | DI Leach | |
| 880-32953-A-1-E MS | Matrix Spike | Soluble | Solid | DI Leach | |
| 880-32953-A-1-F MSD | Matrix Spike Duplicate | Soluble | Solid | DI Leach | |
| 890-5211-A-3-F MS | Matrix Spike | Soluble | Solid | DI Leach | |
| 890-5211-A-3-G MSD | Matrix Spike Duplicate | Soluble | Solid | DI Leach | |

### Analysis Batch: 62323

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5210-1 | BH01 | Soluble | Solid | 300.0 | 62151 |
| 890-5210-2 | BH01A | Soluble | Solid | 300.0 | 62151 |
| 890-5210-3 | SS01 | Soluble | Solid | 300.0 | 62151 |

# QC Association Summary

Client: Ensolum
Project/Site: James Ranch Unit 19 Tank Battery

Job ID: 890-5210-1
SDG: 03C1558267

## HPLC/IC (Continued)

### Analysis Batch: 62323 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5210-4 | SS02 | Soluble | Solid | 300.0 | 62151 |
| 890-5210-5 | SS03 | Soluble | Solid | 300.0 | 62151 |
| 890-5210-6 | SS04 | Soluble | Solid | 300.0 | 62151 |
| MB 880-62151/1-A | Method Blank | Soluble | Solid | 300.0 | 62151 |
| LCS 880-62151/2-A | Lab Control Sample | Soluble | Solid | 300.0 | 62151 |
| LCSD 880-62151/3-A | Lab Control Sample Dup | Soluble | Solid | 300.0 | 62151 |
| 880-32953-A-1-E MS | Matrix Spike | Soluble | Solid | 300.0 | 62151 |
| 880-32953-A-1-F MSD | Matrix Spike Duplicate | Soluble | Solid | 300.0 | 62151 |
| 890-5211-A-3-F MS | Matrix Spike | Soluble | Solid | 300.0 | 62151 |
| 890-5211-A-3-G MSD | Matrix Spike Duplicate | Soluble | Solid | 300.0 | 62151 |

# Lab Chronicle

Client: Ensolum
Project/Site: James Ranch Unit 19 Tank Battery

Job ID: 890-5210-1
SDG: 03C1558267

## Client Sample ID: BH01

**Date Collected: 09/06/23 08:50**
**Date Received: 09/06/23 15:19**

**Lab Sample ID: 890-5210-1**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.02 g | 5 mL | 62082 | 09/08/23 11:01 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 62040 | 09/08/23 23:02 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 62181 | 09/11/23 13:03 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 62142 | 09/11/23 09:54 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.95 g | 10 mL | 62104 | 09/08/23 15:19 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 62025 | 09/08/23 22:49 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.01 g | 50 mL | 62151 | 09/11/23 10:13 | AG | EET MID |
| Soluble | Analysis | 300.0 | | 5 | | | 62323 | 09/12/23 19:29 | CH | EET MID |

## Client Sample ID: BH01A

**Date Collected: 09/06/23 08:55**
**Date Received: 09/06/23 15:19**

**Lab Sample ID: 890-5210-2**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.03 g | 5 mL | 62082 | 09/08/23 11:01 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 62040 | 09/08/23 23:23 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 62181 | 09/11/23 13:03 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 62142 | 09/11/23 09:54 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.91 g | 10 mL | 62104 | 09/08/23 15:19 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 62025 | 09/08/23 23:12 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.95 g | 50 mL | 62151 | 09/11/23 10:13 | AG | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 62323 | 09/12/23 19:36 | CH | EET MID |

## Client Sample ID: SS01

**Date Collected: 09/06/23 09:00**
**Date Received: 09/06/23 15:19**

**Lab Sample ID: 890-5210-3**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.01 g | 5 mL | 62082 | 09/08/23 11:01 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 62040 | 09/08/23 23:43 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 62181 | 09/11/23 13:03 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 62142 | 09/11/23 09:54 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.96 g | 10 mL | 62104 | 09/08/23 15:19 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 62025 | 09/08/23 23:35 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.97 g | 50 mL | 62151 | 09/11/23 10:13 | AG | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 62323 | 09/12/23 19:43 | CH | EET MID |

## Client Sample ID: SS02

**Date Collected: 09/06/23 09:05**
**Date Received: 09/06/23 15:19**

**Lab Sample ID: 890-5210-4**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.97 g | 5 mL | 62082 | 09/08/23 11:01 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 62040 | 09/09/23 00:04 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 62181 | 09/11/23 13:03 | SM | EET MID |

# Lab Chronicle

Client: Ensolum
Project/Site: James Ranch Unit 19 Tank Battery

Job ID: 890-5210-1
SDG: 03C1558267

## Client Sample ID: SS02

**Date Collected: 09/06/23 09:05**
**Date Received: 09/06/23 15:19**

## Lab Sample ID: 890-5210-4

**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 | | | 62142 | 09/11/23 09:54 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.03 g | 10 mL | 62104 | 09/08/23 15:19 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 62025 | 09/08/23 23:58 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.01 g | 50 mL | 62151 | 09/11/23 10:13 | AG | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 62323 | 09/12/23 20:03 | CH | EET MID |

## Client Sample ID: SS03

**Date Collected: 09/06/23 09:10**
**Date Received: 09/06/23 15:19**

## Lab Sample ID: 890-5210-5

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.99 g | 5 mL | 62082 | 09/08/23 11:01 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 62040 | 09/09/23 00:24 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 62181 | 09/11/23 13:03 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 62142 | 09/11/23 09:54 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.09 g | 10 mL | 62104 | 09/08/23 15:19 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 62025 | 09/09/23 00:20 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.03 g | 50 mL | 62151 | 09/11/23 10:13 | AG | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 62323 | 09/12/23 20:09 | CH | EET MID |

## Client Sample ID: SS04

**Date Collected: 09/06/23 09:15**
**Date Received: 09/06/23 15:19**

## Lab Sample ID: 890-5210-6

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.02 g | 5 mL | 62082 | 09/08/23 11:01 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 62040 | 09/09/23 00:45 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 62181 | 09/11/23 13:03 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 62142 | 09/11/23 09:53 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.10 g | 10 mL | 62104 | 09/08/23 15:19 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 62025 | 09/09/23 00:43 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.98 g | 50 mL | 62151 | 09/11/23 10:13 | AG | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 62323 | 09/12/23 20:16 | 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: James Ranch Unit 19 Tank Battery

Job ID: 890-5210-1
SDG: 03C1558267

## Laboratory: Eurofins Midland

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

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

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

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

# Method Summary

Client: Ensolum
Project/Site: James Ranch Unit 19 Tank Battery

Job ID: 890-5210-1
SDG: 03C1558267

| 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: James Ranch Unit 19 Tank Battery

Job ID: 890-5210-1
SDG: 03C1558267

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Depth |
|---|---|---|---|---|---|
| 890-5210-1 | BH01 | Solid | 09/06/23 08:50 | 09/06/23 15:19 | 0.5 |
| 890-5210-2 | BH01A | Solid | 09/06/23 08:55 | 09/06/23 15:19 | 1 |
| 890-5210-3 | SS01 | Solid | 09/06/23 09:00 | 09/06/23 15:19 | 0.5 |
| 890-5210-4 | SS02 | Solid | 09/06/23 09:05 | 09/06/23 15:19 | 0.5 |
| 890-5210-5 | SS03 | Solid | 09/06/23 09:10 | 09/06/23 15:19 | 0.5 |
| 890-5210-6 | SS04 | Solid | 09/06/23 09:15 | 09/06/23 15:19 | 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: | Ben Belill | Bill to: (if different) | Garrett Green |
| Company Name: | Ensolum, LLC | Company Name: | XTO Energy |
| Address: | 3122 Nat'l Parks Hwy | Address: | 3104 E Greene St |
| City, State ZIP: | Carlsbad, NM 88220 | City, State ZIP: | Carlsbad, NM 88220 |
| Phone: | 989-854-0852 | Email: | bbelill@ensolum.com |

**Work Order Comments**

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

| | | | |
|---|---|---|---|
| Project Name: | James Ranch Unit 19 Tank Battery | Turn Around | ☑ Routine ☐ Rush |
| Project Number: | 03C1558267 | | |
| Project Location: | 32.346467, -103.832156 | Due Date: | |
| Sampler's Name: | Meredith Roberts | TAT starts the day received by the lab, if received by 4:30pm | |
| PO #: | | | |

| SAMPLE RECEIPT | | | | |
|---|---|---|---|---|
| Temp Blank: | Yes No | Wet Ice: | Yes No | |
| Samples Received Intact: | Yes No | Thermometer ID: | TM007 | |
| Cooler Custody Seals: | Yes No N/A | Correction Factor: | -0.2 | |
| Sample Custody Seals: | Yes No N/A | Temperature Reading: | 4.8 | |
| Total Containers: | | Corrected Temperature: | 4.6 | |

ANALYSIS REQUEST

Preservative Codes

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

| Sample Identification | Matrix | Date Sampled | Time Sampled | Depth | Grab/ Comp | # of Cont | Pres. Code | Parameters: BTEX | Chlorides | TPH | Sample Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BH01 | S | 9/6/23 | 0850 | 0.5' | G | 1 | | X | X | X | Incident #: |
| BH01A | | | 0855 | 1' | | | | | | | nAPP2322348507 |
| SS01 | | | 0900 | 0.5' | | | | | | | |
| SS02 | | | 0905 | | | | | | | | Cost Center: |
| SS03 | | | 0910 | | | | | | | | 1081093100 |
| SS04 | | | 0915 | | | | | | | | |
| | | | | | | | | | | | mroberts@ensolum.com |

890-5210 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 | | 9-6-23 15:14 | 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

eurofins | Environment Testing

| Client Information (Sub Contract Lab) | Sampler | Lab PM: Kramer, Jessica | Carrier Tracking No(s): | COC No: 890-1488 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 #: 890-5210-1 |
| Address: 1211 W. Florida Ave | Due Date Requested: 9/12/2023 | | | |
| City: Midland | TAT Requested (days): | | | |
| State, Zip: TX, 79701 | | | | |
| Phone: 432-704-5440(Tel) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: XTO Project | Project #: 89000093 | | | |
| Site | SSOW#: | | | |

**Analysis Requested**

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

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 8015MOD_NM/8015NM_S_Prep (MOD) Full TPH | 8015MOD_Calc | 300_ORGFM_28D/DI_LEACH Chloride | 8021B/5035FP_Calc (MOD) BTEX | Total_BTEX_GCV | Total Number of containers | Special Instructions/Note. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Preservation Code: | | | | | | | | | | | | | |
| BH01 (890-5210-1) | 9/6/23 | 08 50 Mountain | | Solid | | | X | X | X | X | X | 1 | |
| BH01A (890-5210-2) | 9/6/23 | 08 55 Mountain | | Solid | | | X | X | X | X | X | 1 | |
| SS01 (890-5210-3) | 9/6/23 | 09 00 Mountain | | Solid | | | X | X | X | X | X | 1 | |
| SS02 (890-5210-4) | 9/6/23 | 09 05 Mountain | | Solid | | | X | X | X | X | X | 1 | |
| SS03 (890-5210-5) | 9/6/23 | 09 10 Mountain | | Solid | | | X | X | X | X | X | 1 | |
| SS04 (890-5210-6) | 9/6/23 | 09 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: Unconfirmed | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
|---|---|
| Deliverable Requested: I, II, III, IV, Other (specify) — Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |
| Empty Kit Relinquished by: | Date: Time: Method of Shipment: |

| Relinquished by | Date/Time | Company | Received by | Date/Time | Company |
|---|---|---|---|---|---|
| | | | Kramer | | |
| 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: 5.4/5.1 |
|---|---|---|

Ver: 06/08/2021

# Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5210-1
SDG Number: 03C1558267

**Login Number: 5210**
**List Number: 1**
**Creator: Lopez, Abraham**

**List Source: Eurofins Carlsbad**

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

# Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5210-1
SDG Number: 03C1558267

**Login Number: 5210**
**List Number: 2**
**Creator: Kramer, Jessica**

**List Source: Eurofins Midland**
**List Creation: 09/08/23 10:49 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 | |

ENSOLUM

# APPENDIX E

## NMOCD Notifications

## Collins, Melanie

**From:** Collins, Melanie
**Sent:** Monday, July 31, 2023 4:31 PM
**To:** ocd.enviro (ocd.enviro@emnrd.nm.gov); Hamlet, Robert, EMNRD (Robert.Hamlet@emnrd.nm.gov); Bratcher, Michael, EMNRD (mike.bratcher@emnrd.nm.gov); Harimon, Jocelyn, EMNRD (Jocelyn.Harimon@emnrd.nm.gov)
**Cc:** Green, Garrett J; DelawareSpills /SM
**Subject:** 24-hour notification JRU 19 7/30/23

All,

This is notification of a release greater than 25 Barrels that occurred yesterday at the JRU 19 Battery location. Details will be provided with a Form C-141.

GPS 32.346467, -103.832156

Thank you,

*Melanie Collins*

XTO ENERGY

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

**From:** Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>
**Sent:** Thursday, August 31, 2023 10:01 AM
**To:** Collins, Melanie <melanie.collins@exxonmobil.com>
**Cc:** Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>
**Subject:** RE: [EXTERNAL] XTO - Sampling Notification (Week of 9/5/23 - 9/8/23)

**External Email - Think Before You Click**

Hi Melanie,

The OCD has received your notification. When reporting sampling at multiple locations it is required to provide the date and time for each location. Include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Thank you,

Shelly

Shelly Wells * Environmental Specialist-Advanced
Environmental Bureau
EMNRD-Oil Conservation Division
1220 S. St. Francis Drive|Santa Fe, NM 87505
(505)469-7520|Shelly.Wells@emnrd.nm.gov
http://www.emnrd.state.nm.us/OCD/

**From:** Collins, Melanie <melanie.collins@exxonmobil.com>
**Sent:** Thursday, August 31, 2023 8:49 AM
**To:** Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; spills@slo.state.nm.us
**Cc:** bbelill@ensolum.com; Green, Garrett J <garrett.green@exxonmobil.com>
**Subject:** [EXTERNAL] XTO - Sampling Notification (Week of 9/5/23 - 9/8/23)

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

All,

XTO plans to complete final sampling activities at the sites listed below for the week of September 5, 2023.

Tuesday
- PLU 18 TWR Sat Battery / nAPP2230551957

Wednesday
- PLU 18 TWR Sat Battery / nAPP2230551957
- James Ranch Unit 19 Tank Battery / NAPP2322348507 (SLO)

Thursday
- PLU 18 TWR Sat Battery / nAPP2230551957
- James Ranch Unit 2 702H / nAPP2211654411
- JRU 108 / nAPP2217931599
- Hudson 1 Fed Com 9H / nAPP2322645119

Friday
- PLU 18 TWR Sat Battery / nAPP2230551957
- JRU 108 / nAPP2217931599
- Hudson 1 Fed Com 9H / nAPP2322645119

Thank you,

*Melanie Collins*

XTO ENERGY

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

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

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

CONDITIONS

Action 279758

## CONDITIONS

| | |
|---|---|
| Operator:<br>XTO ENERGY, INC<br>6401 Holiday Hill Road<br>Midland, TX 79707 | OGRID:<br>5380 |
| | Action Number:<br>279758 |
| | Action Type:<br>[C-141] Release Corrective Action (C-141) |

**CONDITIONS**

| Created By | Condition | Condition Date |
|---|---|---|
| rhamlet | We have received your Remediation Closure Report for Incident #NAPP2322348507 JAMES RANCH UNIT 19 TANK BATTERY, thank you. This Remediation Closure Report is approved. Areas reasonably needed for production or subsequent drilling operations will need to be reclaimed and revegetated as soon as they are no longer reasonably needed. A report for reclamation and revegetation including pictures of the contoured backfilled excavation surface and a thorough discussion on reseeding mixture, vegetation ratio, timelines, etc.., will need to be submitted and approved prior to this incident receiving the final status of "Restoration Complete". | 2/29/2024 |
| rhamlet | The reclamation report will need to include: Executive Summary of the reclamation activities; Scaled Site Map including sampling locations; Analytical results including, but not limited to, results showing that any remaining impacts meet the reclamation standards and results to prove the backfill is non-waste containing if the back fill is coming from a rancher's pit or other local source AND/OR proof from the landfill/landfarm that their backfill is non-waste containing; pictures of the backfilled areas showing that the area is back, as nearly as practical, to the original condition or the final land use and maintain those areas to control dust and minimize erosion to the extent practical; pictures of the top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater; and a revegetation plan. | 2/29/2024 |