| Location: | JRU DI 11 Elkaka 183H | |
|---|---|---|
| Spill Date: | 8/20/2022 | |

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

| Area 2 | | |
|---|---|---|
| Approximate Area = | 7183.00 | sq. ft. |
| Average Saturation (or depth) of spill = | 2.50 | inches |

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

| VOLUME OF LEAK | | |
|---|---|---|
| Total Crude Oil = | 0.00 | bbls |
| Total Produced Water = | 10.00 | bbls |

| TOTAL VOLUME OF LEAK | | |
|---|---|---|
| **Total Crude Oil =** | **0.00** | **bbls** |
| **Total Produced Water =** | **30.00** | **bbls** |
| **TOTAL VOLUME RECOVERED** | | |
| **Total Crude Oil =** | **0.00** | **bbls** |
| **Total Produced Water =** | **22.00** | **bbls** |

ENSOLUM

April 12, 2024

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

**Re: Closure Request**
**JRU DI 11 Ekalaka 823H**
**Incident Number NAPP2224527297**
**Eddy County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum) on behalf of XTO Energy, Inc. (XTO), has prepared this *Closure Request* to document excavation and soil sampling activities performed at the JRU DI 11 Ekalaka 823H (Site). The purpose of excavation and soil sampling activities, conducted in accordance with an approved *Remediation Work Plan* (*RWP) and Remediation Work Plan Addendum (RWPA)*, was to address impacts to soil resulting from a release of produced water containing friction reducer (FR) at the Site. XTO is submitting this *Closure Request*, describing excavation activities that have occurred and requesting no further remediation for Incident Number NAPP2224527297.

## SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit J, Section 17, Township 22 South, Range 30 East, in Eddy County, New Mexico (32.39098°, -103.90321°) 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 August 20, 2022, sand erosion of coil tubing attached to a pump truck caused the tubing to split, resulting in the release of 30 barrels (bbls) of produced water with FR into a temporary lined containment and onto the surface of the well pad. A vacuum truck was dispatched to the Site to recover free standing fluids, approximately 22 bbls of fluids were recovered. XTO immediately reported the release to the New Mexico Oil Conservation Division (NMOCD) via email on August 22, 2022, and submitted a Release Notification Form C-141 (Form C-141) on September 1, 2022. The release was assigned Incident Number NAPP2224527297.

Ensolum conducted Site assessment, delineation and excavation activities and presented the results in the *RWP* and most recently, the *RWPA.* The *RWP* was submitted on February 15, 2023, and approved by NMOCD on June 16, 2023. The *RWPA* was submitted on September 14, 2023, and approved by NMOCD on February 14, 2024. The RWP proposed excavation of impacted soil identified during delineation activities, and the *RWPA* proposed removal of total petroleum hydrocarbons (TPH)-impacted soil found in two confirmation floor soil sample locations (FS33A and FS34A). Delineation soil sample locations are shown on Figure 2, excavation soil sample locations are shown on Figure 3, and laboratory analytical results can be found on Table 1.

## SITE CHARACTERIZATION AND CLOSURE CRITERIA

As documented in the approved *RWP*, 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
- TPH: 100 mg/kg
- Chloride: 600 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.

## EXCAVATION SOIL SAMPLING ACTIVITIES

As documented in the approved *RWPA*, Ensolum personnel were onsite between August 22 and September 7, 2023, to excavate impacted soil according to the approved *RWP.* Excavation activities were performed by use of heavy equipment. To direct excavation activities, soil was field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. Once field screening indicated impacted soil was adequately removed, 5-point composite soil samples were collected every 200 square feet from the floor and sidewall of the excavation extent. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Confirmation soil samples FS01 through FS41 were collected from the floor of the excavation at depths ranging from 2 feet to 9 feet bgs. Confirmation soil samples FS21 through FS24 were collected within the excavation in localized areas at depths ranging from 6 feet to 9 feet bgs and as such, the sidewalls of those isolated depths were incorporated into each composite soil sample. Confirmation soil samples SW01 through SW06 were collected from the sidewalls of the excavation at depths ranging from the ground surface to 3 feet bgs. The confirmation soil sample locations were mapped utilizing a Global Positioning System (GPS) unit and are depicted on Figure 3.

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

On October 12, 2023, Ensolum personnel returned to the Site to oversee the excavation of TPH-impacted soil located in the vicinity of confirmation floor soil sample locations FS33A and FS34A, each collected at 3 feet bgs. Heavy equipment was utilized to complete the excavation to a total depth of 4 feet bgs for both areas. Following the removal of the soil, confirmation floor soil samples FS33B and FS34B were collected at 4 feet bgs. The confirmation soil samples were collected, handled, and submitted for the same COCs as described above. The confirmation soil sample locations were mapped

utilizing a GPS unit and are depicted on Figure 3. Photographic documentation of the excavation extent is provided in Appendix A

The final excavation extent measured approximately 8,154 square feet. A total of approximately 1,230 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and disposed of at the R360 Landfill Disposal Facility in Hobbs, New Mexico. The final excavation was fenced off pending backfilling.

## LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for all excavation floor and sidewall samples indicated COC concentrations were compliant with the Closure Criteria. Laboratory analytical results are summarized on the attached Table 1 and the complete laboratory analytical reports are included in Appendix B. All soil sampling notification correspondence are provided in Appendix C.

## CLOSURE REQUEST

Excavation activities were conducted at the Site as indicated in the *RWP* and *RWPA* to address the August 2022 release of produced water with FR. Laboratory analytical results for all excavation soil samples collected indicate COC concentrations were compliant with the Closure Criteria. Based on the soil sample laboratory analytical results, no further remediation is required. The excavation has been backfilled with material purchased locally and the Site has been recontoured to match pre-existing Site conditions. Photographic documentation of the backfill is provided in Appendix A.

Excavation of soil has mitigated impacts exceeding the Closure Criteria at the Site. XTO believes these remedial actions are protective of human health, the environment, and groundwater. As such, XTO respectfully requests closure for Incident Number NAPP2224527297.

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

Sincerely,
**Ensolum, LLC**

Benjamin J. Belill
Senior Geologist

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

cc: Amy Ruth, XTO
Amanda Garcia, XTO
NMSLO

Appendices:

Figure 1 Site Receptor Map
Figure 2 Delineation Soil Sample Locations
Figure 3 Excavation Soil Sample Locations
Table 1 Soil Sample Analytical Results

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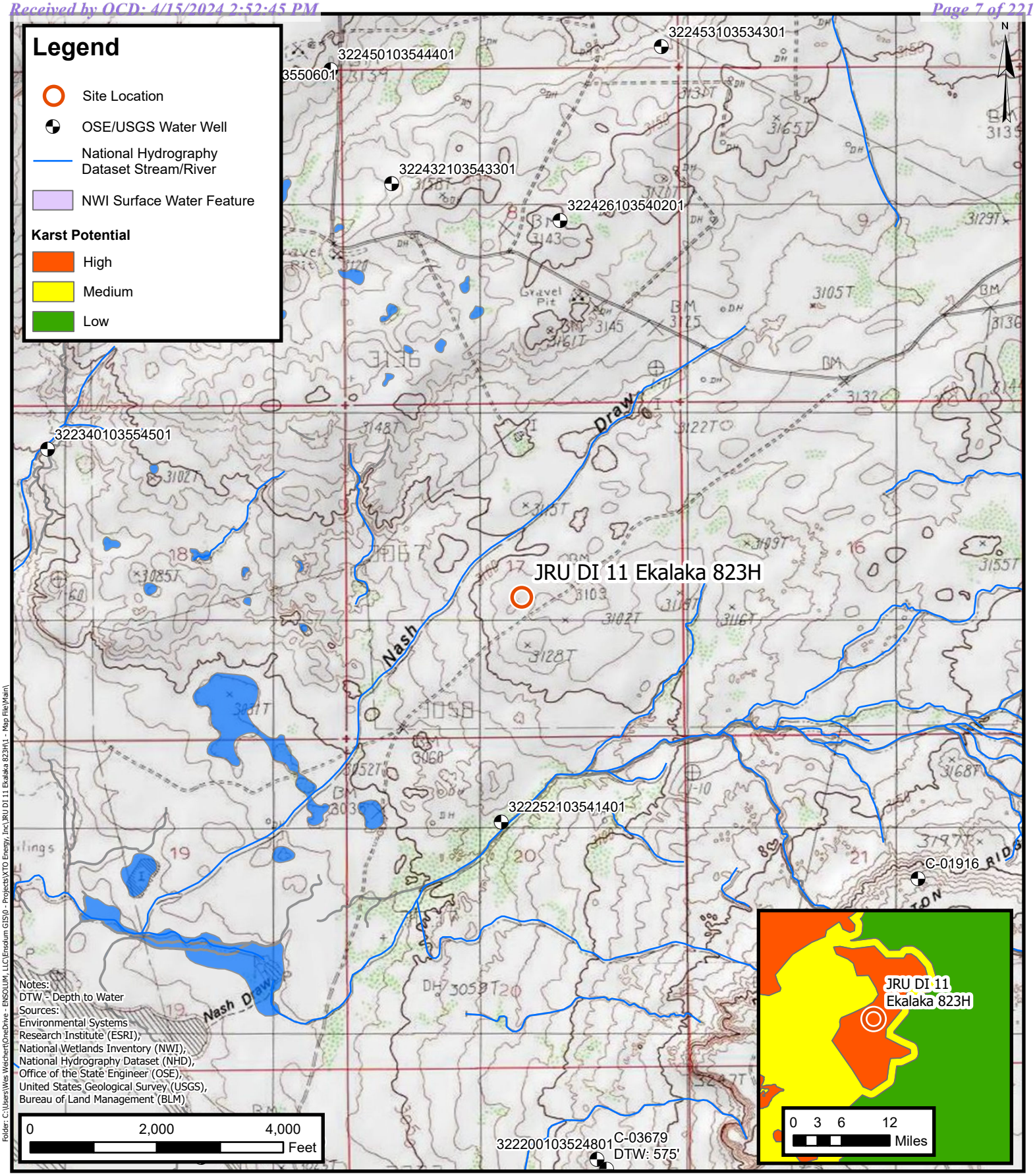
# Figures

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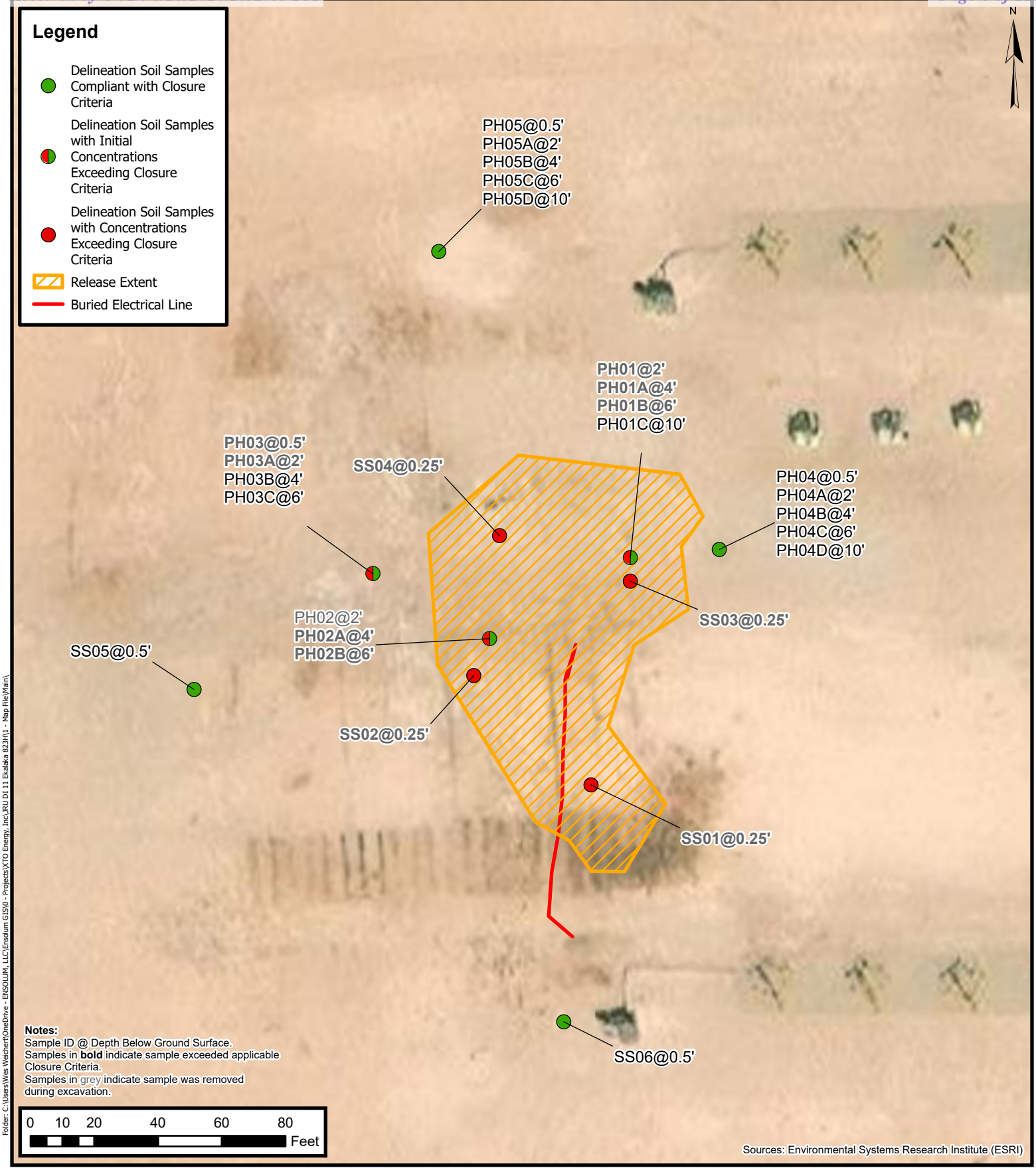
Environmental, Engineering and Hydrogeologic Consultants

# Site Receptor Map

XTO Energy, Inc
JRU DI Ekalaka 823H
Incident Number: NAPP2224527297
Unit J, Sec 17, T22S, R30E
Eddy County, New Mexico, United States

**FIGURE 1**

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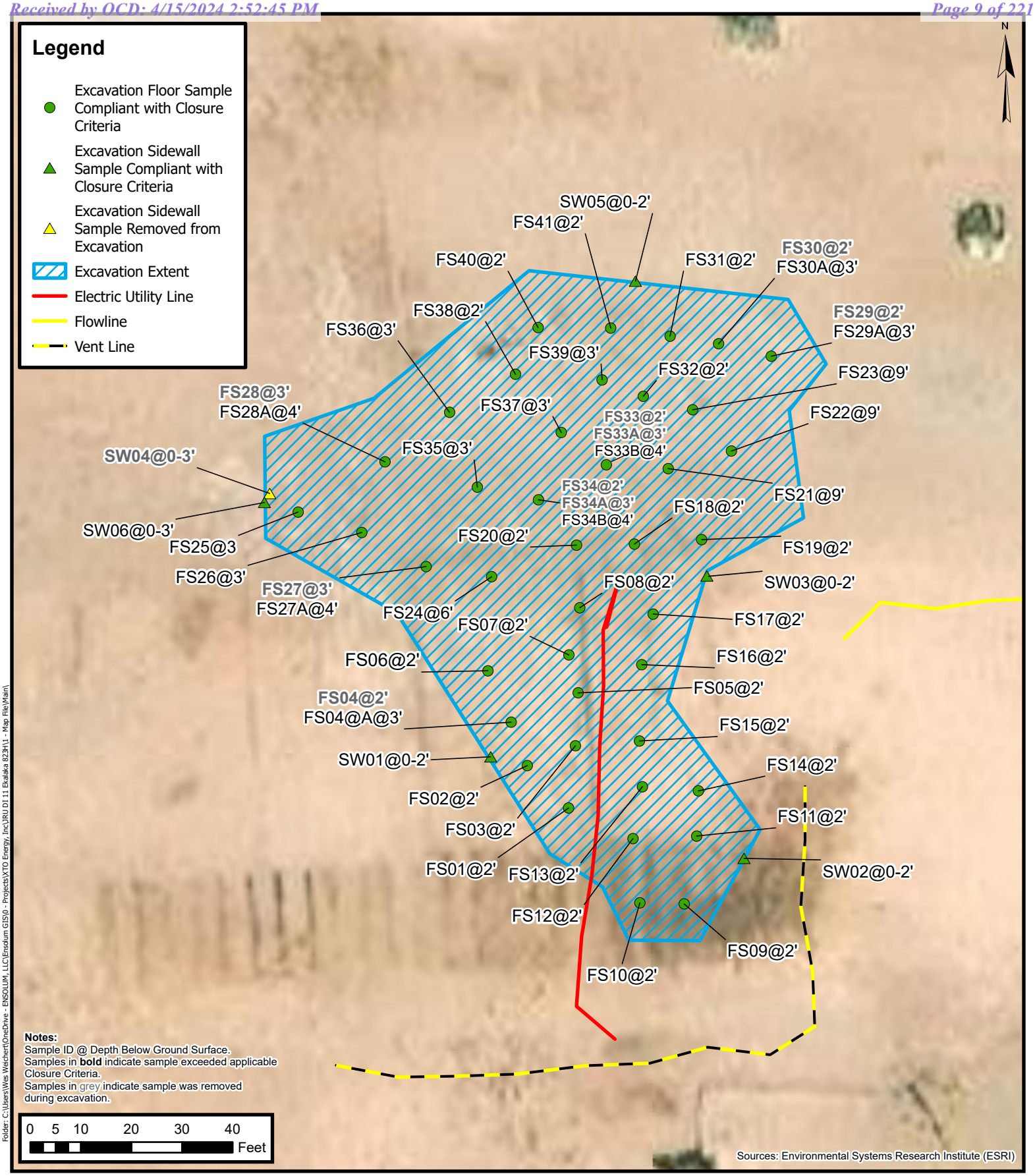
# Delineation Soil Sample Locations

XTO Energy, Inc
JRU DI Ekalaka 823H
Incident Number: NAPP2224527297
Unit J, Sec 17, T22S, R30E
Eddy County, New Mexico, United States

**FIGURE 2**

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# Excavation Soil Sample Locations

XTO Energy, Inc
JRU DI Ekalaka 823H
Incident Number: NAPP2224527297
Unit J, Sec 17, T22S, R30E
Eddy County, New Mexico, United States

**FIGURE 3**

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Table

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# TABLE 1
## SOIL SAMPLE ANALYTICAL RESULTS
## JRU DI 11 Ekalaka 823H
## XTO Energy, Inc
## Eddy County, New Mexico

| Sample I.D. | Sample Date | Sample Depth (feet bgs) | Benzene (mg/kg) | Total BTEX (mg/kg) | TPH GRO (mg/kg) | TPH DRO (mg/kg) | TPH ORO (mg/kg) | GRO+DRO (mg/kg) | Total TPH (mg/kg) | Chloride (mg/kg) |
|---|---|---|---|---|---|---|---|---|---|---|
| NMOCD Table I Closure Criteria (NMAC 19.15.29) | | | 10 | 50 | NE | NE | NE | NE | 100 | 600 |
| Delineation Soil Samples | | | | | | | | | | |
| ~~SS01~~ | ~~09/26/2022~~ | ~~0.25~~ | ~~<0.00201~~ | ~~<0.00402~~ | ~~<50.0~~ | ~~4,610~~ | ~~314~~ | ~~4,610~~ | ~~**4,920**~~ | ~~**10,400**~~ |
| ~~SS02~~ | ~~09/26/2022~~ | ~~0.25~~ | ~~<0.00202~~ | ~~<0.00403~~ | ~~<50.0~~ | ~~3,960~~ | ~~1,030~~ | ~~3,960~~ | ~~**4,990**~~ | ~~**4,440**~~ |
| ~~SS03~~ | ~~09/26/2022~~ | ~~0.25~~ | ~~<0.00199~~ | ~~<0.00398~~ | ~~<250~~ | ~~5,730~~ | ~~1,390~~ | ~~5,730~~ | ~~**7,120**~~ | ~~**4,690**~~ |
| ~~SS04~~ | ~~09/26/2022~~ | ~~0.25~~ | ~~<0.00200~~ | ~~<0.00399~~ | ~~<250~~ | ~~6,320~~ | ~~984~~ | ~~6,320~~ | ~~**7,300**~~ | ~~**30,400**~~ |
| SS05 | 08/30/2023 | 0.5 | <0.00201 | <0.00402 | <50.5 | <50.5 | <50.5 | <50.5 | <50.5 | 230 |
| SS06 | 08/30/2023 | 0.5 | <0.00200 | <0.00401 | <50.1 | <50.1 | <50.1 | <50.1 | <50.1 | 195 |
| ~~PH01~~ | ~~11/02/2022~~ | ~~2~~ | ~~<0.00199~~ | ~~<0.00398~~ | ~~<50.0~~ | ~~<50.0~~ | ~~<50.0~~ | ~~<50.0~~ | ~~<50.0~~ | ~~**5,690**~~ |
| ~~PH01A~~ | ~~11/02/2022~~ | ~~4~~ | ~~<0.00200~~ | ~~<0.00399~~ | ~~<49.9~~ | ~~<49.9~~ | ~~<49.9~~ | ~~<49.9~~ | ~~<49.9~~ | ~~**11,700**~~ |
| ~~PH01B~~ | ~~11/02/2022~~ | ~~6~~ | ~~<0.00201~~ | ~~<0.00402~~ | ~~<49.9~~ | ~~<49.9~~ | ~~<49.9~~ | ~~<49.9~~ | ~~<49.9~~ | ~~**8,960**~~ |
| PH01C | 11/02/2022 | 10 | <0.00199 | <0.00398 | <49.9 | <49.9 | <49.9 | <49.9 | <49.9 | 56.0 |
| ~~PH02~~ | ~~11/03/2022~~ | ~~2~~ | ~~<0.00202~~ | ~~<0.00403~~ | ~~<50.0~~ | ~~<50.0~~ | ~~<50.0~~ | ~~<50.0~~ | ~~<50.0~~ | ~~123~~ |
| ~~PH02A~~ | ~~11/03/2022~~ | ~~4~~ | ~~<0.00200~~ | ~~<0.00399~~ | ~~<50.0~~ | ~~<50.0~~ | ~~<50.0~~ | ~~<50.0~~ | ~~<50.0~~ | ~~**1,190**~~ |
| ~~PH02B~~ | ~~11/03/2022~~ | ~~6~~ | ~~<0.00198~~ | ~~<0.00396~~ | ~~<50.0~~ | ~~147~~ | ~~<50.0~~ | ~~147~~ | ~~**147**~~ | ~~**1,150**~~ |
| ~~PH03~~ | ~~11/03/2022~~ | ~~0.5~~ | ~~<0.00201~~ | ~~<0.00402~~ | ~~<50.0~~ | ~~<50.0~~ | ~~<50.0~~ | ~~<50.0~~ | ~~<50.0~~ | ~~**3,170**~~ |
| ~~PH03A~~ | ~~11/03/2022~~ | ~~2~~ | ~~<0.00199~~ | ~~<0.00398~~ | ~~<50.0~~ | ~~<50.0~~ | ~~<50.0~~ | ~~<50.0~~ | ~~<50.0~~ | ~~**2,950**~~ |
| PH03B | 11/03/2022 | 4 | <0.00199 | <0.00398 | <49.9 | <49.9 | <49.9 | <49.9 | <49.9 | 23.6 |
| PH03C | 11/03/2022 | 6 | <0.00200 | <0.00401 | <50.0 | <50.0 | <50.0 | <50.0 | <50.0 | 18.5 |
| PH04 | 11/03/2022 | 0.5 | <0.00200 | <0.00399 | <50.0 | <50.0 | <50.0 | <50.0 | <50.0 | 68.1 |
| PH04A | 11/03/2022 | 2 | <0.00200 | <0.00401 | <49.9 | <49.9 | <49.9 | <49.9 | <49.9 | 481 |
| PH04B | 11/03/2022 | 4 | <0.00200 | <0.00399 | <49.9 | <49.9 | <49.9 | <49.9 | <49.9 | 420 |
| PH04C | 11/03/2022 | 6 | <0.00198 | <0.00396 | <50.0 | <50.0 | <50.0 | <50.0 | <50.0 | 267 |
| PH04D | 11/03/2022 | 10 | <0.00200 | <0.00399 | <50.0 | <50.0 | <50.0 | <50.0 | <50.0 | 424 |
| PH05 | 11/03/2022 | 0.5 | <0.00199 | <0.00398 | <49.9 | <49.9 | <49.9 | <49.9 | <49.9 | 208 |
| PH05A | 11/03/2022 | 2 | <0.00198 | <0.00396 | <49.9 | <49.9 | <49.9 | <49.9 | <49.9 | 20.0 |
| PH05B | 11/03/2022 | 4 | <0.00200 | <0.00399 | <50.0 | <50.0 | <50.0 | <50.0 | <50.0 | 29.2 |
| PH05C | 11/03/2022 | 6 | <0.00201 | <0.00402 | <49.8 | <49.8 | <49.8 | <49.8 | <49.8 | 19.4 |
| PH05D | 11/03/2022 | 10 | <0.00202 | <0.00403 | <49.9 | <49.9 | <49.9 | <49.9 | <49.9 | 15.7 |

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**TABLE 1**
**SOIL SAMPLE ANALYTICAL RESULTS**
**JRU DI 11 Ekalaka 823H**
**XTO Energy, Inc**
**Eddy County, New Mexico**

| Sample I.D. | Sample Date | Sample Depth (feet bgs) | Benzene (mg/kg) | Total BTEX (mg/kg) | TPH GRO (mg/kg) | TPH DRO (mg/kg) | TPH ORO (mg/kg) | GRO+DRO (mg/kg) | Total TPH (mg/kg) | Chloride (mg/kg) |
|---|---|---|---|---|---|---|---|---|---|---|
| NMOCD Table I Closure Criteria (NMAC 19.15.29) | | | 10 | 50 | NE | NE | NE | NE | 100 | 600 |
| Excavation Soil Samples | | | | | | | | | | |
| FS01 | 08/28/2023 | 2 | <0.00201 | <0.00402 | <50.3 | <50.3 | <50.3 | <50.3 | <50.3 | 534 |
| FS02 | 08/28/2023 | 2 | <0.00202 | <0.00404 | <50.5 | <50.5 | <50.5 | <50.5 | <50.5 | 440 |
| FS03 | 08/28/2023 | 2 | <0.00200 | <0.00401 | <49.7 | <49.7 | <49.7 | <49.7 | <49.7 | 584 |
| ~~FS04~~ | ~~08/28/2023~~ | ~~2~~ | ~~<0.00200~~ | ~~<0.00399~~ | ~~<49.9~~ | ~~<49.9~~ | ~~<49.9~~ | ~~<49.9~~ | ~~<49.9~~ | ~~719~~ |
| FS04A | 09/07/2023 | 3 | <0.00202 | <0.00403 | <50.3 | <50.3 | <50.3 | <50.3 | <50.3 | 64.6 |
| FS05 | 08/28/2023 | 2 | <0.00198 | <0.00396 | <50.0 | <50.0 | <50.0 | <50.0 | <50.0 | 415 |
| FS06 | 08/28/2023 | 2 | <0.00202 | <0.00403 | <50.3 | <50.3 | <50.3 | <50.3 | <50.3 | 369 |
| FS07 | 08/28/2023 | 2 | <0.00200 | <0.00399 | <50.1 | <50.1 | <50.1 | <50.1 | <50.1 | 122 |
| FS08 | 08/28/2023 | 2 | <0.00200 | <0.00400 | <50.5 | <50.5 | <50.5 | <50.5 | <50.5 | 168 |
| FS09 | 08/29/2023 | 2 | <0.00199 | <0.00398 | <50.1 | <50.1 | <50.1 | <50.1 | <50.1 | 192 |
| FS10 | 08/29/2023 | 2 | <0.00202 | <0.00403 | <50.5 | <50.5 | <50.5 | <50.5 | <50.5 | 161 |
| FS11 | 08/29/2023 | 2 | <0.00201 | <0.00402 | <49.7 | <49.7 | <49.7 | <49.7 | <49.7 | 254 |
| FS12 | 08/29/2023 | 2 | <0.00202 | <0.00404 | <49.6 | <49.6 | <49.6 | <49.6 | <49.6 | 291 |
| FS13 | 08/29/2023 | 2 | <0.00200 | <0.00399 | <49.9 | <49.9 | <49.9 | <49.9 | <49.9 | 421 |
| FS14 | 08/29/2023 | 2 | <0.00198 | <0.00397 | <50.5 | <50.5 | <50.5 | <50.5 | <50.5 | 427 |
| FS15 | 08/29/2023 | 2 | <0.00202 | <0.00404 | <50.5 | <50.5 | <50.5 | <50.5 | <50.5 | 299 |
| FS16 | 08/29/2023 | 2 | <0.00200 | <0.00401 | <50.0 | 53.0 | <50.0 | 53.0 | 53.0 | 261 |
| FS17 | 08/29/2023 | 2 | <0.00198 | <0.00396 | <49.9 | 77.9 | <49.9 | 77.9 | 77.9 | 290 |
| FS18 | 08/29/2023 | 2 | <0.00202 | <0.00403 | <49.8 | <49.8 | <49.8 | <49.8 | <49.8 | 180 |
| FS19 | 08/29/2023 | 2 | <0.00199 | <0.00398 | <50.2 | <50.2 | <50.2 | <50.2 | <50.2 | 332 |
| FS20 | 08/29/2023 | 2 | <0.00198 | <0.00396 | <50.3 | 55.9 | <50.3 | 55.9 | 55.9 | 373 |
| FS21 | 08/29/2023 | 9 | <0.00201 | <0.00402 | <49.7 | <49.7 | <49.7 | <49.7 | <49.7 | 117 |
| FS22 | 08/29/2023 | 9 | <0.00200 | <0.00401 | <49.9 | <49.9 | <49.9 | <49.9 | <49.9 | 116 |
| FS23 | 08/29/2023 | 9 | <0.00202 | <0.00403 | <49.6 | <49.6 | <49.6 | <49.6 | <49.6 | 131 |
| FS24 | 08/29/2023 | 6 | <0.00199 | <0.00398 | <49.5 | 53.5 | <49.5 | 53.5 | 53.5 | 81.1 |

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**TABLE 1**
**SOIL SAMPLE ANALYTICAL RESULTS**
**JRU DI 11 Ekalaka 823H**
**XTO Energy, Inc**
**Eddy County, New Mexico**

| Sample I.D. | Sample Date | Sample Depth (feet bgs) | Benzene (mg/kg) | Total BTEX (mg/kg) | TPH GRO (mg/kg) | TPH DRO (mg/kg) | TPH ORO (mg/kg) | GRO+DRO (mg/kg) | Total TPH (mg/kg) | Chloride (mg/kg) |
|---|---|---|---|---|---|---|---|---|---|---|
| NMOCD Table I Closure Criteria (NMAC 19.15.29) | | | 10 | 50 | NE | NE | NE | NE | 100 | 600 |
| FS25 | 08/30/2023 | 3 | <0.00198 | <0.00396 | <50.1 | <50.1 | <50.1 | <50.1 | <50.1 | 315 |
| FS26 | 08/30/2023 | 3 | <0.00201 | <0.00402 | <49.8 | <49.8 | <49.8 | <49.8 | <49.8 | 526 |
| ~~FS27~~ | ~~08/30/2023~~ | ~~3~~ | ~~<0.00200~~ | ~~<0.00401~~ | ~~<50.3~~ | ~~<50.3~~ | ~~<50.3~~ | ~~<50.3~~ | ~~<50.3~~ | ~~983~~ |
| FS27A | 09/07/2023 | 4 | <0.00198 | <0.00396 | <49.5 | <49.5 | <49.5 | <49.5 | <49.5 | 410 |
| ~~FS28~~ | ~~08/30/2023~~ | ~~3~~ | ~~<0.00199~~ | ~~<0.00398~~ | ~~<50.2~~ | ~~<50.2~~ | ~~<50.2~~ | ~~<50.2~~ | ~~<50.2~~ | ~~625~~ |
| FS28A | 09/07/2023 | 4 | <0.00201 | <0.00402 | <50.3 | <50.3 | <50.3 | <50.3 | <50.3 | 405 |
| ~~FS29~~ | ~~08/30/2023~~ | ~~2~~ | ~~<0.00200~~ | ~~<0.00399~~ | ~~<50.1~~ | ~~<50.1~~ | ~~<50.1~~ | ~~<50.1~~ | ~~<50.1~~ | ~~942~~ |
| FS29A | 09/07/2023 | 3 | <0.00199 | <0.00398 | <50.5 | <50.5 | <50.5 | <50.5 | <50.5 | 453 |
| ~~FS30~~ | ~~08/30/2023~~ | ~~2~~ | ~~<0.00202~~ | ~~<0.00404~~ | ~~<49.6~~ | ~~<49.6~~ | ~~<49.6~~ | ~~<49.6~~ | ~~<49.6~~ | ~~859~~ |
| FS30A | 09/07/2023 | 3 | <0.00202 | <0.00403 | <50.1 | <50.1 | <50.1 | <50.1 | <50.1 | 412 |
| FS31 | 08/30/2023 | 2 | <0.00200 | <0.00401 | <49.9 | 53.0 | <49.9 | 53.0 | 53.0 | 193 |
| FS32 | 08/30/2023 | 2 | <0.00200 | <0.00400 | <49.6 | <49.6 | <49.6 | <49.6 | <49.6 | 198 |
| ~~FS33~~ | ~~08/30/2023~~ | ~~2~~ | ~~<0.00198~~ | ~~<0.00396~~ | ~~<50.0~~ | ~~115~~ | ~~<50.0~~ | ~~115~~ | ~~115~~ | ~~602~~ |
| ~~FS33A~~ | ~~09/07/2023~~ | ~~3~~ | ~~<0.00198~~ | ~~<0.00396~~ | ~~<49.9~~ | ~~553~~ | ~~<49.9~~ | ~~553~~ | ~~553~~ | ~~475~~ |
| FS33B | 10/12/2023 | 4 | <0.00202 | <0.00403 | <50.1 | <50.1 | <50.1 | <50.1 | <50.1 | 323 |
| ~~FS34~~ | ~~08/30/2023~~ | ~~2~~ | ~~<0.00202~~ | ~~<0.00403~~ | ~~<49.8~~ | ~~120~~ | ~~<49.8~~ | ~~120~~ | ~~120~~ | ~~540~~ |
| ~~FS34A~~ | ~~09/07/2023~~ | ~~3~~ | ~~<0.00200~~ | ~~<0.00399~~ | ~~<49.5~~ | ~~638~~ | ~~<49.5~~ | ~~638~~ | ~~638~~ | ~~871~~ |
| FS34B | 10/12/2023 | 4 | <0.00200 | <0.00400 | <50.5 | <50.5 | <50.5 | <50.5 | <50.5 | 348 |
| FS35 | 08/30/2023 | 3 | <0.00198 | <0.00397 | <50.5 | <50.5 | <50.5 | <50.5 | <50.5 | 426 |
| FS36 | 08/30/2023 | 3 | <0.00199 | <0.00398 | <49.7 | <49.7 | <49.7 | <49.7 | <49.7 | 398 |
| FS37 | 08/30/2023 | 3 | <0.00200 | <0.00399 | <49.6 | <49.6 | <49.6 | <49.6 | <49.6 | 362 |
| FS38 | 08/30/2023 | 2 | <0.00200 | <0.00400 | <50.5 | <50.5 | <50.5 | <50.5 | <50.5 | 410 |
| FS39 | 08/30/2023 | 3 | <0.00198 | <0.00396 | <50.3 | <50.3 | <50.3 | <50.3 | <50.3 | 244 |
| FS40 | 08/30/2023 | 2 | <0.00201 | <0.00402 | <50.4 | <50.4 | <50.4 | <50.4 | <50.4 | 162 |
| FS41 | 08/30/2023 | 2 | <0.00202 | <0.00403 | <50.1 | <50.1 | <50.1 | <50.1 | <50.1 | 123 |
| SW01 | 08/28/2023 | 0 - 2 | <0.00199 | <0.00398 | <50.5 | <50.5 | <50.5 | <50.5 | <50.5 | 235 |
| SW02 | 08/29/2023 | 0 - 2 | <0.00199 | <0.00398 | <49.8 | 77.9 | <49.8 | 77.9 | 77.9 | 188 |

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**TABLE 1**
**SOIL SAMPLE ANALYTICAL RESULTS**
**JRU DI 11 Ekalaka 823H**
**XTO Energy, Inc**
**Eddy County, New Mexico**

| Sample I.D. | Sample Date | Sample Depth (feet bgs) | Benzene (mg/kg) | Total BTEX (mg/kg) | TPH GRO (mg/kg) | TPH DRO (mg/kg) | TPH ORO (mg/kg) | GRO+DRO (mg/kg) | Total TPH (mg/kg) | Chloride (mg/kg) |
|---|---|---|---|---|---|---|---|---|---|---|
| **NMOCD Table I Closure Criteria (NMAC 19.15.29)** | | | **10** | **50** | **NE** | **NE** | **NE** | **NE** | **100** | **600** |
| SW03 | 08/29/2023 | 0 - 2 | <0.00200 | <0.00400 | <50.5 | <50.5 | <50.5 | <50.5 | <50.5 | 310 |
| ~~SW04~~ | ~~08/30/2023~~ | ~~0 - 3~~ | ~~<0.00201~~ | ~~<0.00402~~ | ~~<49.9~~ | ~~<49.9~~ | ~~<49.9~~ | ~~<49.9~~ | ~~<49.9~~ | ~~**660**~~ |
| SW05 | 08/30/2023 | 0 - 2 | <0.00202 | <0.00404 | <50.4 | 51.4 | <50.4 | 51.4 | 51.4 | 226 |
| SW06 | 09/07/2023 | 0 - 3 | <0.00200 | <0.00401 | <49.6 | <49.6 | <49.6 | <49.6 | <49.6 | 525 |

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

~~Grey~~ text indicates soil sample removed during excavation activities

ENSOLUM

# APPENDIX A

## Photographic Log

ENSOLUM

**Photographic Log**
XTO Energy, Inc
JRU DI 11 Ekalaka 823H
Incident Number NAPP2224527297


Photograph 1 Date: 9/26/2022
Description: Site assessment activities,release area.
View: South


Photograph 2 Date: 11/2/2022
Description: Delineation activities, area of PH01.
View: Southeast.


Photograph 3 Date: 8/30/2023
Description: Excavation extent area.
View: South


Photograph 4 Date: 8/30/2023
Description: Excavation extent area.
View: North

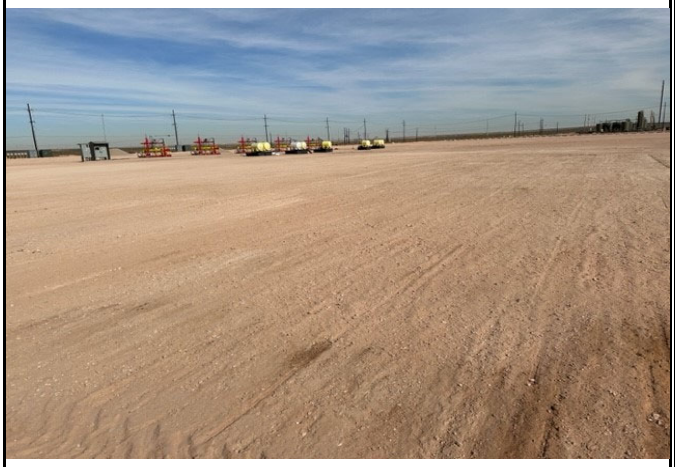
ENSOLUM

**Photographic Log**
XTO Energy, Inc
JRU DI 11 Ekalaka 823H
Incident Number NAPP2224527297


Photograph 5 Date: 9/7/2023
Description: Excavation extent.
View: Northeast


Photograph 6 Date: 10/12/2023
Description: Final excavation extent.
View: Southeast

Photograph 7 Date: 12/6/2023
Description: Excavation backfilled.
View: Southeast



Photograph 8 Date: 12/6/2023
Description: Excavation Backfilled.
View: Southwest

ENSOLUM

# APPENDIX B

## 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 9/6/2023 4:25:07 PM Revision 1

## JOB DESCRIPTION

JRU DI 11 Ekalaka 823H
SDG NUMBER 03C1558118

## JOB NUMBER

890-5168-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.





my EOL

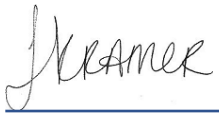
# Eurofins Carlsbad

## Job Notes

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
9/6/2023 4:25:07 PM
Revision 1

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

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Laboratory Job ID: 890-5168-1
SDG: 03C1558118

# Table of Contents

# Definitions/Glossary

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5168-1
SDG: 03C1558118

## Qualifiers

### GC VOA

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

### GC Semi VOA

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

### HPLC/IC

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

## Glossary

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

# Case Narrative

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5168-1
SDG: 03C1558118

## Job ID: 890-5168-1

### Laboratory: Eurofins Carlsbad

**Narrative**

**Job Narrative**
**890-5168-1**

REVISION

The report being provided is a revision of the original report sent on 9/1/2023. The report (revision 1) is being revised due to Per client email, requesting chlorides re run.

**Receipt**
The samples were received on 8/28/2023 3:30 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.2°C

**Receipt Exceptions**
The following samples were received and analyzed from an unpreserved bulk soil jar: FS01 (890-5168-1), FS02 (890-5168-2), FS03 (890-5168-3), FS04 (890-5168-4), FS05 (890-5168-5), FS06 (890-5168-6), FS07 (890-5168-7), FS08 (890-5168-8) and SW01 (890-5168-9).

**GC VOA**
Method 8021B: CCV was biased low for benzene. Another CCV was analyzed and acceptable within the method derived 12 hour window; therefore, the data was qualified and reported.(CCV 880-61519/33)

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-61602 and analytical batch 880-61519 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

**GC Semi VOA**
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-61574 and analytical batch 880-61588 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: FS01 (890-5168-1) and (890-5168-A-1-C MS). 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: FS02 (890-5168-2), FS03 (890-5168-3), FS04 (890-5168-4), FS05 (890-5168-5), FS06 (890-5168-6), FS07 (890-5168-7), FS08 (890-5168-8) and SW01 (890-5168-9). 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 880-61588/20) and (CCV 880-61588/5). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 880-61574 and analytical batch 880-61588 was outside control limits. Sample non-homogeneity is suspected.

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

**HPLC/IC**
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-61768 and analytical batch 880-61779 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

# Case Narrative

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5168-1
SDG: 03C1558118

## Job ID: 890-5168-1 (Continued)

### Laboratory: Eurofins Carlsbad (Continued)

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

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5168-1
SDG: 03C1558118

## Client Sample ID: FS01

**Date Collected: 08/28/23 09:40**
**Date Received: 08/28/23 15:30**
**Sample Depth: 2**

**Lab Sample ID: 890-5168-1**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00201 | U | 0.00201 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 03:38 | 1 |
| Toluene | <0.00201 | U | 0.00201 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 03:38 | 1 |
| Ethylbenzene | <0.00201 | U | 0.00201 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 03:38 | 1 |
| m-Xylene & p-Xylene | <0.00402 | U | 0.00402 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 03:38 | 1 |
| o-Xylene | <0.00201 | U | 0.00201 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 03:38 | 1 |
| Xylenes, Total | <0.00402 | U | 0.00402 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 03:38 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *88* | | *70 - 130* | *08/30/23 08:35* | *08/31/23 03:38* | *1* |
| *1,4-Difluorobenzene (Surr)* | *58* | *S1-* | *70 - 130* | *08/30/23 08:35* | *08/31/23 03:38* | *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 | | | 08/31/23 10:48 | 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 | | | 09/01/23 09:19 | 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 F2 | 50.3 | | mg/Kg | | 08/30/23 15:11 | 08/31/23 10:34 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.3 | U | 50.3 | | mg/Kg | | 08/30/23 15:11 | 08/31/23 10:34 | 1 |
| Oil Range Organics (Over C28-C36) | <50.3 | U | 50.3 | | mg/Kg | | 08/30/23 15:11 | 08/31/23 10:34 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *163* | *S1+* | *70 - 130* | *08/30/23 15:11* | *08/31/23 10:34* | *1* |
| *o-Terphenyl* | *140* | *S1+* | *70 - 130* | *08/30/23 15:11* | *08/31/23 10:34* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **534** | | 5.01 | | mg/Kg | | | 08/31/23 15:39 | 1 |

## Client Sample ID: FS02

**Date Collected: 08/28/23 09:45**
**Date Received: 08/28/23 15:30**
**Sample Depth: 2**

**Lab Sample ID: 890-5168-2**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U | 0.00202 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 05:00 | 1 |
| Toluene | <0.00202 | U | 0.00202 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 05:00 | 1 |
| Ethylbenzene | <0.00202 | U | 0.00202 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 05:00 | 1 |
| m-Xylene & p-Xylene | <0.00404 | U | 0.00404 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 05:00 | 1 |
| o-Xylene | <0.00202 | U | 0.00202 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 05:00 | 1 |
| Xylenes, Total | <0.00404 | U | 0.00404 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 05:00 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *85* | | *70 - 130* | *08/30/23 08:35* | *08/31/23 05:00* | *1* |

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5168-1
SDG: 03C1558118

## Client Sample ID: FS02

**Date Collected: 08/28/23 09:45**
**Date Received: 08/28/23 15:30**
**Sample Depth: 2**

**Lab Sample ID: 890-5168-2**
**Matrix: Solid**

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

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,4-Difluorobenzene (Surr)* | *66* | *S1-* | *70 - 130* | *08/30/23 08:35* | *08/31/23 05:00* | *1* |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00404 | U | 0.00404 | mg/Kg | | | 08/31/23 10:48 | 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 | | | 09/01/23 09:19 | 1 |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.5 | U | 50.5 | mg/Kg | | 08/30/23 15:11 | 08/31/23 11:39 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.5 | U | 50.5 | mg/Kg | | 08/30/23 15:11 | 08/31/23 11:39 | 1 |
| Oil Range Organics (Over C28-C36) | <50.5 | U | 50.5 | mg/Kg | | 08/30/23 15:11 | 08/31/23 11:39 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *140* | *S1+* | *70 - 130* | *08/30/23 15:11* | *08/31/23 11:39* | *1* |
| *o-Terphenyl* | *122* | | *70 - 130* | *08/30/23 15:11* | *08/31/23 11:39* | *1* |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Chloride** | **440** | | 4.99 | mg/Kg | | | 08/31/23 15:58 | 1 |

## Client Sample ID: FS03

**Date Collected: 08/28/23 09:50**
**Date Received: 08/28/23 15:30**
**Sample Depth: 2**

**Lab Sample ID: 890-5168-3**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | mg/Kg | | 08/30/23 08:35 | 08/31/23 05:20 | 1 |
| Toluene | <0.00200 | U | 0.00200 | mg/Kg | | 08/30/23 08:35 | 08/31/23 05:20 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | mg/Kg | | 08/30/23 08:35 | 08/31/23 05:20 | 1 |
| m-Xylene & p-Xylene | <0.00401 | U | 0.00401 | mg/Kg | | 08/30/23 08:35 | 08/31/23 05:20 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | mg/Kg | | 08/30/23 08:35 | 08/31/23 05:20 | 1 |
| Xylenes, Total | <0.00401 | U | 0.00401 | mg/Kg | | 08/30/23 08:35 | 08/31/23 05:20 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *137* | *S1+* | *70 - 130* | *08/30/23 08:35* | *08/31/23 05:20* | *1* |
| *1,4-Difluorobenzene (Surr)* | *68* | *S1-* | *70 - 130* | *08/30/23 08:35* | *08/31/23 05:20* | *1* |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00401 | U | 0.00401 | mg/Kg | | | 08/31/23 10:48 | 1 |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.7 | U | 49.7 | mg/Kg | | | 09/01/23 09:19 | 1 |

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5168-1
SDG: 03C1558118

## Client Sample ID: FS03

**Date Collected: 08/28/23 09:50**
**Date Received: 08/28/23 15:30**
**Sample Depth: 2**

**Lab Sample ID: 890-5168-3**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.7 | U | 49.7 | | mg/Kg | | 08/30/23 15:11 | 08/31/23 12:01 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.7 | U | 49.7 | | mg/Kg | | 08/30/23 15:11 | 08/31/23 12:01 | 1 |
| Oil Range Organics (Over C28-C36) | <49.7 | U | 49.7 | | mg/Kg | | 08/30/23 15:11 | 08/31/23 12:01 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *141* | *S1+* | *70 - 130* | *08/30/23 15:11* | *08/31/23 12:01* | *1* |
| *o-Terphenyl* | *121* | | *70 - 130* | *08/30/23 15:11* | *08/31/23 12:01* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **584** | | 5.02 | | mg/Kg | | | 09/02/23 05:12 | 1 |

## Client Sample ID: FS04

**Date Collected: 08/28/23 09:55**
**Date Received: 08/28/23 15:30**
**Sample Depth: 2**

**Lab Sample ID: 890-5168-4**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 05:40 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 05:40 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 05:40 | 1 |
| m-Xylene & p-Xylene | <0.00399 | U | 0.00399 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 05:40 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 05:40 | 1 |
| Xylenes, Total | <0.00399 | U | 0.00399 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 05:40 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *110* | | *70 - 130* | *08/30/23 08:35* | *08/31/23 05:40* | *1* |
| *1,4-Difluorobenzene (Surr)* | *56* | *S1-* | *70 - 130* | *08/30/23 08:35* | *08/31/23 05:40* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00399 | U | 0.00399 | | mg/Kg | | | 08/31/23 10:48 | 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 | | | 09/01/23 09:19 | 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 | | 08/30/23 15:11 | 08/31/23 12:23 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 08/30/23 15:11 | 08/31/23 12:23 | 1 |
| Oil Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 08/30/23 15:11 | 08/31/23 12:23 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *132* | *S1+* | *70 - 130* | *08/30/23 15:11* | *08/31/23 12:23* | *1* |
| *o-Terphenyl* | *109* | | *70 - 130* | *08/30/23 15:11* | *08/31/23 12:23* | *1* |

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5168-1
SDG: 03C1558118

## Client Sample ID: FS04

**Date Collected: 08/28/23 09:55**
**Date Received: 08/28/23 15:30**
**Sample Depth: 2**

**Lab Sample ID: 890-5168-4**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 719 | F1 | 5.00 | | mg/Kg | | | 09/02/23 05:19 | 1 |

## Client Sample ID: FS05

**Date Collected: 08/28/23 10:00**
**Date Received: 08/28/23 15:30**
**Sample Depth: 2**

**Lab Sample ID: 890-5168-5**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00198 | U | 0.00198 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 06:01 | 1 |
| Toluene | <0.00198 | U | 0.00198 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 06:01 | 1 |
| Ethylbenzene | <0.00198 | U | 0.00198 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 06:01 | 1 |
| m-Xylene & p-Xylene | <0.00396 | U | 0.00396 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 06:01 | 1 |
| o-Xylene | <0.00198 | U | 0.00198 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 06:01 | 1 |
| Xylenes, Total | <0.00396 | U | 0.00396 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 06:01 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *108* | | *70 - 130* | *08/30/23 08:35* | *08/31/23 06:01* | *1* |
| *1,4-Difluorobenzene (Surr)* | *59* | *S1-* | *70 - 130* | *08/30/23 08:35* | *08/31/23 06:01* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00396 | U | 0.00396 | | mg/Kg | | | 08/31/23 10:48 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.0 | U | 50.0 | | mg/Kg | | | 09/01/23 09:19 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 08/30/23 15:11 | 08/31/23 12:45 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 08/30/23 15:11 | 08/31/23 12:45 | 1 |
| Oil Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 08/30/23 15:11 | 08/31/23 12:45 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *134* | *S1+* | *70 - 130* | *08/30/23 15:11* | *08/31/23 12:45* | *1* |
| *o-Terphenyl* | *113* | | *70 - 130* | *08/30/23 15:11* | *08/31/23 12:45* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 415 | | 5.02 | | mg/Kg | | | 09/02/23 05:38 | 1 |

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5168-1
SDG: 03C1558118

## Client Sample ID: FS06

**Date Collected: 08/28/23 10:05**
**Date Received: 08/28/23 15:30**
**Sample Depth: 2**

**Lab Sample ID: 890-5168-6**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U | 0.00202 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 06:21 | 1 |
| Toluene | <0.00202 | U | 0.00202 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 06:21 | 1 |
| Ethylbenzene | <0.00202 | U | 0.00202 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 06:21 | 1 |
| m-Xylene & p-Xylene | <0.00403 | U | 0.00403 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 06:21 | 1 |
| o-Xylene | <0.00202 | U | 0.00202 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 06:21 | 1 |
| Xylenes, Total | <0.00403 | U | 0.00403 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 06:21 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *79* | | *70 - 130* | *08/30/23 08:35* | *08/31/23 06:21* | *1* |
| *1,4-Difluorobenzene (Surr)* | *56* | *S1-* | *70 - 130* | *08/30/23 08:35* | *08/31/23 06:21* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00403 | U | 0.00403 | | mg/Kg | | | 08/31/23 10:48 | 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 | | | 09/01/23 09:19 | 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 | | 08/30/23 15:11 | 08/31/23 13:06 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.3 | U | 50.3 | | mg/Kg | | 08/30/23 15:11 | 08/31/23 13:06 | 1 |
| OII Range Organics (Over C28-C36) | <50.3 | U | 50.3 | | mg/Kg | | 08/30/23 15:11 | 08/31/23 13:06 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *133* | *S1+* | *70 - 130* | *08/30/23 15:11* | *08/31/23 13:06* | *1* |
| *o-Terphenyl* | *111* | | *70 - 130* | *08/30/23 15:11* | *08/31/23 13:06* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **369** | | 5.02 | | mg/Kg | | | 08/31/23 16:22 | 1 |

## Client Sample ID: FS07

**Date Collected: 08/28/23 10:10**
**Date Received: 08/28/23 15:30**
**Sample Depth: 2**

**Lab Sample ID: 890-5168-7**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 06:42 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 06:42 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 06:42 | 1 |
| m-Xylene & p-Xylene | <0.00399 | U | 0.00399 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 06:42 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 06:42 | 1 |
| Xylenes, Total | <0.00399 | U | 0.00399 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 06:42 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *141* | *S1+* | *70 - 130* | *08/30/23 08:35* | *08/31/23 06:42* | *1* |

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5168-1
SDG: 03C1558118

## Client Sample ID: FS07

**Date Collected: 08/28/23 10:10**
**Date Received: 08/28/23 15:30**
**Sample Depth: 2**

**Lab Sample ID: 890-5168-7**
**Matrix: Solid**

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

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,4-Difluorobenzene (Surr)* | *68* | *S1-* | *70 - 130* | *08/30/23 08:35* | *08/31/23 06:42* | *1* |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00399 | U | 0.00399 | mg/Kg | | | 08/31/23 10:48 | 1 |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.1 | U | 50.1 | mg/Kg | | | 09/01/23 09:19 | 1 |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.1 | U | 50.1 | mg/Kg | | 08/30/23 15:11 | 08/31/23 13:28 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.1 | U | 50.1 | mg/Kg | | 08/30/23 15:11 | 08/31/23 13:28 | 1 |
| Oil Range Organics (Over C28-C36) | <50.1 | U | 50.1 | mg/Kg | | 08/30/23 15:11 | 08/31/23 13:28 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *135* | *S1+* | *70 - 130* | *08/30/23 15:11* | *08/31/23 13:28* | *1* |
| *o-Terphenyl* | *114* | | *70 - 130* | *08/30/23 15:11* | *08/31/23 13:28* | *1* |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Chloride** | **122** | | 5.00 | mg/Kg | | | 08/31/23 16:28 | 1 |

## Client Sample ID: FS08

**Date Collected: 08/28/23 10:15**
**Date Received: 08/28/23 15:30**
**Sample Depth: 2**

**Lab Sample ID: 890-5168-8**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | mg/Kg | | 08/30/23 08:35 | 08/31/23 07:02 | 1 |
| Toluene | <0.00200 | U | 0.00200 | mg/Kg | | 08/30/23 08:35 | 08/31/23 07:02 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | mg/Kg | | 08/30/23 08:35 | 08/31/23 07:02 | 1 |
| m-Xylene & p-Xylene | <0.00400 | U | 0.00400 | mg/Kg | | 08/30/23 08:35 | 08/31/23 07:02 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | mg/Kg | | 08/30/23 08:35 | 08/31/23 07:02 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | mg/Kg | | 08/30/23 08:35 | 08/31/23 07:02 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *104* | | *70 - 130* | *08/30/23 08:35* | *08/31/23 07:02* | *1* |
| *1,4-Difluorobenzene (Surr)* | *54* | *S1-* | *70 - 130* | *08/30/23 08:35* | *08/31/23 07:02* | *1* |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00400 | U | 0.00400 | mg/Kg | | | 08/31/23 10:48 | 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 | | | 09/01/23 09:19 | 1 |

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# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5168-1
SDG: 03C1558118

## Client Sample ID: FS08

**Date Collected: 08/28/23 10:15**
**Date Received: 08/28/23 15:30**
**Sample Depth: 2**

**Lab Sample ID: 890-5168-8**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.5 | U | 50.5 | | mg/Kg | | 08/30/23 15:11 | 08/31/23 13:49 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.5 | U | 50.5 | | mg/Kg | | 08/30/23 15:11 | 08/31/23 13:49 | 1 |
| Oil Range Organics (Over C28-C36) | <50.5 | U | 50.5 | | mg/Kg | | 08/30/23 15:11 | 08/31/23 13:49 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *147* | *S1+* | *70 - 130* | *08/30/23 15:11* | *08/31/23 13:49* | *1* |
| *o-Terphenyl* | *123* | | *70 - 130* | *08/30/23 15:11* | *08/31/23 13:49* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **168** | | 5.00 | | mg/Kg | | | 08/31/23 16:35 | 1 |

## Client Sample ID: SW01

**Date Collected: 08/28/23 11:20**
**Date Received: 08/28/23 15:30**
**Sample Depth: 0 - 2**

**Lab Sample ID: 890-5168-9**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 07:23 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 07:23 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 07:23 | 1 |
| m-Xylene & p-Xylene | <0.00398 | U | 0.00398 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 07:23 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 07:23 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 07:23 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *75* | | *70 - 130* | *08/30/23 08:35* | *08/31/23 07:23* | *1* |
| *1,4-Difluorobenzene (Surr)* | *82* | | *70 - 130* | *08/30/23 08:35* | *08/31/23 07:23* | *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 | | | 08/31/23 10:48 | 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 | | | 09/01/23 09:19 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.5 | U | 50.5 | | mg/Kg | | 08/30/23 15:11 | 08/31/23 14:11 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.5 | U | 50.5 | | mg/Kg | | 08/30/23 15:11 | 08/31/23 14:11 | 1 |
| Oil Range Organics (Over C28-C36) | <50.5 | U | 50.5 | | mg/Kg | | 08/30/23 15:11 | 08/31/23 14:11 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *147* | *S1+* | *70 - 130* | *08/30/23 15:11* | *08/31/23 14:11* | *1* |
| *o-Terphenyl* | *123* | | *70 - 130* | *08/30/23 15:11* | *08/31/23 14:11* | *1* |

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5168-1
SDG: 03C1558118

## Client Sample ID: SW01

**Date Collected: 08/28/23 11:20**
**Date Received: 08/28/23 15:30**
**Sample Depth: 0 - 2**

## Lab Sample ID: 890-5168-9

**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 235 | | 4.98 | | mg/Kg | | | 09/02/23 05:44 | 1 |

# Surrogate Summary

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5168-1
SDG: 03C1558118

## 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) |
| 880-32558-A-1-C MS | Matrix Spike | 87 | 76 |
| 880-32558-A-1-D MSD | Matrix Spike Duplicate | 90 | 73 |
| 890-5168-1 | FS01 | 88 | 58 S1- |
| 890-5168-2 | FS02 | 85 | 66 S1- |
| 890-5168-3 | FS03 | 137 S1+ | 68 S1- |
| 890-5168-4 | FS04 | 110 | 56 S1- |
| 890-5168-5 | FS05 | 108 | 59 S1- |
| 890-5168-6 | FS06 | 79 | 56 S1- |
| 890-5168-7 | FS07 | 141 S1+ | 68 S1- |
| 890-5168-8 | FS08 | 104 | 54 S1- |
| 890-5168-9 | SW01 | 75 | 82 |
| LCS 880-61602/1-A | Lab Control Sample | 140 S1+ | 112 |
| LCSD 880-61602/2-A | Lab Control Sample Dup | 146 S1+ | 113 |
| MB 880-61572/5-A | Method Blank | 76 | 81 |
| MB 880-61602/5-A | Method Blank | 80 | 80 |

**Surrogate Legend**

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

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

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

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | 1CO1 (70-130) | OTPH1 (70-130) |
| 890-5168-1 | FS01 | 163 S1+ | 140 S1+ |
| 890-5168-1 MS | FS01 | 131 S1+ | 102 |
| 890-5168-1 MSD | FS01 | 130 | 100 |
| 890-5168-2 | FS02 | 140 S1+ | 122 |
| 890-5168-3 | FS03 | 141 S1+ | 121 |
| 890-5168-4 | FS04 | 132 S1+ | 109 |
| 890-5168-5 | FS05 | 134 S1+ | 113 |
| 890-5168-6 | FS06 | 133 S1+ | 111 |
| 890-5168-7 | FS07 | 135 S1+ | 114 |
| 890-5168-8 | FS08 | 147 S1+ | 123 |
| 890-5168-9 | SW01 | 147 S1+ | 123 |
| LCS 880-61574/2-A | Lab Control Sample | 109 | 123 |
| LCSD 880-61574/3-A | Lab Control Sample Dup | 117 | 122 |
| MB 880-61574/1-A | Method Blank | 161 S1+ | 157 S1+ |

**Surrogate Legend**

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

# QC Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5168-1
SDG: 03C1558118

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

### Lab Sample ID: MB 880-61572/5-A
### Matrix: Solid
### Analysis Batch: 61519

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 61572

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 08/30/23 12:38 | 08/30/23 12:57 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 08/30/23 12:38 | 08/30/23 12:57 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 08/30/23 12:38 | 08/30/23 12:57 | 1 |
| m-Xylene & p-Xylene | <0.00400 | U | 0.00400 | | mg/Kg | | 08/30/23 12:38 | 08/30/23 12:57 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 08/30/23 12:38 | 08/30/23 12:57 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 08/30/23 12:38 | 08/30/23 12:57 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *76* | | *70 - 130* | *08/30/23 12:38* | *08/30/23 12:57* | *1* |
| *1,4-Difluorobenzene (Surr)* | *81* | | *70 - 130* | *08/30/23 12:38* | *08/30/23 12:57* | *1* |

### Lab Sample ID: MB 880-61602/5-A
### Matrix: Solid
### Analysis Batch: 61519

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 61602

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 00:13 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 00:13 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 00:13 | 1 |
| m-Xylene & p-Xylene | <0.00400 | U | 0.00400 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 00:13 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 00:13 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 08/30/23 08:35 | 08/31/23 00:13 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *80* | | *70 - 130* | *08/30/23 08:35* | *08/31/23 00:13* | *1* |
| *1,4-Difluorobenzene (Surr)* | *80* | | *70 - 130* | *08/30/23 08:35* | *08/31/23 00:13* | *1* |

### Lab Sample ID: LCS 880-61602/1-A
### Matrix: Solid
### Analysis Batch: 61519

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 61602

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.07135 | | mg/Kg | | 71 | 70 - 130 | | |
| Toluene | | | 0.100 | 0.08583 | | mg/Kg | | 86 | 70 - 130 | | |
| Ethylbenzene | | | 0.100 | 0.09784 | | mg/Kg | | 98 | 70 - 130 | | |
| m-Xylene & p-Xylene | | | 0.200 | 0.2168 | | mg/Kg | | 108 | 70 - 130 | | |
| o-Xylene | | | 0.100 | 0.1101 | | mg/Kg | | 110 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *140* | *S1+* | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *112* | | *70 - 130* |

### Lab Sample ID: LCSD 880-61602/2-A
### Matrix: Solid
### Analysis Batch: 61519

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 61602

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.07676 | | mg/Kg | | 77 | 70 - 130 | 7 | 35 |

# QC Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5168-1
SDG: 03C1558118

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

**Lab Sample ID: LCSD 880-61602/2-A** — **Client Sample ID: Lab Control Sample Dup**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 61519** — **Prep Batch: 61602**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | | | 0.100 | 0.09134 | | mg/Kg | | 91 | 70 - 130 | 6 | 35 |
| Ethylbenzene | | | 0.100 | 0.1034 | | mg/Kg | | 103 | 70 - 130 | 6 | 35 |
| m-Xylene & p-Xylene | | | 0.200 | 0.2307 | | mg/Kg | | 115 | 70 - 130 | 6 | 35 |
| o-Xylene | | | 0.100 | 0.1170 | | mg/Kg | | 117 | 70 - 130 | 6 | 35 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *146* | *S1+* | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *113* | | *70 - 130* |

**Lab Sample ID: 880-32558-A-1-C MS** — **Client Sample ID: Matrix Spike**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 61519** — **Prep Batch: 61602**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00198 | U F1 F2 | 0.0996 | 0.02565 | F1 | mg/Kg | | 25 | 70 - 130 |
| Toluene | <0.00198 | U F1 F2 | 0.0996 | 0.03751 | F1 | mg/Kg | | 38 | 70 - 130 |
| Ethylbenzene | <0.00198 | U F1 F2 | 0.0996 | 0.02878 | F1 | mg/Kg | | 29 | 70 - 130 |
| m-Xylene & p-Xylene | <0.00397 | U F1 F2 | 0.199 | 0.05253 | F1 | mg/Kg | | 26 | 70 - 130 |
| o-Xylene | <0.00198 | U F1 F2 | 0.0996 | 0.02722 | F1 | mg/Kg | | 27 | 70 - 130 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *87* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *76* | | *70 - 130* |

**Lab Sample ID: 880-32558-A-1-D MSD** — **Client Sample ID: Matrix Spike Duplicate**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 61519** — **Prep Batch: 61602**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00198 | U F1 F2 | 0.101 | 0.01712 | F1 F2 | mg/Kg | | 16 | 70 - 130 | 40 | 35 |
| Toluene | <0.00198 | U F1 F2 | 0.101 | 0.01883 | F1 F2 | mg/Kg | | 19 | 70 - 130 | 66 | 35 |
| Ethylbenzene | <0.00198 | U F1 F2 | 0.101 | 0.01036 | F1 F2 | mg/Kg | | 10 | 70 - 130 | 94 | 35 |
| m-Xylene & p-Xylene | <0.00397 | U F1 F2 | 0.202 | 0.01892 | F1 F2 | mg/Kg | | 9 | 70 - 130 | 94 | 35 |
| o-Xylene | <0.00198 | U F1 F2 | 0.101 | 0.01024 | F1 F2 | mg/Kg | | 10 | 70 - 130 | 91 | 35 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *90* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *73* | | *70 - 130* |

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

**Lab Sample ID: MB 880-61574/1-A** — **Client Sample ID: Method Blank**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 61588** — **Prep Batch: 61574**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 08/30/23 15:11 | 08/31/23 08:03 | 1 |

# QC Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5168-1
SDG: 03C1558118

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

### Lab Sample ID: MB 880-61574/1-A
**Matrix: Solid**
**Analysis Batch: 61588**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 61574**

| 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 | | 08/30/23 15:11 | 08/31/23 08:03 | 1 |
| Oil Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 08/30/23 15:11 | 08/31/23 08:03 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *161* | *S1+* | *70 - 130* | *08/30/23 15:11* | *08/31/23 08:03* | *1* |
| *o-Terphenyl* | *157* | *S1+* | *70 - 130* | *08/30/23 15:11* | *08/31/23 08:03* | *1* |

### Lab Sample ID: LCS 880-61574/2-A
**Matrix: Solid**
**Analysis Batch: 61588**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 61574**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 988.1 | | mg/Kg | | 99 | 70 - 130 | | |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 973.8 | | mg/Kg | | 97 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane* | *109* | | *70 - 130* |
| *o-Terphenyl* | *123* | | *70 - 130* |

### Lab Sample ID: LCSD 880-61574/3-A
**Matrix: Solid**
**Analysis Batch: 61588**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 61574**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 992.6 | | mg/Kg | | 99 | 70 - 130 | 0 | 20 |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 965.7 | | mg/Kg | | 97 | 70 - 130 | 1 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane* | *117* | | *70 - 130* |
| *o-Terphenyl* | *122* | | *70 - 130* |

### Lab Sample ID: 890-5168-1 MS
**Matrix: Solid**
**Analysis Batch: 61588**

**Client Sample ID: FS01**
**Prep Type: Total/NA**
**Prep Batch: 61574**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.3 | U F2 | 998 | 1297 | | mg/Kg | | 126 | 70 - 130 | | |
| Diesel Range Organics (Over C10-C28) | <50.3 | U | 998 | 1296 | | mg/Kg | | 125 | 70 - 130 | | |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane* | *131* | *S1+* | *70 - 130* |
| *o-Terphenyl* | *102* | | *70 - 130* |

# QC Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5168-1
SDG: 03C1558118

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

**Lab Sample ID: 890-5168-1 MSD**
**Matrix: Solid**
**Analysis Batch: 61588**

**Client Sample ID: FS01**
**Prep Type: Total/NA**
**Prep Batch: 61574**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.3 | U F2 | 998 | 886.2 | F2 | mg/Kg | | 85 | 70 - 130 | 38 | 20 |
| Diesel Range Organics (Over C10-C28) | <50.3 | U | 998 | 1291 | | mg/Kg | | 125 | 70 - 130 | 0 | 20 |

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

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 880-61531/1-A**
**Matrix: Solid**
**Analysis Batch: 61647**

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

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <5.00 | U | 5.00 | | mg/Kg | | | 08/31/23 13:30 | 1 |

**Lab Sample ID: LCS 880-61531/2-A**
**Matrix: Solid**
**Analysis Batch: 61647**

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

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 250 | 254.1 | | mg/Kg | | 102 | 90 - 110 | | |

**Lab Sample ID: LCSD 880-61531/3-A**
**Matrix: Solid**
**Analysis Batch: 61647**

**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 | 249.4 | | mg/Kg | | 100 | 90 - 110 | 2 | 20 |

**Lab Sample ID: 880-32646-A-5-C MS**
**Matrix: Solid**
**Analysis Batch: 61647**

**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 | 125 | | 249 | 364.1 | | mg/Kg | | 96 | 90 - 110 | | |

**Lab Sample ID: 880-32646-A-5-D MSD**
**Matrix: Solid**
**Analysis Batch: 61647**

**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 | 125 | | 249 | 381.5 | | mg/Kg | | 103 | 90 - 110 | 5 | 20 |

# QC Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5168-1
SDG: 03C1558118

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

**Lab Sample ID: MB 880-61768/1-A**
**Matrix: Solid**
**Analysis Batch: 61779**

**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 | | | 09/02/23 03:30 | 1 |

**Lab Sample ID: LCS 880-61768/2-A**
**Matrix: Solid**
**Analysis Batch: 61779**

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

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

**Lab Sample ID: LCSD 880-61768/3-A**
**Matrix: Solid**
**Analysis Batch: 61779**

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

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 250 | 256.2 | | mg/Kg | | 102 | 90 - 110 | 0 | 20 |

**Lab Sample ID: 890-5168-4 MS**
**Matrix: Solid**
**Analysis Batch: 61779**

**Client Sample ID: FS04**
**Prep Type: Soluble**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 719 | F1 | 250 | 916.0 | F1 | mg/Kg | | 79 | 90 - 110 | | |

**Lab Sample ID: 890-5168-4 MSD**
**Matrix: Solid**
**Analysis Batch: 61779**

**Client Sample ID: FS04**
**Prep Type: Soluble**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 719 | F1 | 250 | 917.1 | F1 | mg/Kg | | 79 | 90 - 110 | 0 | 20 |

# QC Association Summary

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5168-1
SDG: 03C1558118

## GC VOA

### Analysis Batch: 61519

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5168-1 | FS01 | Total/NA | Solid | 8021B | 61602 |
| 890-5168-2 | FS02 | Total/NA | Solid | 8021B | 61602 |
| 890-5168-3 | FS03 | Total/NA | Solid | 8021B | 61602 |
| 890-5168-4 | FS04 | Total/NA | Solid | 8021B | 61602 |
| 890-5168-5 | FS05 | Total/NA | Solid | 8021B | 61602 |
| 890-5168-6 | FS06 | Total/NA | Solid | 8021B | 61602 |
| 890-5168-7 | FS07 | Total/NA | Solid | 8021B | 61602 |
| 890-5168-8 | FS08 | Total/NA | Solid | 8021B | 61602 |
| 890-5168-9 | SW01 | Total/NA | Solid | 8021B | 61602 |
| MB 880-61572/5-A | Method Blank | Total/NA | Solid | 8021B | 61572 |
| MB 880-61602/5-A | Method Blank | Total/NA | Solid | 8021B | 61602 |
| LCS 880-61602/1-A | Lab Control Sample | Total/NA | Solid | 8021B | 61602 |
| LCSD 880-61602/2-A | Lab Control Sample Dup | Total/NA | Solid | 8021B | 61602 |
| 880-32558-A-1-C MS | Matrix Spike | Total/NA | Solid | 8021B | 61602 |
| 880-32558-A-1-D MSD | Matrix Spike Duplicate | Total/NA | Solid | 8021B | 61602 |

### Prep Batch: 61572

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| MB 880-61572/5-A | Method Blank | Total/NA | Solid | 5035 | |

### Prep Batch: 61602

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5168-1 | FS01 | Total/NA | Solid | 5035 | |
| 890-5168-2 | FS02 | Total/NA | Solid | 5035 | |
| 890-5168-3 | FS03 | Total/NA | Solid | 5035 | |
| 890-5168-4 | FS04 | Total/NA | Solid | 5035 | |
| 890-5168-5 | FS05 | Total/NA | Solid | 5035 | |
| 890-5168-6 | FS06 | Total/NA | Solid | 5035 | |
| 890-5168-7 | FS07 | Total/NA | Solid | 5035 | |
| 890-5168-8 | FS08 | Total/NA | Solid | 5035 | |
| 890-5168-9 | SW01 | Total/NA | Solid | 5035 | |
| MB 880-61602/5-A | Method Blank | Total/NA | Solid | 5035 | |
| LCS 880-61602/1-A | Lab Control Sample | Total/NA | Solid | 5035 | |
| LCSD 880-61602/2-A | Lab Control Sample Dup | Total/NA | Solid | 5035 | |
| 880-32558-A-1-C MS | Matrix Spike | Total/NA | Solid | 5035 | |
| 880-32558-A-1-D MSD | Matrix Spike Duplicate | Total/NA | Solid | 5035 | |

### Analysis Batch: 61632

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5168-1 | FS01 | Total/NA | Solid | Total BTEX | |
| 890-5168-2 | FS02 | Total/NA | Solid | Total BTEX | |
| 890-5168-3 | FS03 | Total/NA | Solid | Total BTEX | |
| 890-5168-4 | FS04 | Total/NA | Solid | Total BTEX | |
| 890-5168-5 | FS05 | Total/NA | Solid | Total BTEX | |
| 890-5168-6 | FS06 | Total/NA | Solid | Total BTEX | |
| 890-5168-7 | FS07 | Total/NA | Solid | Total BTEX | |
| 890-5168-8 | FS08 | Total/NA | Solid | Total BTEX | |
| 890-5168-9 | SW01 | Total/NA | Solid | Total BTEX | |

# QC Association Summary

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5168-1
SDG: 03C1558118

## GC Semi VOA

### Prep Batch: 61574

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5168-1 | FS01 | Total/NA | Solid | 8015NM Prep | |
| 890-5168-2 | FS02 | Total/NA | Solid | 8015NM Prep | |
| 890-5168-3 | FS03 | Total/NA | Solid | 8015NM Prep | |
| 890-5168-4 | FS04 | Total/NA | Solid | 8015NM Prep | |
| 890-5168-5 | FS05 | Total/NA | Solid | 8015NM Prep | |
| 890-5168-6 | FS06 | Total/NA | Solid | 8015NM Prep | |
| 890-5168-7 | FS07 | Total/NA | Solid | 8015NM Prep | |
| 890-5168-8 | FS08 | Total/NA | Solid | 8015NM Prep | |
| 890-5168-9 | SW01 | Total/NA | Solid | 8015NM Prep | |
| MB 880-61574/1-A | Method Blank | Total/NA | Solid | 8015NM Prep | |
| LCS 880-61574/2-A | Lab Control Sample | Total/NA | Solid | 8015NM Prep | |
| LCSD 880-61574/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015NM Prep | |
| 890-5168-1 MS | FS01 | Total/NA | Solid | 8015NM Prep | |
| 890-5168-1 MSD | FS01 | Total/NA | Solid | 8015NM Prep | |

### Analysis Batch: 61588

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5168-1 | FS01 | Total/NA | Solid | 8015B NM | 61574 |
| 890-5168-2 | FS02 | Total/NA | Solid | 8015B NM | 61574 |
| 890-5168-3 | FS03 | Total/NA | Solid | 8015B NM | 61574 |
| 890-5168-4 | FS04 | Total/NA | Solid | 8015B NM | 61574 |
| 890-5168-5 | FS05 | Total/NA | Solid | 8015B NM | 61574 |
| 890-5168-6 | FS06 | Total/NA | Solid | 8015B NM | 61574 |
| 890-5168-7 | FS07 | Total/NA | Solid | 8015B NM | 61574 |
| 890-5168-8 | FS08 | Total/NA | Solid | 8015B NM | 61574 |
| 890-5168-9 | SW01 | Total/NA | Solid | 8015B NM | 61574 |
| MB 880-61574/1-A | Method Blank | Total/NA | Solid | 8015B NM | 61574 |
| LCS 880-61574/2-A | Lab Control Sample | Total/NA | Solid | 8015B NM | 61574 |
| LCSD 880-61574/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015B NM | 61574 |
| 890-5168-1 MS | FS01 | Total/NA | Solid | 8015B NM | 61574 |
| 890-5168-1 MSD | FS01 | Total/NA | Solid | 8015B NM | 61574 |

### Analysis Batch: 61745

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5168-1 | FS01 | Total/NA | Solid | 8015 NM | |
| 890-5168-2 | FS02 | Total/NA | Solid | 8015 NM | |
| 890-5168-3 | FS03 | Total/NA | Solid | 8015 NM | |
| 890-5168-4 | FS04 | Total/NA | Solid | 8015 NM | |
| 890-5168-5 | FS05 | Total/NA | Solid | 8015 NM | |
| 890-5168-6 | FS06 | Total/NA | Solid | 8015 NM | |
| 890-5168-7 | FS07 | Total/NA | Solid | 8015 NM | |
| 890-5168-8 | FS08 | Total/NA | Solid | 8015 NM | |
| 890-5168-9 | SW01 | Total/NA | Solid | 8015 NM | |

## HPLC/IC

### Leach Batch: 61531

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5168-1 | FS01 | Soluble | Solid | DI Leach | |
| 890-5168-2 | FS02 | Soluble | Solid | DI Leach | |
| 890-5168-6 | FS06 | Soluble | Solid | DI Leach | |

# QC Association Summary

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5168-1
SDG: 03C1558118

## HPLC/IC (Continued)

### Leach Batch: 61531 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5168-7 | FS07 | Soluble | Solid | DI Leach | |
| 890-5168-8 | FS08 | Soluble | Solid | DI Leach | |
| MB 880-61531/1-A | Method Blank | Soluble | Solid | DI Leach | |
| LCS 880-61531/2-A | Lab Control Sample | Soluble | Solid | DI Leach | |
| LCSD 880-61531/3-A | Lab Control Sample Dup | Soluble | Solid | DI Leach | |
| 880-32646-A-5-C MS | Matrix Spike | Soluble | Solid | DI Leach | |
| 880-32646-A-5-D MSD | Matrix Spike Duplicate | Soluble | Solid | DI Leach | |

### Analysis Batch: 61647

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5168-1 | FS01 | Soluble | Solid | 300.0 | 61531 |
| 890-5168-2 | FS02 | Soluble | Solid | 300.0 | 61531 |
| 890-5168-6 | FS06 | Soluble | Solid | 300.0 | 61531 |
| 890-5168-7 | FS07 | Soluble | Solid | 300.0 | 61531 |
| 890-5168-8 | FS08 | Soluble | Solid | 300.0 | 61531 |
| MB 880-61531/1-A | Method Blank | Soluble | Solid | 300.0 | 61531 |
| LCS 880-61531/2-A | Lab Control Sample | Soluble | Solid | 300.0 | 61531 |
| LCSD 880-61531/3-A | Lab Control Sample Dup | Soluble | Solid | 300.0 | 61531 |
| 880-32646-A-5-C MS | Matrix Spike | Soluble | Solid | 300.0 | 61531 |
| 880-32646-A-5-D MSD | Matrix Spike Duplicate | Soluble | Solid | 300.0 | 61531 |

### Leach Batch: 61768

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5168-3 | FS03 | Soluble | Solid | DI Leach | |
| 890-5168-4 | FS04 | Soluble | Solid | DI Leach | |
| 890-5168-5 | FS05 | Soluble | Solid | DI Leach | |
| 890-5168-9 | SW01 | Soluble | Solid | DI Leach | |
| MB 880-61768/1-A | Method Blank | Soluble | Solid | DI Leach | |
| LCS 880-61768/2-A | Lab Control Sample | Soluble | Solid | DI Leach | |
| LCSD 880-61768/3-A | Lab Control Sample Dup | Soluble | Solid | DI Leach | |
| 890-5168-4 MS | FS04 | Soluble | Solid | DI Leach | |
| 890-5168-4 MSD | FS04 | Soluble | Solid | DI Leach | |

### Analysis Batch: 61779

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5168-3 | FS03 | Soluble | Solid | 300.0 | 61768 |
| 890-5168-4 | FS04 | Soluble | Solid | 300.0 | 61768 |
| 890-5168-5 | FS05 | Soluble | Solid | 300.0 | 61768 |
| 890-5168-9 | SW01 | Soluble | Solid | 300.0 | 61768 |
| MB 880-61768/1-A | Method Blank | Soluble | Solid | 300.0 | 61768 |
| LCS 880-61768/2-A | Lab Control Sample | Soluble | Solid | 300.0 | 61768 |
| LCSD 880-61768/3-A | Lab Control Sample Dup | Soluble | Solid | 300.0 | 61768 |
| 890-5168-4 MS | FS04 | Soluble | Solid | 300.0 | 61768 |
| 890-5168-4 MSD | FS04 | Soluble | Solid | 300.0 | 61768 |

# Lab Chronicle

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5168-1
SDG: 03C1558118

## Client Sample ID: FS01
**Date Collected: 08/28/23 09:40**
**Date Received: 08/28/23 15:30**

**Lab Sample ID: 890-5168-1**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.98 g | 5 mL | 61602 | 08/30/23 08:35 | AJ | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61519 | 08/31/23 03:38 | AJ | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61632 | 08/31/23 10:48 | AJ | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61745 | 09/01/23 09:19 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.95 g | 10 mL | 61574 | 08/30/23 15:11 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61588 | 08/31/23 10:34 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.99 g | 50 mL | 61531 | 08/30/23 10:55 | SMC | EET MID |
| Soluble | Analysis | 300.0 | | 1 | 50 mL | 50 mL | 61647 | 08/31/23 15:39 | CH | EET MID |

## Client Sample ID: FS02
**Date Collected: 08/28/23 09:45**
**Date Received: 08/28/23 15:30**

**Lab Sample ID: 890-5168-2**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.95 g | 5 mL | 61602 | 08/30/23 08:35 | AJ | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61519 | 08/31/23 05:00 | AJ | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61632 | 08/31/23 10:48 | AJ | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61745 | 09/01/23 09:19 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.91 g | 10 mL | 61574 | 08/30/23 15:11 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61588 | 08/31/23 11:39 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.01 g | 50 mL | 61531 | 08/30/23 10:55 | SMC | EET MID |
| Soluble | Analysis | 300.0 | | 1 | 50 mL | 50 mL | 61647 | 08/31/23 15:58 | CH | EET MID |

## Client Sample ID: FS03
**Date Collected: 08/28/23 09:50**
**Date Received: 08/28/23 15:30**

**Lab Sample ID: 890-5168-3**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.99 g | 5 mL | 61602 | 08/30/23 08:35 | AJ | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61519 | 08/31/23 05:20 | AJ | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61632 | 08/31/23 10:48 | AJ | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61745 | 09/01/23 09:19 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.07 g | 10 mL | 61574 | 08/30/23 15:11 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61588 | 08/31/23 12:01 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.98 g | 50 mL | 61768 | 09/01/23 14:17 | CH | EET MID |
| Soluble | Analysis | 300.0 | | 1 | 50 mL | 50 mL | 61779 | 09/02/23 05:12 | CH | EET MID |

## Client Sample ID: FS04
**Date Collected: 08/28/23 09:55**
**Date Received: 08/28/23 15:30**

**Lab Sample ID: 890-5168-4**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.01 g | 5 mL | 61602 | 08/30/23 08:35 | AJ | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61519 | 08/31/23 05:40 | AJ | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61632 | 08/31/23 10:48 | AJ | EET MID |

# Lab Chronicle

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5168-1
SDG: 03C1558118

## Client Sample ID: FS04
**Date Collected: 08/28/23 09:55**
**Date Received: 08/28/23 15:30**

## Lab Sample ID: 890-5168-4
**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 | | | 61745 | 09/01/23 09:19 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.03 g | 10 mL | 61574 | 08/30/23 15:11 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61588 | 08/31/23 12:23 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5 g | 50 mL | 61768 | 09/01/23 14:17 | CH | EET MID |
| Soluble | Analysis | 300.0 | | 1 | 50 mL | 50 mL | 61779 | 09/02/23 05:19 | CH | EET MID |

## Client Sample ID: FS05
**Date Collected: 08/28/23 10:00**
**Date Received: 08/28/23 15:30**

## Lab Sample ID: 890-5168-5
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.05 g | 5 mL | 61602 | 08/30/23 08:35 | AJ | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61519 | 08/31/23 06:01 | AJ | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61632 | 08/31/23 10:48 | AJ | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61745 | 09/01/23 09:19 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.00 g | 10 mL | 61574 | 08/30/23 15:11 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61588 | 08/31/23 12:45 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.98 g | 50 mL | 61768 | 09/01/23 14:17 | CH | EET MID |
| Soluble | Analysis | 300.0 | | 1 | 50 mL | 50 mL | 61779 | 09/02/23 05:38 | CH | EET MID |

## Client Sample ID: FS06
**Date Collected: 08/28/23 10:05**
**Date Received: 08/28/23 15:30**

## Lab Sample ID: 890-5168-6
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.96 g | 5 mL | 61602 | 08/30/23 08:35 | AJ | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61519 | 08/31/23 06:21 | AJ | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61632 | 08/31/23 10:48 | AJ | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61745 | 09/01/23 09:19 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.94 g | 10 mL | 61574 | 08/30/23 15:11 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61588 | 08/31/23 13:06 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.98 g | 50 mL | 61531 | 08/30/23 10:55 | SMC | EET MID |
| Soluble | Analysis | 300.0 | | 1 | 50 mL | 50 mL | 61647 | 08/31/23 16:22 | CH | EET MID |

## Client Sample ID: FS07
**Date Collected: 08/28/23 10:10**
**Date Received: 08/28/23 15:30**

## Lab Sample ID: 890-5168-7
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.01 g | 5 mL | 61602 | 08/30/23 08:35 | AJ | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61519 | 08/31/23 06:42 | AJ | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61632 | 08/31/23 10:48 | AJ | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61745 | 09/01/23 09:19 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.98 g | 10 mL | 61574 | 08/30/23 15:11 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61588 | 08/31/23 13:28 | SM | EET MID |

# Lab Chronicle

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5168-1
SDG: 03C1558118

## Client Sample ID: FS07

**Date Collected: 08/28/23 10:10**
**Date Received: 08/28/23 15:30**

**Lab Sample ID: 890-5168-7**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Soluble | Leach | DI Leach | | | 5 g | 50 mL | 61531 | 08/30/23 10:55 | SMC | EET MID |
| Soluble | Analysis | 300.0 | | 1 | 50 mL | 50 mL | 61647 | 08/31/23 16:28 | CH | EET MID |

## Client Sample ID: FS08

**Date Collected: 08/28/23 10:15**
**Date Received: 08/28/23 15:30**

**Lab Sample ID: 890-5168-8**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.00 g | 5 mL | 61602 | 08/30/23 08:35 | AJ | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61519 | 08/31/23 07:02 | AJ | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61632 | 08/31/23 10:48 | AJ | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61745 | 09/01/23 09:19 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.91 g | 10 mL | 61574 | 08/30/23 15:11 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61588 | 08/31/23 13:49 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5 g | 50 mL | 61531 | 08/30/23 10:55 | SMC | EET MID |
| Soluble | Analysis | 300.0 | | 1 | 50 mL | 50 mL | 61647 | 08/31/23 16:35 | CH | EET MID |

## Client Sample ID: SW01

**Date Collected: 08/28/23 11:20**
**Date Received: 08/28/23 15:30**

**Lab Sample ID: 890-5168-9**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.02 g | 5 mL | 61602 | 08/30/23 08:35 | AJ | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61519 | 08/31/23 07:23 | AJ | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61632 | 08/31/23 10:48 | AJ | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61745 | 09/01/23 09:19 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.90 g | 10 mL | 61574 | 08/30/23 15:11 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61588 | 08/31/23 14:11 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.02 g | 50 mL | 61768 | 09/01/23 14:17 | CH | EET MID |
| Soluble | Analysis | 300.0 | | 1 | 50 mL | 50 mL | 61779 | 09/02/23 05:44 | 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: JRU DI 11 Ekalaka 823H

Job ID: 890-5168-1
SDG: 03C1558118

## 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: JRU DI 11 Ekalaka 823H

Job ID: 890-5168-1
SDG: 03C1558118

| 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: JRU DI 11 Ekalaka 823H

Job ID: 890-5168-1
SDG: 03C1558118

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Depth |
|---|---|---|---|---|---|
| 890-5168-1 | FS01 | Solid | 08/28/23 09:40 | 08/28/23 15:30 | 2 |
| 890-5168-2 | FS02 | Solid | 08/28/23 09:45 | 08/28/23 15:30 | 2 |
| 890-5168-3 | FS03 | Solid | 08/28/23 09:50 | 08/28/23 15:30 | 2 |
| 890-5168-4 | FS04 | Solid | 08/28/23 09:55 | 08/28/23 15:30 | 2 |
| 890-5168-5 | FS05 | Solid | 08/28/23 10:00 | 08/28/23 15:30 | 2 |
| 890-5168-6 | FS06 | Solid | 08/28/23 10:05 | 08/28/23 15:30 | 2 |
| 890-5168-7 | FS07 | Solid | 08/28/23 10:10 | 08/28/23 15:30 | 2 |
| 890-5168-8 | FS08 | Solid | 08/28/23 10:15 | 08/28/23 15:30 | 2 |
| 890-5168-9 | SW01 | Solid | 08/28/23 11:20 | 08/28/23 15:30 | 0 - 2 |

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# Chain of Custody

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

**Work Order No:** _____

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| | | | |
|---|---|---|---|
| Project Manager: | Ben Belill | Bill to: (if different) | Garrett Green |
| Company Name: | Ensolum | Company Name: | XTO Energy |
| Address: | 3122 National Parks Hwy | Address: | 3104 E. Green St. |
| City, State ZIP: | Carlsbad, NM 88220 | City, State ZIP: | Carlsbad, NM 88220 |
| Phone: | 303-887-2946 | Email: | Garrett.Green@ExxonMobil.com |

**Work Order Comments**

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

| | | | |
|---|---|---|---|
| Project Name: | JRU DI 11 Ekalaka 823H | Turn Around | |
| Project Number: | 03C1558118 | ☒ Routine ☐ Rush | |
| Project Location: | | Due Date: | |
| Sampler's Name: | Connor Whitman | 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: | TNM007 | |
| Cooler Custody Seals: | Yes No (N/A) | Correction Factor: | -0.2 | |
| Sample Custody Seals: | Yes No (N/A) | Temperature Reading: | 3.4 | |
| Total Containers: | | Corrected Temperature: | 3.2 | |

**ANALYSIS REQUEST**

| Sample Identification | Matrix | Date Sampled | Time Sampled | Depth | Grab/ Comp | # of Cont | Pres. Code | CHLORIDES (EPA: 3000.0) | TPH (8015) | BTEX (8021) |
|---|---|---|---|---|---|---|---|---|---|---|
| FS01 | S | 8/28/23 | 940 | 2' | C | 1 | | | | |
| FS02 | | | 945 | | | 1 | | | | |
| FS03 | | | 950 | | | 1 | | | | |
| FS04 | | | 955 | | | 1 | | | | |
| FS05 | | | 1000 | | | 1 | | | | |
| FS06 | | | 1005 | | | 1 | | | | |
| FS07 | | | 1010 | | | 1 | | | | |
| FS08 | | | 1015 | | | 1 | | | | |
| SW01 | | | 1120 | 0-2' | | 1 | | | | |

Parameters

890-5168 Chain of Custody

**Preservative Codes**

None: NO | DI Water: $H_2O$
Cool: Cool | MeOH: Me
HCL: HC | $HNO_3$: HN
$H_2S0_4$: $H_2$ | NaOH: Na
$H_3PO_4$: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

**Sample Comments**

Incident ID:
nAPP2224527297

Cost Center:
2104541001

AFE:
DD.2019.06665.CAP.CMP

**Total 200.7 / 6010 200.8 / 6020:** 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag $SiO_2$ Na Sr Tl Sn U V Zn

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



| Relinquished by: (Signature) | Received by: (Signature) | Date/Time | Relinquished by: (Signature) | Received by: (Signature) | Date/Time |
|---|---|---|---|---|---|
| 1 | | 8.28.23 1530 | | | |
| 3 | | | 4 | | |
| 5 | | | 6 | | |

Revised Date: 08/25/2020 Rev. 2020.2

# Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5168-1
SDG Number: 03C1558118

**Login Number: 5168**
**List Number: 1**
**Creator: Clifton, Cloe**

**List Source: Eurofins Carlsbad**

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

# Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5168-1
SDG Number: 03C1558118

**Login Number: 5168**
**List Number: 2**
**Creator: Teel, Brianna**

**List Source: Eurofins Midland**
**List Creation: 08/30/23 10:58 AM**

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

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# ANALYTICAL REPORT

## PREPARED FOR

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

Generated 9/5/2023 5:19:12 PM

## JOB DESCRIPTION

JRU DI 11 Ekalaka 823H
SDG NUMBER 03C1558118

## JOB NUMBER

890-5178-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.





my EOL

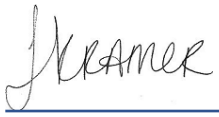
# Eurofins Carlsbad

## Job Notes

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
9/5/2023 5:19:12 PM

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

# Table of Contents

# Definitions/Glossary

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

## Qualifiers

### GC VOA

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

### GC Semi VOA

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

### HPLC/IC

| Qualifier | Qualifier Description |
|---|---|
| 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: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

## Job ID: 890-5178-1

### Laboratory: Eurofins Carlsbad

**Narrative**

**Job Narrative**
**890-5178-1**

**Receipt**
The samples were received on 8/29/2023 3:35 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: FS09 (890-5178-1), FS10 (890-5178-2), FS11 (890-5178-3), FS12 (890-5178-4), FS13 (890-5178-5), FS14 (890-5178-6), FS15 (890-5178-7), FS16 (890-5178-8), SW02 (890-5178-9), FS17 (890-5178-10), FS18 (890-5178-11), FS19 (890-5178-12), SW03 (890-5178-13), FS20 (890-5178-14), FS21 (890-5178-15), FS22 (890-5178-16), FS23 (890-5178-17) and FS24 (890-5178-18).

**GC VOA**
Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-61763 and analytical batch 880-61708 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-61708 recovered above the upper control limit for m-Xylene & p-Xylene and o-Xylene. The samples associated with this CCV were ran within 12 hours of passing CCV; therefore, the data have been reported.

Method 8021B: Surrogate recovery for the following samples were outside control limits: (LCS 880-61763/1-A), (LCSD 880-61763/2-A), (890-5178-A-1-C MS) and (890-5178-A-1-D MSD). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following samples were outside control limits: FS09 (890-5178-1) and FS10 (890-5178-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following samples were outside control limits: FS13 (890-5178-5), FS14 (890-5178-6), FS15 (890-5178-7), FS16 (890-5178-8), SW02 (890-5178-9) and FS17 (890-5178-10). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following samples were outside control limits: FS18 (890-5178-11), FS19 (890-5178-12), SW03 (890-5178-13), FS21 (890-5178-15), FS22 (890-5178-16), FS23 (890-5178-17) and FS24 (890-5178-18). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The method blank for preparation batch 880-61711 and 880-61763 and analytical batch 880-61708 contained Benzene above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-61708 recovered above the upper control limit for m-Xylene & p-Xylene and o-Xylene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 880-61708/51).

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 880-61642 and analytical batch 880-61701 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: FS10 (890-5178-2), FS11 (890-5178-3), FS13 (890-5178-5), (880-32645-A-1-C), (880-32645-A-1-D MS) and (880-32645-A-1-E MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

# Case Narrative

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

## Job ID: 890-5178-1 (Continued)

**Laboratory: Eurofins Carlsbad (Continued)**

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-61701/20), (CCV 880-61701/31) and (CCV 880-61701/5). Evidence of matrix interferences is not obvious.

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

**HPLC/IC**

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

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

## Client Sample ID: FS09

**Lab Sample ID: 890-5178-1**
**Matrix: Solid**
**Date Collected: 08/29/23 09:55**
**Date Received: 08/29/23 15:35**
**Sample Depth: 2**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 09/01/23 12:40 | 09/01/23 22:54 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 09/01/23 12:40 | 09/01/23 22:54 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 09/01/23 12:40 | 09/01/23 22:54 | 1 |
| m-Xylene & p-Xylene | <0.00398 | U | 0.00398 | | mg/Kg | | 09/01/23 12:40 | 09/01/23 22:54 | 1 |
| o-Xylene | <0.00199 | U *+ | 0.00199 | | mg/Kg | | 09/01/23 12:40 | 09/01/23 22:54 | 1 |
| Xylenes, Total | <0.00398 | U *+ | 0.00398 | | mg/Kg | | 09/01/23 12:40 | 09/01/23 22:54 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *98* | | *70 - 130* | *09/01/23 12:40* | *09/01/23 22:54* | *1* |
| *1,4-Difluorobenzene (Surr)* | *56* | *S1-* | *70 - 130* | *09/01/23 12:40* | *09/01/23 22:54* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00398 | U | 0.00398 | | mg/Kg | | | 09/05/23 17:22 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.1 | U | 50.1 | | mg/Kg | | | 09/05/23 12:04 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.1 | U | 50.1 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 11:51 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.1 | U | 50.1 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 11:51 | 1 |
| OII Range Organics (Over C28-C36) | <50.1 | U | 50.1 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 11:51 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *125* | | *70 - 130* | *08/31/23 12:14* | *09/01/23 11:51* | *1* |
| *o-Terphenyl* | *109* | | *70 - 130* | *08/31/23 12:14* | *09/01/23 11:51* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **192** | | 4.98 | | mg/Kg | | | 09/05/23 14:45 | 1 |

## Client Sample ID: FS10

**Lab Sample ID: 890-5178-2**
**Matrix: Solid**
**Date Collected: 08/29/23 10:00**
**Date Received: 08/29/23 15:35**
**Sample Depth: 2**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/01/23 12:40 | 09/01/23 23:15 | 1 |
| Toluene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/01/23 12:40 | 09/01/23 23:15 | 1 |
| Ethylbenzene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/01/23 12:40 | 09/01/23 23:15 | 1 |
| m-Xylene & p-Xylene | <0.00403 | U | 0.00403 | | mg/Kg | | 09/01/23 12:40 | 09/01/23 23:15 | 1 |
| o-Xylene | <0.00202 | U *+ | 0.00202 | | mg/Kg | | 09/01/23 12:40 | 09/01/23 23:15 | 1 |
| Xylenes, Total | <0.00403 | U *+ | 0.00403 | | mg/Kg | | 09/01/23 12:40 | 09/01/23 23:15 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *136* | *S1+* | *70 - 130* | *09/01/23 12:40* | *09/01/23 23:15* | *1* |

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

## Client Sample ID: FS10

**Lab Sample ID: 890-5178-2**
**Matrix: Solid**
**Date Collected: 08/29/23 10:00**
**Date Received: 08/29/23 15:35**
**Sample Depth: 2**

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

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,4-Difluorobenzene (Surr)* | *67* | *S1-* | *70 - 130* | *09/01/23 12:40* | *09/01/23 23:15* | *1* |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00403 | U | 0.00403 | mg/Kg | | | 09/05/23 17:22 | 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 | | | 09/05/23 12:04 | 1 |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.5 | U | 50.5 | mg/Kg | | 08/31/23 12:14 | 09/01/23 12:13 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.5 | U | 50.5 | mg/Kg | | 08/31/23 12:14 | 09/01/23 12:13 | 1 |
| OII Range Organics (Over C28-C36) | <50.5 | U | 50.5 | mg/Kg | | 08/31/23 12:14 | 09/01/23 12:13 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *132* | *S1+* | *70 - 130* | *08/31/23 12:14* | *09/01/23 12:13* | *1* |
| *o-Terphenyl* | *113* | | *70 - 130* | *08/31/23 12:14* | *09/01/23 12:13* | *1* |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Chloride** | **161** | | 4.95 | mg/Kg | | | 09/05/23 14:51 | 1 |

## Client Sample ID: FS11

**Lab Sample ID: 890-5178-3**
**Matrix: Solid**
**Date Collected: 08/29/23 10:05**
**Date Received: 08/29/23 15:35**
**Sample Depth: 2**

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00201 | U | 0.00201 | mg/Kg | | 09/01/23 12:40 | 09/01/23 23:35 | 1 |
| Toluene | <0.00201 | U | 0.00201 | mg/Kg | | 09/01/23 12:40 | 09/01/23 23:35 | 1 |
| Ethylbenzene | <0.00201 | U | 0.00201 | mg/Kg | | 09/01/23 12:40 | 09/01/23 23:35 | 1 |
| m-Xylene & p-Xylene | <0.00402 | U | 0.00402 | mg/Kg | | 09/01/23 12:40 | 09/01/23 23:35 | 1 |
| o-Xylene | <0.00201 | U *+ | 0.00201 | mg/Kg | | 09/01/23 12:40 | 09/01/23 23:35 | 1 |
| Xylenes, Total | <0.00402 | U *+ | 0.00402 | mg/Kg | | 09/01/23 12:40 | 09/01/23 23:35 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *88* | | *70 - 130* | *09/01/23 12:40* | *09/01/23 23:35* | *1* |
| *1,4-Difluorobenzene (Surr)* | *71* | | *70 - 130* | *09/01/23 12:40* | *09/01/23 23:35* | *1* |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00402 | U | 0.00402 | mg/Kg | | | 09/05/23 17:22 | 1 |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.7 | U | 49.7 | mg/Kg | | | 09/05/23 12:04 | 1 |

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

## Client Sample ID: FS11

**Lab Sample ID: 890-5178-3**
**Matrix: Solid**
**Date Collected: 08/29/23 10:05**
**Date Received: 08/29/23 15:35**
**Sample Depth: 2**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.7 | U | 49.7 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 12:34 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.7 | U | 49.7 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 12:34 | 1 |
| OII Range Organics (Over C28-C36) | <49.7 | U | 49.7 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 12:34 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *137* | *S1+* | *70 - 130* | *08/31/23 12:14* | *09/01/23 12:34* | *1* |
| *o-Terphenyl* | *117* | | *70 - 130* | *08/31/23 12:14* | *09/01/23 12:34* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **254** | | 4.98 | | mg/Kg | | | 09/01/23 13:20 | 1 |

## Client Sample ID: FS12

**Lab Sample ID: 890-5178-4**
**Matrix: Solid**
**Date Collected: 08/29/23 10:10**
**Date Received: 08/29/23 15:35**
**Sample Depth: 2**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/01/23 12:40 | 09/01/23 23:55 | 1 |
| Toluene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/01/23 12:40 | 09/01/23 23:55 | 1 |
| Ethylbenzene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/01/23 12:40 | 09/01/23 23:55 | 1 |
| m-Xylene & p-Xylene | <0.00404 | U | 0.00404 | | mg/Kg | | 09/01/23 12:40 | 09/01/23 23:55 | 1 |
| o-Xylene | <0.00202 | U *+ | 0.00202 | | mg/Kg | | 09/01/23 12:40 | 09/01/23 23:55 | 1 |
| Xylenes, Total | <0.00404 | U *+ | 0.00404 | | mg/Kg | | 09/01/23 12:40 | 09/01/23 23:55 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *107* | | *70 - 130* | *09/01/23 12:40* | *09/01/23 23:55* | *1* |
| *1,4-Difluorobenzene (Surr)* | *74* | | *70 - 130* | *09/01/23 12:40* | *09/01/23 23:55* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00404 | U | 0.00404 | | mg/Kg | | | 09/05/23 17:22 | 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 | | | 09/05/23 12:04 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.6 | U | 49.6 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 12:56 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.6 | U | 49.6 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 12:56 | 1 |
| OII Range Organics (Over C28-C36) | <49.6 | U | 49.6 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 12:56 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *130* | | *70 - 130* | *08/31/23 12:14* | *09/01/23 12:56* | *1* |
| *o-Terphenyl* | *112* | | *70 - 130* | *08/31/23 12:14* | *09/01/23 12:56* | *1* |

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

## Client Sample ID: FS12

**Lab Sample ID: 890-5178-4**
**Matrix: Solid**
**Date Collected: 08/29/23 10:10**
**Date Received: 08/29/23 15:35**
**Sample Depth: 2**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 291 | | 5.00 | | mg/Kg | | | 09/01/23 13:39 | 1 |

## Client Sample ID: FS13

**Lab Sample ID: 890-5178-5**
**Matrix: Solid**
**Date Collected: 08/29/23 10:15**
**Date Received: 08/29/23 15:35**
**Sample Depth: 2**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 00:16 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 00:16 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 00:16 | 1 |
| m-Xylene & p-Xylene | <0.00399 | U | 0.00399 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 00:16 | 1 |
| o-Xylene | <0.00200 | U *+ | 0.00200 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 00:16 | 1 |
| Xylenes, Total | <0.00399 | U *+ | 0.00399 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 00:16 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *107* | | *70 - 130* | *09/01/23 12:40* | *09/02/23 00:16* | *1* |
| *1,4-Difluorobenzene (Surr)* | *62* | *S1-* | *70 - 130* | *09/01/23 12:40* | *09/02/23 00:16* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00399 | U | 0.00399 | | mg/Kg | | | 09/05/23 17:22 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.9 | U | 49.9 | | mg/Kg | | | 09/05/23 12:04 | 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 | | 08/31/23 12:14 | 09/01/23 13:17 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 13:17 | 1 |
| OII Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 13:17 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *137* | *S1+* | *70 - 130* | *08/31/23 12:14* | *09/01/23 13:17* | *1* |
| *o-Terphenyl* | *116* | | *70 - 130* | *08/31/23 12:14* | *09/01/23 13:17* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 421 | | 5.05 | | mg/Kg | | | 09/01/23 13:45 | 1 |

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

## Client Sample ID: FS14

**Lab Sample ID: 890-5178-6**
**Matrix: Solid**
**Date Collected: 08/29/23 10:20**
**Date Received: 08/29/23 15:35**
**Sample Depth: 2**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00198 | U | 0.00198 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 00:36 | 1 |
| Toluene | <0.00198 | U | 0.00198 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 00:36 | 1 |
| Ethylbenzene | <0.00198 | U | 0.00198 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 00:36 | 1 |
| m-Xylene & p-Xylene | <0.00397 | U | 0.00397 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 00:36 | 1 |
| o-Xylene | <0.00198 | U *+ | 0.00198 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 00:36 | 1 |
| Xylenes, Total | <0.00397 | U *+ | 0.00397 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 00:36 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *140* | *S1+* | *70 - 130* | *09/01/23 12:40* | *09/02/23 00:36* | *1* |
| *1,4-Difluorobenzene (Surr)* | *73* | | *70 - 130* | *09/01/23 12:40* | *09/02/23 00:36* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00397 | U | 0.00397 | | mg/Kg | | | 09/05/23 17:22 | 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 | | | 09/05/23 12:04 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.5 | U | 50.5 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 13:39 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.5 | U | 50.5 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 13:39 | 1 |
| OII Range Organics (Over C28-C36) | <50.5 | U | 50.5 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 13:39 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *124* | | *70 - 130* | *08/31/23 12:14* | *09/01/23 13:39* | *1* |
| *o-Terphenyl* | *107* | | *70 - 130* | *08/31/23 12:14* | *09/01/23 13:39* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **427** | | 4.96 | | mg/Kg | | | 09/01/23 13:52 | 1 |

## Client Sample ID: FS15

**Lab Sample ID: 890-5178-7**
**Matrix: Solid**
**Date Collected: 08/29/23 10:25**
**Date Received: 08/29/23 15:35**
**Sample Depth: 2**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 00:57 | 1 |
| Toluene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 00:57 | 1 |
| Ethylbenzene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 00:57 | 1 |
| m-Xylene & p-Xylene | <0.00404 | U | 0.00404 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 00:57 | 1 |
| o-Xylene | <0.00202 | U *+ | 0.00202 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 00:57 | 1 |
| Xylenes, Total | <0.00404 | U *+ | 0.00404 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 00:57 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *99* | | *70 - 130* | *09/01/23 12:40* | *09/02/23 00:57* | *1* |

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# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

## Client Sample ID: FS15

**Lab Sample ID: 890-5178-7**
**Matrix: Solid**
**Date Collected: 08/29/23 10:25**
**Date Received: 08/29/23 15:35**
**Sample Depth: 2**

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

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,4-Difluorobenzene (Surr)* | *54* | *S1-* | *70 - 130* | *09/01/23 12:40* | *09/02/23 00:57* | *1* |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00404 | U | 0.00404 | mg/Kg | | | 09/05/23 17:22 | 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 | | | 09/05/23 12:04 | 1 |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.5 | U | 50.5 | mg/Kg | | 08/31/23 12:14 | 09/01/23 14:00 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.5 | U | 50.5 | mg/Kg | | 08/31/23 12:14 | 09/01/23 14:00 | 1 |
| OII Range Organics (Over C28-C36) | <50.5 | U | 50.5 | mg/Kg | | 08/31/23 12:14 | 09/01/23 14:00 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *124* | | *70 - 130* | *08/31/23 12:14* | *09/01/23 14:00* | *1* |
| *o-Terphenyl* | *107* | | *70 - 130* | *08/31/23 12:14* | *09/01/23 14:00* | *1* |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Chloride** | **299** | | 4.98 | mg/Kg | | | 09/01/23 13:58 | 1 |

## Client Sample ID: FS16

**Lab Sample ID: 890-5178-8**
**Matrix: Solid**
**Date Collected: 08/29/23 10:30**
**Date Received: 08/29/23 15:35**
**Sample Depth: 2**

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | mg/Kg | | 09/01/23 12:40 | 09/02/23 01:17 | 1 |
| Toluene | <0.00200 | U | 0.00200 | mg/Kg | | 09/01/23 12:40 | 09/02/23 01:17 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | mg/Kg | | 09/01/23 12:40 | 09/02/23 01:17 | 1 |
| m-Xylene & p-Xylene | <0.00401 | U | 0.00401 | mg/Kg | | 09/01/23 12:40 | 09/02/23 01:17 | 1 |
| o-Xylene | <0.00200 | U *+ | 0.00200 | mg/Kg | | 09/01/23 12:40 | 09/02/23 01:17 | 1 |
| Xylenes, Total | <0.00401 | U *+ | 0.00401 | mg/Kg | | 09/01/23 12:40 | 09/02/23 01:17 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *100* | | *70 - 130* | *09/01/23 12:40* | *09/02/23 01:17* | *1* |
| *1,4-Difluorobenzene (Surr)* | *63* | *S1-* | *70 - 130* | *09/01/23 12:40* | *09/02/23 01:17* | *1* |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00401 | U | 0.00401 | mg/Kg | | | 09/05/23 17:22 | 1 |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Total TPH** | **53.0** | | 50.0 | mg/Kg | | | 09/05/23 12:04 | 1 |

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# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

## Client Sample ID: FS16

**Lab Sample ID: 890-5178-8**
**Matrix: Solid**
**Date Collected: 08/29/23 10:30**
**Date Received: 08/29/23 15:35**
**Sample Depth: 2**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 14:22 | 1 |
| **Diesel Range Organics (Over C10-C28)** | **53.0** | | 50.0 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 14:22 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 14:22 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *128* | | *70 - 130* | *08/31/23 12:14* | *09/01/23 14:22* | *1* |
| *o-Terphenyl* | *110* | | *70 - 130* | *08/31/23 12:14* | *09/01/23 14:22* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **261** | | 4.98 | | mg/Kg | | | 09/01/23 14:17 | 1 |

## Client Sample ID: SW02

**Lab Sample ID: 890-5178-9**
**Matrix: Solid**
**Date Collected: 08/29/23 10:45**
**Date Received: 08/29/23 15:35**
**Sample Depth: 2**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 01:38 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 01:38 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 01:38 | 1 |
| m-Xylene & p-Xylene | <0.00398 | U | 0.00398 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 01:38 | 1 |
| o-Xylene | <0.00199 | U *+ | 0.00199 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 01:38 | 1 |
| Xylenes, Total | <0.00398 | U *+ | 0.00398 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 01:38 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *106* | | *70 - 130* | *09/01/23 12:40* | *09/02/23 01:38* | *1* |
| *1,4-Difluorobenzene (Surr)* | *58* | *S1-* | *70 - 130* | *09/01/23 12:40* | *09/02/23 01:38* | *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 | | | 09/05/23 17:22 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total TPH** | **77.9** | | 49.8 | | mg/Kg | | | 09/05/23 12:04 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.8 | U | 49.8 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 15:05 | 1 |
| **Diesel Range Organics (Over C10-C28)** | **77.9** | | 49.8 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 15:05 | 1 |
| OII Range Organics (Over C28-C36) | <49.8 | U | 49.8 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 15:05 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *125* | | *70 - 130* | *08/31/23 12:14* | *09/01/23 15:05* | *1* |
| *o-Terphenyl* | *109* | | *70 - 130* | *08/31/23 12:14* | *09/01/23 15:05* | *1* |

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

## Client Sample ID: SW02

**Lab Sample ID: 890-5178-9**
**Matrix: Solid**
**Date Collected: 08/29/23 10:45**
**Date Received: 08/29/23 15:35**
**Sample Depth: 2**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **188** | | 4.99 | | mg/Kg | | | 09/01/23 14:24 | 1 |

## Client Sample ID: FS17

**Lab Sample ID: 890-5178-10**
**Matrix: Solid**
**Date Collected: 08/29/23 10:55**
**Date Received: 08/29/23 15:35**
**Sample Depth: 2**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00198 | U | 0.00198 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 01:58 | 1 |
| Toluene | <0.00198 | U | 0.00198 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 01:58 | 1 |
| Ethylbenzene | <0.00198 | U | 0.00198 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 01:58 | 1 |
| m-Xylene & p-Xylene | <0.00396 | U | 0.00396 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 01:58 | 1 |
| o-Xylene | <0.00198 | U *+ | 0.00198 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 01:58 | 1 |
| Xylenes, Total | <0.00396 | U *+ | 0.00396 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 01:58 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *131* | *S1+* | *70 - 130* | *09/01/23 12:40* | *09/02/23 01:58* | *1* |
| *1,4-Difluorobenzene (Surr)* | *59* | *S1-* | *70 - 130* | *09/01/23 12:40* | *09/02/23 01:58* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00396 | U | 0.00396 | | mg/Kg | | | 09/05/23 17:22 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total TPH** | **77.9** | | 49.9 | | mg/Kg | | | 09/05/23 12:04 | 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 | | 08/31/23 12:14 | 09/01/23 15:26 | 1 |
| **Diesel Range Organics (Over C10-C28)** | **77.9** | | 49.9 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 15:26 | 1 |
| OII Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 15:26 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *126* | | *70 - 130* | *08/31/23 12:14* | *09/01/23 15:26* | *1* |
| *o-Terphenyl* | *110* | | *70 - 130* | *08/31/23 12:14* | *09/01/23 15:26* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **290** | | 5.01 | | mg/Kg | | | 09/01/23 14:30 | 1 |

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

## Client Sample ID: FS18

**Lab Sample ID: 890-5178-11**
**Matrix: Solid**
**Date Collected: 08/29/23 11:00**
**Date Received: 08/29/23 15:35**
**Sample Depth: 2**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 03:20 | 1 |
| Toluene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 03:20 | 1 |
| Ethylbenzene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 03:20 | 1 |
| m-Xylene & p-Xylene | <0.00403 | U | 0.00403 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 03:20 | 1 |
| o-Xylene | <0.00202 | U *+ | 0.00202 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 03:20 | 1 |
| Xylenes, Total | <0.00403 | U *+ | 0.00403 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 03:20 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *102* | | *70 - 130* | *09/01/23 12:40* | *09/02/23 03:20* | *1* |
| *1,4-Difluorobenzene (Surr)* | *55* | *S1-* | *70 - 130* | *09/01/23 12:40* | *09/02/23 03:20* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00403 | U | 0.00403 | | mg/Kg | | | 09/05/23 17:22 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.8 | U | 49.8 | | mg/Kg | | | 09/05/23 12:04 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.8 | U | 49.8 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 15:48 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.8 | U | 49.8 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 15:48 | 1 |
| OII Range Organics (Over C28-C36) | <49.8 | U | 49.8 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 15:48 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *125* | | *70 - 130* | *08/31/23 12:14* | *09/01/23 15:48* | *1* |
| *o-Terphenyl* | *108* | | *70 - 130* | *08/31/23 12:14* | *09/01/23 15:48* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **180** | | 5.02 | | mg/Kg | | | 09/01/23 14:37 | 1 |

## Client Sample ID: FS19

**Lab Sample ID: 890-5178-12**
**Matrix: Solid**
**Date Collected: 08/29/23 11:05**
**Date Received: 08/29/23 15:35**
**Sample Depth: 2**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 03:40 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 03:40 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 03:40 | 1 |
| m-Xylene & p-Xylene | <0.00398 | U | 0.00398 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 03:40 | 1 |
| o-Xylene | <0.00199 | U *+ | 0.00199 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 03:40 | 1 |
| Xylenes, Total | <0.00398 | U *+ | 0.00398 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 03:40 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *131* | *S1+* | *70 - 130* | *09/01/23 12:40* | *09/02/23 03:40* | *1* |

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# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

## Client Sample ID: FS19

**Lab Sample ID: 890-5178-12**
**Matrix: Solid**
**Date Collected: 08/29/23 11:05**
**Date Received: 08/29/23 15:35**
**Sample Depth: 2**

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

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,4-Difluorobenzene (Surr)* | *75* | | *70 - 130* | *09/01/23 12:40* | *09/02/23 03:40* | *1* |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00398 | U | 0.00398 | mg/Kg | | | 09/05/23 17:22 | 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 | | | 09/05/23 12:04 | 1 |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.2 | U | 50.2 | mg/Kg | | 08/31/23 12:14 | 09/01/23 16:10 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.2 | U | 50.2 | mg/Kg | | 08/31/23 12:14 | 09/01/23 16:10 | 1 |
| OII Range Organics (Over C28-C36) | <50.2 | U | 50.2 | mg/Kg | | 08/31/23 12:14 | 09/01/23 16:10 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *128* | | *70 - 130* | *08/31/23 12:14* | *09/01/23 16:10* | *1* |
| *o-Terphenyl* | *110* | | *70 - 130* | *08/31/23 12:14* | *09/01/23 16:10* | *1* |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Chloride** | **332** | | 4.99 | mg/Kg | | | 09/01/23 14:43 | 1 |

## Client Sample ID: SW03

**Lab Sample ID: 890-5178-13**
**Matrix: Solid**
**Date Collected: 08/29/23 11:30**
**Date Received: 08/29/23 15:35**
**Sample Depth: 2**

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | mg/Kg | | 09/01/23 12:40 | 09/02/23 04:01 | 1 |
| Toluene | <0.00200 | U | 0.00200 | mg/Kg | | 09/01/23 12:40 | 09/02/23 04:01 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | mg/Kg | | 09/01/23 12:40 | 09/02/23 04:01 | 1 |
| m-Xylene & p-Xylene | <0.00400 | U | 0.00400 | mg/Kg | | 09/01/23 12:40 | 09/02/23 04:01 | 1 |
| o-Xylene | <0.00200 | U *+ | 0.00200 | mg/Kg | | 09/01/23 12:40 | 09/02/23 04:01 | 1 |
| Xylenes, Total | <0.00400 | U *+ | 0.00400 | mg/Kg | | 09/01/23 12:40 | 09/02/23 04:01 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *101* | | *70 - 130* | *09/01/23 12:40* | *09/02/23 04:01* | *1* |
| *1,4-Difluorobenzene (Surr)* | *58* | *S1-* | *70 - 130* | *09/01/23 12:40* | *09/02/23 04:01* | *1* |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00400 | U | 0.00400 | mg/Kg | | | 09/05/23 17:22 | 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 | | | 09/05/23 12:04 | 1 |

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

## Client Sample ID: SW03

**Lab Sample ID: 890-5178-13**
**Matrix: Solid**
**Date Collected: 08/29/23 11:30**
**Date Received: 08/29/23 15:35**
**Sample Depth: 2**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.5 | U | 50.5 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 16:31 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.5 | U | 50.5 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 16:31 | 1 |
| OII Range Organics (Over C28-C36) | <50.5 | U | 50.5 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 16:31 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *120* | | *70 - 130* | *08/31/23 12:14* | *09/01/23 16:31* | *1* |
| *o-Terphenyl* | *103* | | *70 - 130* | *08/31/23 12:14* | *09/01/23 16:31* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **310** | | 5.04 | | mg/Kg | | | 09/01/23 14:49 | 1 |

## Client Sample ID: FS20

**Lab Sample ID: 890-5178-14**
**Matrix: Solid**
**Date Collected: 08/29/23 12:00**
**Date Received: 08/29/23 15:35**
**Sample Depth: 2**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00198 | U | 0.00198 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 04:21 | 1 |
| Toluene | <0.00198 | U | 0.00198 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 04:21 | 1 |
| Ethylbenzene | <0.00198 | U | 0.00198 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 04:21 | 1 |
| m-Xylene & p-Xylene | <0.00396 | U | 0.00396 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 04:21 | 1 |
| o-Xylene | <0.00198 | U *+ | 0.00198 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 04:21 | 1 |
| Xylenes, Total | <0.00396 | U *+ | 0.00396 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 04:21 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *98* | | *70 - 130* | *09/01/23 12:40* | *09/02/23 04:21* | *1* |
| *1,4-Difluorobenzene (Surr)* | *71* | | *70 - 130* | *09/01/23 12:40* | *09/02/23 04:21* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00396 | U | 0.00396 | | mg/Kg | | | 09/05/23 17:22 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total TPH** | **55.9** | | 50.3 | | mg/Kg | | | 09/05/23 12:04 | 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 | | 08/31/23 12:14 | 09/01/23 16:53 | 1 |
| **Diesel Range Organics (Over C10-C28)** | **55.9** | | 50.3 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 16:53 | 1 |
| OII Range Organics (Over C28-C36) | <50.3 | U | 50.3 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 16:53 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *122* | | *70 - 130* | *08/31/23 12:14* | *09/01/23 16:53* | *1* |
| *o-Terphenyl* | *104* | | *70 - 130* | *08/31/23 12:14* | *09/01/23 16:53* | *1* |

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

## Client Sample ID: FS20

**Lab Sample ID: 890-5178-14**
**Matrix: Solid**
**Date Collected: 08/29/23 12:00**
**Date Received: 08/29/23 15:35**
**Sample Depth: 2**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 373 | | 5.00 | | mg/Kg | | | 09/01/23 15:08 | 1 |

## Client Sample ID: FS21

**Lab Sample ID: 890-5178-15**
**Matrix: Solid**
**Date Collected: 08/29/23 14:50**
**Date Received: 08/29/23 15:35**
**Sample Depth: 9**

### 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 | | 09/01/23 12:40 | 09/02/23 04:42 | 1 |
| Toluene | <0.00201 | U | 0.00201 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 04:42 | 1 |
| Ethylbenzene | <0.00201 | U | 0.00201 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 04:42 | 1 |
| m-Xylene & p-Xylene | <0.00402 | U | 0.00402 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 04:42 | 1 |
| o-Xylene | <0.00201 | U *+ | 0.00201 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 04:42 | 1 |
| Xylenes, Total | <0.00402 | U *+ | 0.00402 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 04:42 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *98* | | *70 - 130* | *09/01/23 12:40* | *09/02/23 04:42* | *1* |
| *1,4-Difluorobenzene (Surr)* | *55* | *S1-* | *70 - 130* | *09/01/23 12:40* | *09/02/23 04:42* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00402 | U | 0.00402 | | mg/Kg | | | 09/05/23 17:22 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.7 | U | 49.7 | | mg/Kg | | | 09/05/23 12:04 | 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 | <49.7 | U | 49.7 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 17:14 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.7 | U | 49.7 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 17:14 | 1 |
| OII Range Organics (Over C28-C36) | <49.7 | U | 49.7 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 17:14 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *125* | | *70 - 130* | *08/31/23 12:14* | *09/01/23 17:14* | *1* |
| *o-Terphenyl* | *109* | | *70 - 130* | *08/31/23 12:14* | *09/01/23 17:14* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 117 | | 5.05 | | mg/Kg | | | 09/01/23 15:15 | 1 |

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

## Client Sample ID: FS22

**Lab Sample ID: 890-5178-16**
**Matrix: Solid**
**Date Collected: 08/29/23 15:00**
**Date Received: 08/29/23 15:35**
**Sample Depth: 9**

### 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 | | 09/01/23 12:40 | 09/02/23 05:02 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 05:02 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 05:02 | 1 |
| m-Xylene & p-Xylene | <0.00401 | U | 0.00401 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 05:02 | 1 |
| o-Xylene | <0.00200 | U *+ | 0.00200 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 05:02 | 1 |
| Xylenes, Total | <0.00401 | U *+ | 0.00401 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 05:02 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *105* | | *70 - 130* | *09/01/23 12:40* | *09/02/23 05:02* | *1* |
| *1,4-Difluorobenzene (Surr)* | *56* | *S1-* | *70 - 130* | *09/01/23 12:40* | *09/02/23 05:02* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00401 | U | 0.00401 | | mg/Kg | | | 09/05/23 17:22 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.9 | U | 49.9 | | mg/Kg | | | 09/05/23 12:04 | 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 | | 08/31/23 12:14 | 09/01/23 17:36 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 17:36 | 1 |
| OII Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 17:36 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *123* | | *70 - 130* | *08/31/23 12:14* | *09/01/23 17:36* | *1* |
| *o-Terphenyl* | *108* | | *70 - 130* | *08/31/23 12:14* | *09/01/23 17:36* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **116** | | 5.04 | | mg/Kg | | | 09/01/23 15:34 | 1 |

## Client Sample ID: FS23

**Lab Sample ID: 890-5178-17**
**Matrix: Solid**
**Date Collected: 08/29/23 15:05**
**Date Received: 08/29/23 15:35**
**Sample Depth: 9**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 05:22 | 1 |
| Toluene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 05:22 | 1 |
| Ethylbenzene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 05:22 | 1 |
| m-Xylene & p-Xylene | <0.00403 | U | 0.00403 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 05:22 | 1 |
| o-Xylene | <0.00202 | U *+ | 0.00202 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 05:22 | 1 |
| Xylenes, Total | <0.00403 | U *+ | 0.00403 | | mg/Kg | | 09/01/23 12:40 | 09/02/23 05:22 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *104* | | *70 - 130* | *09/01/23 12:40* | *09/02/23 05:22* | *1* |

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# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

## Client Sample ID: FS23

**Lab Sample ID: 890-5178-17**
**Matrix: Solid**
**Date Collected: 08/29/23 15:05**
**Date Received: 08/29/23 15:35**
**Sample Depth: 9**

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

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,4-Difluorobenzene (Surr)* | *53* | *S1-* | *70 - 130* | *09/01/23 12:40* | *09/02/23 05:22* | *1* |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00403 | U | 0.00403 | mg/Kg | | | 09/05/23 17:22 | 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 | | | 09/05/23 12:04 | 1 |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.6 | U | 49.6 | mg/Kg | | 08/31/23 12:14 | 09/01/23 17:58 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.6 | U | 49.6 | mg/Kg | | 08/31/23 12:14 | 09/01/23 17:58 | 1 |
| OII Range Organics (Over C28-C36) | <49.6 | U | 49.6 | mg/Kg | | 08/31/23 12:14 | 09/01/23 17:58 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *121* | | *70 - 130* | *08/31/23 12:14* | *09/01/23 17:58* | *1* |
| *o-Terphenyl* | *106* | | *70 - 130* | *08/31/23 12:14* | *09/01/23 17:58* | *1* |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Chloride** | **131** | | 4.98 | mg/Kg | | | 09/01/23 15:40 | 1 |

## Client Sample ID: FS24

**Lab Sample ID: 890-5178-18**
**Matrix: Solid**
**Date Collected: 08/29/23 15:10**
**Date Received: 08/29/23 15:35**
**Sample Depth: 6**

### 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 | | 09/01/23 12:40 | 09/02/23 05:43 | 1 |
| Toluene | <0.00199 | U | 0.00199 | mg/Kg | | 09/01/23 12:40 | 09/02/23 05:43 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | mg/Kg | | 09/01/23 12:40 | 09/02/23 05:43 | 1 |
| m-Xylene & p-Xylene | <0.00398 | U | 0.00398 | mg/Kg | | 09/01/23 12:40 | 09/02/23 05:43 | 1 |
| o-Xylene | <0.00199 | U *+ | 0.00199 | mg/Kg | | 09/01/23 12:40 | 09/02/23 05:43 | 1 |
| Xylenes, Total | <0.00398 | U *+ | 0.00398 | mg/Kg | | 09/01/23 12:40 | 09/02/23 05:43 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *113* | | *70 - 130* | *09/01/23 12:40* | *09/02/23 05:43* | *1* |
| *1,4-Difluorobenzene (Surr)* | *66* | *S1-* | *70 - 130* | *09/01/23 12:40* | *09/02/23 05:43* | *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 | | | 09/05/23 17:22 | 1 |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Total TPH** | **53.5** | | 49.5 | mg/Kg | | | 09/05/23 12:04 | 1 |

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

## Client Sample ID: FS24

**Date Collected: 08/29/23 15:10**
**Date Received: 08/29/23 15:35**
**Sample Depth: 6**

## Lab Sample ID: 890-5178-18

**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.5 | U | 49.5 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 18:19 | 1 |
| **Diesel Range Organics (Over C10-C28)** | **53.5** | | 49.5 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 18:19 | 1 |
| Oil Range Organics (Over C28-C36) | <49.5 | U | 49.5 | | mg/Kg | | 08/31/23 12:14 | 09/01/23 18:19 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *122* | | *70 - 130* | *08/31/23 12:14* | *09/01/23 18:19* | *1* |
| *o-Terphenyl* | *105* | | *70 - 130* | *08/31/23 12:14* | *09/01/23 18:19* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **81.1** | | 4.97 | | mg/Kg | | | 09/01/23 15:47 | 1 |

# Surrogate Summary

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

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

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

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | BFB1 (70-130) | DFBZ1 (70-130) |
| 890-5178-1 | FS09 | 98 | 56 S1- |
| 890-5178-1 MS | FS09 | 136 S1+ | 105 |
| 890-5178-1 MSD | FS09 | 140 S1+ | 103 |
| 890-5178-2 | FS10 | 136 S1+ | 67 S1- |
| 890-5178-3 | FS11 | 88 | 71 |
| 890-5178-4 | FS12 | 107 | 74 |
| 890-5178-5 | FS13 | 107 | 62 S1- |
| 890-5178-6 | FS14 | 140 S1+ | 73 |
| 890-5178-7 | FS15 | 99 | 54 S1- |
| 890-5178-8 | FS16 | 100 | 63 S1- |
| 890-5178-9 | SW02 | 106 | 58 S1- |
| 890-5178-10 | FS17 | 131 S1+ | 59 S1- |
| 890-5178-11 | FS18 | 102 | 55 S1- |
| 890-5178-12 | FS19 | 131 S1+ | 75 |
| 890-5178-13 | SW03 | 101 | 58 S1- |
| 890-5178-14 | FS20 | 98 | 71 |
| 890-5178-15 | FS21 | 98 | 55 S1- |
| 890-5178-16 | FS22 | 105 | 56 S1- |
| 890-5178-17 | FS23 | 104 | 53 S1- |
| 890-5178-18 | FS24 | 113 | 66 S1- |
| LCS 880-61763/1-A | Lab Control Sample | 140 S1+ | 117 |
| LCSD 880-61763/2-A | Lab Control Sample Dup | 148 S1+ | 107 |
| MB 880-61711/5-A | Method Blank | 75 | 79 |
| MB 880-61763/5-A | Method Blank | 98 | 97 |

**Surrogate Legend**

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

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

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | 1CO1 (70-130) | OTPH1 (70-130) |
| 880-32645-A-1-D MS | Matrix Spike | 135 S1+ | 104 |
| 880-32645-A-1-E MSD | Matrix Spike Duplicate | 132 S1+ | 101 |
| 890-5178-1 | FS09 | 125 | 109 |
| 890-5178-2 | FS10 | 132 S1+ | 113 |
| 890-5178-3 | FS11 | 137 S1+ | 117 |
| 890-5178-4 | FS12 | 130 | 112 |
| 890-5178-5 | FS13 | 137 S1+ | 116 |
| 890-5178-6 | FS14 | 124 | 107 |
| 890-5178-7 | FS15 | 124 | 107 |
| 890-5178-8 | FS16 | 128 | 110 |
| 890-5178-9 | SW02 | 125 | 109 |
| 890-5178-10 | FS17 | 126 | 110 |
| 890-5178-11 | FS18 | 125 | 108 |
| 890-5178-12 | FS19 | 128 | 110 |
| 890-5178-13 | SW03 | 120 | 103 |

# Surrogate Summary

Client: Ensolum Job ID: 890-5178-1
Project/Site: JRU DI 11 Ekalaka 823H SDG: 03C1558118

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

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

| | | Percent Surrogate Recovery (Acceptance Limits) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1CO1 | OTPH1 | | | | | | | | | | |
| Lab Sample ID | Client Sample ID | (70-130) | (70-130) | | | | | | | | | | |
| 890-5178-14 | FS20 | 122 | 104 | | | | | | | | | | |
| 890-5178-15 | FS21 | 125 | 109 | | | | | | | | | | |
| 890-5178-16 | FS22 | 123 | 108 | | | | | | | | | | |
| 890-5178-17 | FS23 | 121 | 106 | | | | | | | | | | |
| 890-5178-18 | FS24 | 122 | 105 | | | | | | | | | | |
| LCS 880-61642/2-A | Lab Control Sample | 114 | 117 | | | | | | | | | | |
| LCSD 880-61642/3-A | Lab Control Sample Dup | 120 | 114 | | | | | | | | | | |
| MB 880-61642/1-A | Method Blank | 161 S1+ | 149 S1+ | | | | | | | | | | |

**Surrogate Legend**

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

# QC Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

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

**Lab Sample ID: MB 880-61711/5-A**
**Matrix: Solid**
**Analysis Batch: 61708**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 61711**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 09:05 | 09/01/23 11:29 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 09:05 | 09/01/23 11:29 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 09:05 | 09/01/23 11:29 | 1 |
| m-Xylene & p-Xylene | <0.00400 | U | 0.00400 | | mg/Kg | | 09/01/23 09:05 | 09/01/23 11:29 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 09:05 | 09/01/23 11:29 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 09/01/23 09:05 | 09/01/23 11:29 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *75* | | *70 - 130* | *09/01/23 09:05* | *09/01/23 11:29* | *1* |
| *1,4-Difluorobenzene (Surr)* | *79* | | *70 - 130* | *09/01/23 09:05* | *09/01/23 11:29* | *1* |

**Lab Sample ID: MB 880-61763/5-A**
**Matrix: Solid**
**Analysis Batch: 61708**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 61763**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:40 | 09/01/23 22:33 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:40 | 09/01/23 22:33 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:40 | 09/01/23 22:33 | 1 |
| m-Xylene & p-Xylene | <0.00400 | U | 0.00400 | | mg/Kg | | 09/01/23 12:40 | 09/01/23 22:33 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:40 | 09/01/23 22:33 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 09/01/23 12:40 | 09/01/23 22:33 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *98* | | *70 - 130* | *09/01/23 12:40* | *09/01/23 22:33* | *1* |
| *1,4-Difluorobenzene (Surr)* | *97* | | *70 - 130* | *09/01/23 12:40* | *09/01/23 22:33* | *1* |

**Lab Sample ID: LCS 880-61763/1-A**
**Matrix: Solid**
**Analysis Batch: 61708**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 61763**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.09692 | | mg/Kg | | 97 | 70 - 130 | | |
| Toluene | | | 0.100 | 0.1065 | | mg/Kg | | 107 | 70 - 130 | | |
| Ethylbenzene | | | 0.100 | 0.1107 | | mg/Kg | | 111 | 70 - 130 | | |
| m-Xylene & p-Xylene | | | 0.200 | 0.2523 | | mg/Kg | | 126 | 70 - 130 | | |
| o-Xylene | | | 0.100 | 0.1451 | *+ | mg/Kg | | 145 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *140* | *S1+* | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *117* | | *70 - 130* |

**Lab Sample ID: LCSD 880-61763/2-A**
**Matrix: Solid**
**Analysis Batch: 61708**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 61763**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.08199 | | mg/Kg | | 82 | 70 - 130 | 17 | 35 |

# QC Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

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

**Lab Sample ID: LCSD 880-61763/2-A** — **Client Sample ID: Lab Control Sample Dup**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 61708** — **Prep Batch: 61763**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | | | 0.100 | 0.09865 | | mg/Kg | | 99 | 70 - 130 | 8 | 35 |
| Ethylbenzene | | | 0.100 | 0.1149 | | mg/Kg | | 115 | 70 - 130 | 4 | 35 |
| m-Xylene & p-Xylene | | | 0.200 | 0.2518 | | mg/Kg | | 126 | 70 - 130 | 0 | 35 |
| o-Xylene | | | 0.100 | 0.1290 | | mg/Kg | | 129 | 70 - 130 | 12 | 35 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *148* | *S1+* | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *107* | | *70 - 130* |

**Lab Sample ID: 890-5178-1 MS** — **Client Sample ID: FS09**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 61708** — **Prep Batch: 61763**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.0996 | 0.08453 | | mg/Kg | | 84 | 70 - 130 |
| Toluene | <0.00199 | U | 0.0996 | 0.09585 | | mg/Kg | | 96 | 70 - 130 |
| Ethylbenzene | <0.00199 | U | 0.0996 | 0.1060 | | mg/Kg | | 106 | 70 - 130 |
| m-Xylene & p-Xylene | <0.00398 | U | 0.199 | 0.2373 | | mg/Kg | | 119 | 70 - 130 |
| o-Xylene | <0.00199 | U *+ | 0.0996 | 0.1189 | | mg/Kg | | 119 | 70 - 130 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *136* | *S1+* | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *105* | | *70 - 130* |

**Lab Sample ID: 890-5178-1 MSD** — **Client Sample ID: FS09**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 61708** — **Prep Batch: 61763**

| 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 | 0.08561 | | mg/Kg | | 84 | 70 - 130 | 1 | 35 |
| Toluene | <0.00199 | U | 0.100 | 0.1011 | | mg/Kg | | 101 | 70 - 130 | 5 | 35 |
| Ethylbenzene | <0.00199 | U | 0.100 | 0.1109 | | mg/Kg | | 111 | 70 - 130 | 5 | 35 |
| m-Xylene & p-Xylene | <0.00398 | U | 0.200 | 0.2473 | | mg/Kg | | 123 | 70 - 130 | 4 | 35 |
| o-Xylene | <0.00199 | U *+ | 0.100 | 0.1230 | | mg/Kg | | 123 | 70 - 130 | 3 | 35 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *140* | *S1+* | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *103* | | *70 - 130* |

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

**Lab Sample ID: MB 880-61642/1-A** — **Client Sample ID: Method Blank**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 61701** — **Prep Batch: 61642**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 08/31/23 12:13 | 09/01/23 07:51 | 1 |

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# QC Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

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

**Lab Sample ID: MB 880-61642/1-A**
**Matrix: Solid**
**Analysis Batch: 61701**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 61642**

| 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 | | 08/31/23 12:13 | 09/01/23 07:51 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 08/31/23 12:13 | 09/01/23 07:51 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *161* | *S1+* | *70 - 130* | *08/31/23 12:13* | *09/01/23 07:51* | *1* |
| *o-Terphenyl* | *149* | *S1+* | *70 - 130* | *08/31/23 12:13* | *09/01/23 07:51* | *1* |

**Lab Sample ID: LCS 880-61642/2-A**
**Matrix: Solid**
**Analysis Batch: 61701**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 61642**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 1065 | | mg/Kg | | 107 | 70 - 130 | | |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 949.4 | | mg/Kg | | 95 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane* | *114* | | *70 - 130* |
| *o-Terphenyl* | *117* | | *70 - 130* |

**Lab Sample ID: LCSD 880-61642/3-A**
**Matrix: Solid**
**Analysis Batch: 61701**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 61642**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 1064 | | mg/Kg | | 106 | 70 - 130 | 0 | 20 |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 918.9 | | mg/Kg | | 92 | 70 - 130 | 3 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane* | *120* | | *70 - 130* |
| *o-Terphenyl* | *114* | | *70 - 130* |

**Lab Sample ID: 880-32645-A-1-D MS**
**Matrix: Solid**
**Analysis Batch: 61701**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 61642**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.3 | U | 998 | 1051 | | mg/Kg | | 102 | 70 - 130 | | |
| Diesel Range Organics (Over C10-C28) | 108 | | 998 | 1376 | | mg/Kg | | 127 | 70 - 130 | | |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane* | *135* | *S1+* | *70 - 130* |
| *o-Terphenyl* | *104* | | *70 - 130* |

# QC Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

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

**Lab Sample ID: 880-32645-A-1-E MSD** — **Client Sample ID: Matrix Spike Duplicate**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 61701** — **Prep Batch: 61642**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.3 | U | 998 | 1037 | | mg/Kg | | 101 | 70 - 130 | 1 | 20 |
| Diesel Range Organics (Over C10-C28) | 108 | | 998 | 1340 | | mg/Kg | | 123 | 70 - 130 | 3 | 20 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane* | *132* | *S1+* | *70 - 130* |
| *o-Terphenyl* | *101* | | *70 - 130* |

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 880-61635/1-A** — **Client Sample ID: Method Blank**
**Matrix: Solid** — **Prep Type: Soluble**
**Analysis Batch: 61688**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <5.00 | U | 5.00 | | mg/Kg | | | 09/01/23 15:52 | 1 |

**Lab Sample ID: LCS 880-61635/2-A** — **Client Sample ID: Lab Control Sample**
**Matrix: Solid** — **Prep Type: Soluble**
**Analysis Batch: 61688**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 250 | 248.3 | | mg/Kg | | 99 | 90 - 110 | | |

**Lab Sample ID: LCSD 880-61635/3-A** — **Client Sample ID: Lab Control Sample Dup**
**Matrix: Solid** — **Prep Type: Soluble**
**Analysis Batch: 61688**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 250 | 247.3 | | mg/Kg | | 99 | 90 - 110 | 0 | 20 |

**Lab Sample ID: 890-5177-A-11-B MS** — **Client Sample ID: Matrix Spike**
**Matrix: Solid** — **Prep Type: Soluble**
**Analysis Batch: 61688**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 265 | | 248 | 517.4 | | mg/Kg | | 102 | 90 - 110 | | |

**Lab Sample ID: 890-5177-A-11-C MSD** — **Client Sample ID: Matrix Spike Duplicate**
**Matrix: Solid** — **Prep Type: Soluble**
**Analysis Batch: 61688**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 265 | | 248 | 515.3 | | mg/Kg | | 101 | 90 - 110 | 0 | 20 |

# QC Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

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

**Lab Sample ID: MB 880-61639/1-A**
**Matrix: Solid**
**Analysis Batch: 61689**

**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 | | | 09/01/23 11:55 | 1 |

**Lab Sample ID: LCS 880-61639/2-A**
**Matrix: Solid**
**Analysis Batch: 61689**

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

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 250 | 250.2 | | mg/Kg | | 100 | 90 - 110 | | |

**Lab Sample ID: LCSD 880-61639/3-A**
**Matrix: Solid**
**Analysis Batch: 61689**

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

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 250 | 250.3 | | mg/Kg | | 100 | 90 - 110 | 0 | 20 |

**Lab Sample ID: 890-5178-3 MS**
**Matrix: Solid**
**Analysis Batch: 61689**

**Client Sample ID: FS11**
**Prep Type: Soluble**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 254 | | 248 | 491.1 | | mg/Kg | | 96 | 90 - 110 | | |

**Lab Sample ID: 890-5178-3 MSD**
**Matrix: Solid**
**Analysis Batch: 61689**

**Client Sample ID: FS11**
**Prep Type: Soluble**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 254 | | 249 | 494.5 | | mg/Kg | | 97 | 90 - 110 | 1 | 20 |

**Lab Sample ID: 890-5178-13 MS**
**Matrix: Solid**
**Analysis Batch: 61689**

**Client Sample ID: SW03**
**Prep Type: Soluble**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 310 | | 252 | 547.9 | | mg/Kg | | 94 | 90 - 110 | | |

**Lab Sample ID: 890-5178-13 MSD**
**Matrix: Solid**
**Analysis Batch: 61689**

**Client Sample ID: SW03**
**Prep Type: Soluble**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 310 | | 252 | 547.7 | | mg/Kg | | 94 | 90 - 110 | 0 | 20 |

# QC Association Summary

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

## GC VOA

### Analysis Batch: 61708

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5178-1 | FS09 | Total/NA | Solid | 8021B | 61763 |
| 890-5178-2 | FS10 | Total/NA | Solid | 8021B | 61763 |
| 890-5178-3 | FS11 | Total/NA | Solid | 8021B | 61763 |
| 890-5178-4 | FS12 | Total/NA | Solid | 8021B | 61763 |
| 890-5178-5 | FS13 | Total/NA | Solid | 8021B | 61763 |
| 890-5178-6 | FS14 | Total/NA | Solid | 8021B | 61763 |
| 890-5178-7 | FS15 | Total/NA | Solid | 8021B | 61763 |
| 890-5178-8 | FS16 | Total/NA | Solid | 8021B | 61763 |
| 890-5178-9 | SW02 | Total/NA | Solid | 8021B | 61763 |
| 890-5178-10 | FS17 | Total/NA | Solid | 8021B | 61763 |
| 890-5178-11 | FS18 | Total/NA | Solid | 8021B | 61763 |
| 890-5178-12 | FS19 | Total/NA | Solid | 8021B | 61763 |
| 890-5178-13 | SW03 | Total/NA | Solid | 8021B | 61763 |
| 890-5178-14 | FS20 | Total/NA | Solid | 8021B | 61763 |
| 890-5178-15 | FS21 | Total/NA | Solid | 8021B | 61763 |
| 890-5178-16 | FS22 | Total/NA | Solid | 8021B | 61763 |
| 890-5178-17 | FS23 | Total/NA | Solid | 8021B | 61763 |
| 890-5178-18 | FS24 | Total/NA | Solid | 8021B | 61763 |
| MB 880-61711/5-A | Method Blank | Total/NA | Solid | 8021B | 61711 |
| MB 880-61763/5-A | Method Blank | Total/NA | Solid | 8021B | 61763 |
| LCS 880-61763/1-A | Lab Control Sample | Total/NA | Solid | 8021B | 61763 |
| LCSD 880-61763/2-A | Lab Control Sample Dup | Total/NA | Solid | 8021B | 61763 |
| 890-5178-1 MS | FS09 | Total/NA | Solid | 8021B | 61763 |
| 890-5178-1 MSD | FS09 | Total/NA | Solid | 8021B | 61763 |

### Prep Batch: 61711

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| MB 880-61711/5-A | Method Blank | Total/NA | Solid | 5035 | |

### Prep Batch: 61763

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5178-1 | FS09 | Total/NA | Solid | 5035 | |
| 890-5178-2 | FS10 | Total/NA | Solid | 5035 | |
| 890-5178-3 | FS11 | Total/NA | Solid | 5035 | |
| 890-5178-4 | FS12 | Total/NA | Solid | 5035 | |
| 890-5178-5 | FS13 | Total/NA | Solid | 5035 | |
| 890-5178-6 | FS14 | Total/NA | Solid | 5035 | |
| 890-5178-7 | FS15 | Total/NA | Solid | 5035 | |
| 890-5178-8 | FS16 | Total/NA | Solid | 5035 | |
| 890-5178-9 | SW02 | Total/NA | Solid | 5035 | |
| 890-5178-10 | FS17 | Total/NA | Solid | 5035 | |
| 890-5178-11 | FS18 | Total/NA | Solid | 5035 | |
| 890-5178-12 | FS19 | Total/NA | Solid | 5035 | |
| 890-5178-13 | SW03 | Total/NA | Solid | 5035 | |
| 890-5178-14 | FS20 | Total/NA | Solid | 5035 | |
| 890-5178-15 | FS21 | Total/NA | Solid | 5035 | |
| 890-5178-16 | FS22 | Total/NA | Solid | 5035 | |
| 890-5178-17 | FS23 | Total/NA | Solid | 5035 | |
| 890-5178-18 | FS24 | Total/NA | Solid | 5035 | |
| MB 880-61763/5-A | Method Blank | Total/NA | Solid | 5035 | |
| LCS 880-61763/1-A | Lab Control Sample | Total/NA | Solid | 5035 | |

# QC Association Summary

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

## GC VOA (Continued)

### Prep Batch: 61763 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| LCSD 880-61763/2-A | Lab Control Sample Dup | Total/NA | Solid | 5035 | |
| 890-5178-1 MS | FS09 | Total/NA | Solid | 5035 | |
| 890-5178-1 MSD | FS09 | Total/NA | Solid | 5035 | |

### Analysis Batch: 61858

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5178-1 | FS09 | Total/NA | Solid | Total BTEX | |
| 890-5178-2 | FS10 | Total/NA | Solid | Total BTEX | |
| 890-5178-3 | FS11 | Total/NA | Solid | Total BTEX | |
| 890-5178-4 | FS12 | Total/NA | Solid | Total BTEX | |
| 890-5178-5 | FS13 | Total/NA | Solid | Total BTEX | |
| 890-5178-6 | FS14 | Total/NA | Solid | Total BTEX | |
| 890-5178-7 | FS15 | Total/NA | Solid | Total BTEX | |
| 890-5178-8 | FS16 | Total/NA | Solid | Total BTEX | |
| 890-5178-9 | SW02 | Total/NA | Solid | Total BTEX | |
| 890-5178-10 | FS17 | Total/NA | Solid | Total BTEX | |
| 890-5178-11 | FS18 | Total/NA | Solid | Total BTEX | |
| 890-5178-12 | FS19 | Total/NA | Solid | Total BTEX | |
| 890-5178-13 | SW03 | Total/NA | Solid | Total BTEX | |
| 890-5178-14 | FS20 | Total/NA | Solid | Total BTEX | |
| 890-5178-15 | FS21 | Total/NA | Solid | Total BTEX | |
| 890-5178-16 | FS22 | Total/NA | Solid | Total BTEX | |
| 890-5178-17 | FS23 | Total/NA | Solid | Total BTEX | |
| 890-5178-18 | FS24 | Total/NA | Solid | Total BTEX | |

## GC Semi VOA

### Prep Batch: 61642

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5178-1 | FS09 | Total/NA | Solid | 8015NM Prep | |
| 890-5178-2 | FS10 | Total/NA | Solid | 8015NM Prep | |
| 890-5178-3 | FS11 | Total/NA | Solid | 8015NM Prep | |
| 890-5178-4 | FS12 | Total/NA | Solid | 8015NM Prep | |
| 890-5178-5 | FS13 | Total/NA | Solid | 8015NM Prep | |
| 890-5178-6 | FS14 | Total/NA | Solid | 8015NM Prep | |
| 890-5178-7 | FS15 | Total/NA | Solid | 8015NM Prep | |
| 890-5178-8 | FS16 | Total/NA | Solid | 8015NM Prep | |
| 890-5178-9 | SW02 | Total/NA | Solid | 8015NM Prep | |
| 890-5178-10 | FS17 | Total/NA | Solid | 8015NM Prep | |
| 890-5178-11 | FS18 | Total/NA | Solid | 8015NM Prep | |
| 890-5178-12 | FS19 | Total/NA | Solid | 8015NM Prep | |
| 890-5178-13 | SW03 | Total/NA | Solid | 8015NM Prep | |
| 890-5178-14 | FS20 | Total/NA | Solid | 8015NM Prep | |
| 890-5178-15 | FS21 | Total/NA | Solid | 8015NM Prep | |
| 890-5178-16 | FS22 | Total/NA | Solid | 8015NM Prep | |
| 890-5178-17 | FS23 | Total/NA | Solid | 8015NM Prep | |
| 890-5178-18 | FS24 | Total/NA | Solid | 8015NM Prep | |
| MB 880-61642/1-A | Method Blank | Total/NA | Solid | 8015NM Prep | |
| LCS 880-61642/2-A | Lab Control Sample | Total/NA | Solid | 8015NM Prep | |
| LCSD 880-61642/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015NM Prep | |
| 880-32645-A-1-D MS | Matrix Spike | Total/NA | Solid | 8015NM Prep | |

# QC Association Summary

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

## GC Semi VOA (Continued)

### Prep Batch: 61642 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-32645-A-1-E MSD | Matrix Spike Duplicate | Total/NA | Solid | 8015NM Prep | |

### Analysis Batch: 61701

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5178-1 | FS09 | Total/NA | Solid | 8015B NM | 61642 |
| 890-5178-2 | FS10 | Total/NA | Solid | 8015B NM | 61642 |
| 890-5178-3 | FS11 | Total/NA | Solid | 8015B NM | 61642 |
| 890-5178-4 | FS12 | Total/NA | Solid | 8015B NM | 61642 |
| 890-5178-5 | FS13 | Total/NA | Solid | 8015B NM | 61642 |
| 890-5178-6 | FS14 | Total/NA | Solid | 8015B NM | 61642 |
| 890-5178-7 | FS15 | Total/NA | Solid | 8015B NM | 61642 |
| 890-5178-8 | FS16 | Total/NA | Solid | 8015B NM | 61642 |
| 890-5178-9 | SW02 | Total/NA | Solid | 8015B NM | 61642 |
| 890-5178-10 | FS17 | Total/NA | Solid | 8015B NM | 61642 |
| 890-5178-11 | FS18 | Total/NA | Solid | 8015B NM | 61642 |
| 890-5178-12 | FS19 | Total/NA | Solid | 8015B NM | 61642 |
| 890-5178-13 | SW03 | Total/NA | Solid | 8015B NM | 61642 |
| 890-5178-14 | FS20 | Total/NA | Solid | 8015B NM | 61642 |
| 890-5178-15 | FS21 | Total/NA | Solid | 8015B NM | 61642 |
| 890-5178-16 | FS22 | Total/NA | Solid | 8015B NM | 61642 |
| 890-5178-17 | FS23 | Total/NA | Solid | 8015B NM | 61642 |
| 890-5178-18 | FS24 | Total/NA | Solid | 8015B NM | 61642 |
| MB 880-61642/1-A | Method Blank | Total/NA | Solid | 8015B NM | 61642 |
| LCS 880-61642/2-A | Lab Control Sample | Total/NA | Solid | 8015B NM | 61642 |
| LCSD 880-61642/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015B NM | 61642 |
| 880-32645-A-1-D MS | Matrix Spike | Total/NA | Solid | 8015B NM | 61642 |
| 880-32645-A-1-E MSD | Matrix Spike Duplicate | Total/NA | Solid | 8015B NM | 61642 |

### Analysis Batch: 61802

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5178-1 | FS09 | Total/NA | Solid | 8015 NM | |
| 890-5178-2 | FS10 | Total/NA | Solid | 8015 NM | |
| 890-5178-3 | FS11 | Total/NA | Solid | 8015 NM | |
| 890-5178-4 | FS12 | Total/NA | Solid | 8015 NM | |
| 890-5178-5 | FS13 | Total/NA | Solid | 8015 NM | |
| 890-5178-6 | FS14 | Total/NA | Solid | 8015 NM | |
| 890-5178-7 | FS15 | Total/NA | Solid | 8015 NM | |
| 890-5178-8 | FS16 | Total/NA | Solid | 8015 NM | |
| 890-5178-9 | SW02 | Total/NA | Solid | 8015 NM | |
| 890-5178-10 | FS17 | Total/NA | Solid | 8015 NM | |
| 890-5178-11 | FS18 | Total/NA | Solid | 8015 NM | |
| 890-5178-12 | FS19 | Total/NA | Solid | 8015 NM | |
| 890-5178-13 | SW03 | Total/NA | Solid | 8015 NM | |
| 890-5178-14 | FS20 | Total/NA | Solid | 8015 NM | |
| 890-5178-15 | FS21 | Total/NA | Solid | 8015 NM | |
| 890-5178-16 | FS22 | Total/NA | Solid | 8015 NM | |
| 890-5178-17 | FS23 | Total/NA | Solid | 8015 NM | |
| 890-5178-18 | FS24 | Total/NA | Solid | 8015 NM | |

# QC Association Summary

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

## HPLC/IC

### Leach Batch: 61635

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5178-1 | FS09 | Soluble | Solid | DI Leach | |
| 890-5178-2 | FS10 | Soluble | Solid | DI Leach | |
| MB 880-61635/1-A | Method Blank | Soluble | Solid | DI Leach | |
| LCS 880-61635/2-A | Lab Control Sample | Soluble | Solid | DI Leach | |
| LCSD 880-61635/3-A | Lab Control Sample Dup | Soluble | Solid | DI Leach | |
| 890-5177-A-11-B MS | Matrix Spike | Soluble | Solid | DI Leach | |
| 890-5177-A-11-C MSD | Matrix Spike Duplicate | Soluble | Solid | DI Leach | |

### Leach Batch: 61639

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5178-3 | FS11 | Soluble | Solid | DI Leach | |
| 890-5178-4 | FS12 | Soluble | Solid | DI Leach | |
| 890-5178-5 | FS13 | Soluble | Solid | DI Leach | |
| 890-5178-6 | FS14 | Soluble | Solid | DI Leach | |
| 890-5178-7 | FS15 | Soluble | Solid | DI Leach | |
| 890-5178-8 | FS16 | Soluble | Solid | DI Leach | |
| 890-5178-9 | SW02 | Soluble | Solid | DI Leach | |
| 890-5178-10 | FS17 | Soluble | Solid | DI Leach | |
| 890-5178-11 | FS18 | Soluble | Solid | DI Leach | |
| 890-5178-12 | FS19 | Soluble | Solid | DI Leach | |
| 890-5178-13 | SW03 | Soluble | Solid | DI Leach | |
| 890-5178-14 | FS20 | Soluble | Solid | DI Leach | |
| 890-5178-15 | FS21 | Soluble | Solid | DI Leach | |
| 890-5178-16 | FS22 | Soluble | Solid | DI Leach | |
| 890-5178-17 | FS23 | Soluble | Solid | DI Leach | |
| 890-5178-18 | FS24 | Soluble | Solid | DI Leach | |
| MB 880-61639/1-A | Method Blank | Soluble | Solid | DI Leach | |
| LCS 880-61639/2-A | Lab Control Sample | Soluble | Solid | DI Leach | |
| LCSD 880-61639/3-A | Lab Control Sample Dup | Soluble | Solid | DI Leach | |
| 890-5178-3 MS | FS11 | Soluble | Solid | DI Leach | |
| 890-5178-3 MSD | FS11 | Soluble | Solid | DI Leach | |
| 890-5178-13 MS | SW03 | Soluble | Solid | DI Leach | |
| 890-5178-13 MSD | SW03 | Soluble | Solid | DI Leach | |

### Analysis Batch: 61688

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5178-1 | FS09 | Soluble | Solid | 300.0 | 61635 |
| 890-5178-2 | FS10 | Soluble | Solid | 300.0 | 61635 |
| MB 880-61635/1-A | Method Blank | Soluble | Solid | 300.0 | 61635 |
| LCS 880-61635/2-A | Lab Control Sample | Soluble | Solid | 300.0 | 61635 |
| LCSD 880-61635/3-A | Lab Control Sample Dup | Soluble | Solid | 300.0 | 61635 |
| 890-5177-A-11-B MS | Matrix Spike | Soluble | Solid | 300.0 | 61635 |
| 890-5177-A-11-C MSD | Matrix Spike Duplicate | Soluble | Solid | 300.0 | 61635 |

### Analysis Batch: 61689

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5178-3 | FS11 | Soluble | Solid | 300.0 | 61639 |
| 890-5178-4 | FS12 | Soluble | Solid | 300.0 | 61639 |
| 890-5178-5 | FS13 | Soluble | Solid | 300.0 | 61639 |
| 890-5178-6 | FS14 | Soluble | Solid | 300.0 | 61639 |
| 890-5178-7 | FS15 | Soluble | Solid | 300.0 | 61639 |

# QC Association Summary

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

## HPLC/IC (Continued)

### Analysis Batch: 61689 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5178-8 | FS16 | Soluble | Solid | 300.0 | 61639 |
| 890-5178-9 | SW02 | Soluble | Solid | 300.0 | 61639 |
| 890-5178-10 | FS17 | Soluble | Solid | 300.0 | 61639 |
| 890-5178-11 | FS18 | Soluble | Solid | 300.0 | 61639 |
| 890-5178-12 | FS19 | Soluble | Solid | 300.0 | 61639 |
| 890-5178-13 | SW03 | Soluble | Solid | 300.0 | 61639 |
| 890-5178-14 | FS20 | Soluble | Solid | 300.0 | 61639 |
| 890-5178-15 | FS21 | Soluble | Solid | 300.0 | 61639 |
| 890-5178-16 | FS22 | Soluble | Solid | 300.0 | 61639 |
| 890-5178-17 | FS23 | Soluble | Solid | 300.0 | 61639 |
| 890-5178-18 | FS24 | Soluble | Solid | 300.0 | 61639 |
| MB 880-61639/1-A | Method Blank | Soluble | Solid | 300.0 | 61639 |
| LCS 880-61639/2-A | Lab Control Sample | Soluble | Solid | 300.0 | 61639 |
| LCSD 880-61639/3-A | Lab Control Sample Dup | Soluble | Solid | 300.0 | 61639 |
| 890-5178-3 MS | FS11 | Soluble | Solid | 300.0 | 61639 |
| 890-5178-3 MSD | FS11 | Soluble | Solid | 300.0 | 61639 |
| 890-5178-13 MS | SW03 | Soluble | Solid | 300.0 | 61639 |
| 890-5178-13 MSD | SW03 | Soluble | Solid | 300.0 | 61639 |

# Lab Chronicle

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

## Client Sample ID: FS09

**Date Collected: 08/29/23 09:55**
**Date Received: 08/29/23 15:35**

**Lab Sample ID: 890-5178-1**
**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 | | | 5.03 g | 5 mL | 61763 | 09/01/23 12:40 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/01/23 22:54 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61858 | 09/05/23 17:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61802 | 09/05/23 12:04 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.99 g | 10 mL | 61642 | 08/31/23 12:14 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61701 | 09/01/23 11:51 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.02 g | 50 mL | 61635 | 08/31/23 11:05 | SMC | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61688 | 09/05/23 14:45 | CH | EET MID |

## Client Sample ID: FS10

**Date Collected: 08/29/23 10:00**
**Date Received: 08/29/23 15:35**

**Lab Sample ID: 890-5178-2**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.96 g | 5 mL | 61763 | 09/01/23 12:40 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/01/23 23:15 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61858 | 09/05/23 17:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61802 | 09/05/23 12:04 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.91 g | 10 mL | 61642 | 08/31/23 12:14 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61701 | 09/01/23 12:13 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.05 g | 50 mL | 61635 | 08/31/23 11:05 | SMC | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61688 | 09/05/23 14:51 | CH | EET MID |

## Client Sample ID: FS11

**Date Collected: 08/29/23 10:05**
**Date Received: 08/29/23 15:35**

**Lab Sample ID: 890-5178-3**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.97 g | 5 mL | 61763 | 09/01/23 12:40 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/01/23 23:35 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61858 | 09/05/23 17:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61802 | 09/05/23 12:04 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.06 g | 10 mL | 61642 | 08/31/23 12:14 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61701 | 09/01/23 12:34 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.02 g | 50 mL | 61639 | 08/31/23 11:24 | SMC | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61689 | 09/01/23 13:20 | CH | EET MID |

## Client Sample ID: FS12

**Date Collected: 08/29/23 10:10**
**Date Received: 08/29/23 15:35**

**Lab Sample ID: 890-5178-4**
**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 | | | 4.95 g | 5 mL | 61763 | 09/01/23 12:40 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/01/23 23:55 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61858 | 09/05/23 17:22 | SM | EET MID |

# Lab Chronicle

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

## Client Sample ID: FS12

**Date Collected: 08/29/23 10:10**
**Date Received: 08/29/23 15:35**

**Lab Sample ID: 890-5178-4**
**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 | | | 61802 | 09/05/23 12:04 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.08 g | 10 mL | 61642 | 08/31/23 12:14 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61701 | 09/01/23 12:56 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5 g | 50 mL | 61639 | 08/31/23 11:24 | SMC | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61689 | 09/01/23 13:39 | CH | EET MID |

## Client Sample ID: FS13

**Date Collected: 08/29/23 10:15**
**Date Received: 08/29/23 15:35**

**Lab Sample ID: 890-5178-5**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.01 g | 5 mL | 61763 | 09/01/23 12:40 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/02/23 00:16 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61858 | 09/05/23 17:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61802 | 09/05/23 12:04 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.03 g | 10 mL | 61642 | 08/31/23 12:14 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61701 | 09/01/23 13:17 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.95 g | 50 mL | 61639 | 08/31/23 11:24 | SMC | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61689 | 09/01/23 13:45 | CH | EET MID |

## Client Sample ID: FS14

**Date Collected: 08/29/23 10:20**
**Date Received: 08/29/23 15:35**

**Lab Sample ID: 890-5178-6**
**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 | | | 5.04 g | 5 mL | 61763 | 09/01/23 12:40 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/02/23 00:36 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61858 | 09/05/23 17:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61802 | 09/05/23 12:04 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.91 g | 10 mL | 61642 | 08/31/23 12:14 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61701 | 09/01/23 13:39 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.04 g | 50 mL | 61639 | 08/31/23 11:24 | SMC | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61689 | 09/01/23 13:52 | CH | EET MID |

## Client Sample ID: FS15

**Date Collected: 08/29/23 10:25**
**Date Received: 08/29/23 15:35**

**Lab Sample ID: 890-5178-7**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.95 g | 5 mL | 61763 | 09/01/23 12:40 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/02/23 00:57 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61858 | 09/05/23 17:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61802 | 09/05/23 12:04 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.90 g | 10 mL | 61642 | 08/31/23 12:14 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61701 | 09/01/23 14:00 | SM | EET MID |

# Lab Chronicle

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

## Client Sample ID: FS15

**Date Collected: 08/29/23 10:25**
**Date Received: 08/29/23 15:35**

## Lab Sample ID: 890-5178-7

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Soluble | Leach | DI Leach | | | 5.02 g | 50 mL | 61639 | 08/31/23 11:24 | SMC | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61689 | 09/01/23 13:58 | CH | EET MID |

## Client Sample ID: FS16

**Date Collected: 08/29/23 10:30**
**Date Received: 08/29/23 15:35**

## Lab Sample ID: 890-5178-8

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.99 g | 5 mL | 61763 | 09/01/23 12:40 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/02/23 01:17 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61858 | 09/05/23 17:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61802 | 09/05/23 12:04 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.00 g | 10 mL | 61642 | 08/31/23 12:14 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61701 | 09/01/23 14:22 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.02 g | 50 mL | 61639 | 08/31/23 11:24 | SMC | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61689 | 09/01/23 14:17 | CH | EET MID |

## Client Sample ID: SW02

**Date Collected: 08/29/23 10:45**
**Date Received: 08/29/23 15:35**

## Lab Sample ID: 890-5178-9

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.02 g | 5 mL | 61763 | 09/01/23 12:40 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/02/23 01:38 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61858 | 09/05/23 17:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61802 | 09/05/23 12:04 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.05 g | 10 mL | 61642 | 08/31/23 12:14 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61701 | 09/01/23 15:05 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.01 g | 50 mL | 61639 | 08/31/23 11:24 | SMC | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61689 | 09/01/23 14:24 | CH | EET MID |

## Client Sample ID: FS17

**Date Collected: 08/29/23 10:55**
**Date Received: 08/29/23 15:35**

## Lab Sample ID: 890-5178-10

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.05 g | 5 mL | 61763 | 09/01/23 12:40 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/02/23 01:58 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61858 | 09/05/23 17:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61802 | 09/05/23 12:04 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.03 g | 10 mL | 61642 | 08/31/23 12:14 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61701 | 09/01/23 15:26 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.99 g | 50 mL | 61639 | 08/31/23 11:24 | SMC | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61689 | 09/01/23 14:30 | CH | EET MID |

# Lab Chronicle

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

## Client Sample ID: FS18

**Lab Sample ID: 890-5178-11**
**Matrix: Solid**
**Date Collected: 08/29/23 11:00**
**Date Received: 08/29/23 15:35**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.96 g | 5 mL | 61763 | 09/01/23 12:40 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/02/23 03:20 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61858 | 09/05/23 17:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61802 | 09/05/23 12:04 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.04 g | 10 mL | 61642 | 08/31/23 12:14 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61701 | 09/01/23 15:48 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.98 g | 50 mL | 61639 | 08/31/23 11:24 | SMC | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61689 | 09/01/23 14:37 | CH | EET MID |

## Client Sample ID: FS19

**Lab Sample ID: 890-5178-12**
**Matrix: Solid**
**Date Collected: 08/29/23 11:05**
**Date Received: 08/29/23 15:35**

| 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 | 61763 | 09/01/23 12:40 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/02/23 03:40 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61858 | 09/05/23 17:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61802 | 09/05/23 12:04 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.97 g | 10 mL | 61642 | 08/31/23 12:14 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61701 | 09/01/23 16:10 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.01 g | 50 mL | 61639 | 08/31/23 11:24 | SMC | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61689 | 09/01/23 14:43 | CH | EET MID |

## Client Sample ID: SW03

**Lab Sample ID: 890-5178-13**
**Matrix: Solid**
**Date Collected: 08/29/23 11:30**
**Date Received: 08/29/23 15:35**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.00 g | 5 mL | 61763 | 09/01/23 12:40 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/02/23 04:01 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61858 | 09/05/23 17:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61802 | 09/05/23 12:04 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.91 g | 10 mL | 61642 | 08/31/23 12:14 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61701 | 09/01/23 16:31 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.96 g | 50 mL | 61639 | 08/31/23 11:24 | SMC | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61689 | 09/01/23 14:49 | CH | EET MID |

## Client Sample ID: FS20

**Lab Sample ID: 890-5178-14**
**Matrix: Solid**
**Date Collected: 08/29/23 12:00**
**Date Received: 08/29/23 15:35**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.05 g | 5 mL | 61763 | 09/01/23 12:40 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/02/23 04:21 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61858 | 09/05/23 17:22 | SM | EET MID |

# Lab Chronicle

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

## Client Sample ID: FS20

**Lab Sample ID: 890-5178-14**

**Date Collected: 08/29/23 12:00**
**Matrix: Solid**
**Date Received: 08/29/23 15:35**

| 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 | | | 61802 | 09/05/23 12:04 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.95 g | 10 mL | 61642 | 08/31/23 12:14 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61701 | 09/01/23 16:53 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5 g | 50 mL | 61639 | 08/31/23 11:24 | SMC | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61689 | 09/01/23 15:08 | CH | EET MID |

## Client Sample ID: FS21

**Lab Sample ID: 890-5178-15**

**Date Collected: 08/29/23 14:50**
**Matrix: Solid**
**Date Received: 08/29/23 15:35**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.98 g | 5 mL | 61763 | 09/01/23 12:40 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/02/23 04:42 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61858 | 09/05/23 17:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61802 | 09/05/23 12:04 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.06 g | 10 mL | 61642 | 08/31/23 12:14 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61701 | 09/01/23 17:14 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.95 g | 50 mL | 61639 | 08/31/23 11:24 | SMC | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61689 | 09/01/23 15:15 | CH | EET MID |

## Client Sample ID: FS22

**Lab Sample ID: 890-5178-16**

**Date Collected: 08/29/23 15:00**
**Matrix: Solid**
**Date Received: 08/29/23 15:35**

| 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 | 61763 | 09/01/23 12:40 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/02/23 05:02 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61858 | 09/05/23 17:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61802 | 09/05/23 12:04 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.03 g | 10 mL | 61642 | 08/31/23 12:14 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61701 | 09/01/23 17:36 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.96 g | 50 mL | 61639 | 08/31/23 11:24 | SMC | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61689 | 09/01/23 15:34 | CH | EET MID |

## Client Sample ID: FS23

**Lab Sample ID: 890-5178-17**

**Date Collected: 08/29/23 15:05**
**Matrix: Solid**
**Date Received: 08/29/23 15:35**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.96 g | 5 mL | 61763 | 09/01/23 12:40 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/02/23 05:22 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61858 | 09/05/23 17:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61802 | 09/05/23 12:04 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.08 g | 10 mL | 61642 | 08/31/23 12:14 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61701 | 09/01/23 17:58 | SM | EET MID |

# Lab Chronicle

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

## Client Sample ID: FS23

**Lab Sample ID: 890-5178-17**

**Date Collected: 08/29/23 15:05**
**Matrix: Solid**
**Date Received: 08/29/23 15:35**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Soluble | Leach | DI Leach | | | 5.02 g | 50 mL | 61639 | 08/31/23 11:24 | SMC | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61689 | 09/01/23 15:40 | CH | EET MID |

## Client Sample ID: FS24

**Lab Sample ID: 890-5178-18**

**Date Collected: 08/29/23 15:10**
**Matrix: Solid**
**Date Received: 08/29/23 15:35**

| 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 | 61763 | 09/01/23 12:40 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/02/23 05:43 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61858 | 09/05/23 17:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61802 | 09/05/23 12:04 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.10 g | 10 mL | 61642 | 08/31/23 12:14 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61701 | 09/01/23 18:19 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.03 g | 50 mL | 61639 | 08/31/23 11:24 | SMC | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61689 | 09/01/23 15:47 | 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: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

## 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: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

| 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: JRU DI 11 Ekalaka 823H

Job ID: 890-5178-1
SDG: 03C1558118

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Depth |
|---|---|---|---|---|---|
| 890-5178-1 | FS09 | Solid | 08/29/23 09:55 | 08/29/23 15:35 | 2 |
| 890-5178-2 | FS10 | Solid | 08/29/23 10:00 | 08/29/23 15:35 | 2 |
| 890-5178-3 | FS11 | Solid | 08/29/23 10:05 | 08/29/23 15:35 | 2 |
| 890-5178-4 | FS12 | Solid | 08/29/23 10:10 | 08/29/23 15:35 | 2 |
| 890-5178-5 | FS13 | Solid | 08/29/23 10:15 | 08/29/23 15:35 | 2 |
| 890-5178-6 | FS14 | Solid | 08/29/23 10:20 | 08/29/23 15:35 | 2 |
| 890-5178-7 | FS15 | Solid | 08/29/23 10:25 | 08/29/23 15:35 | 2 |
| 890-5178-8 | FS16 | Solid | 08/29/23 10:30 | 08/29/23 15:35 | 2 |
| 890-5178-9 | SW02 | Solid | 08/29/23 10:45 | 08/29/23 15:35 | 2 |
| 890-5178-10 | FS17 | Solid | 08/29/23 10:55 | 08/29/23 15:35 | 2 |
| 890-5178-11 | FS18 | Solid | 08/29/23 11:00 | 08/29/23 15:35 | 2 |
| 890-5178-12 | FS19 | Solid | 08/29/23 11:05 | 08/29/23 15:35 | 2 |
| 890-5178-13 | SW03 | Solid | 08/29/23 11:30 | 08/29/23 15:35 | 2 |
| 890-5178-14 | FS20 | Solid | 08/29/23 12:00 | 08/29/23 15:35 | 2 |
| 890-5178-15 | FS21 | Solid | 08/29/23 14:50 | 08/29/23 15:35 | 9 |
| 890-5178-16 | FS22 | Solid | 08/29/23 15:00 | 08/29/23 15:35 | 9 |
| 890-5178-17 | FS23 | Solid | 08/29/23 15:05 | 08/29/23 15:35 | 9 |
| 890-5178-18 | FS24 | Solid | 08/29/23 15:10 | 08/29/23 15:35 | 6 |

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# Chain of Custody

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

**Work Order No:** _____

www.xenco.com Page 1 of 2

| | | | |
|---|---|---|---|
| Project Manager: | Ben Belill | Bill to: (if different) | Garrett Green |
| Company Name: | Ensolum | Company Name: | XTO Energy |
| Address: | 3122 National Parks Hwy | Address: | 3104 E. Green St. |
| City, State ZIP: | Carlsbad, NM 88220 | City, State ZIP: | Carlsbad, NM 88220 |
| Phone: | 303-887-2946 | Email: | Garrett.Green@ExxonMobil.com |

**Work Order Comments**

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

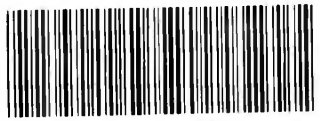
| | | | |
|---|---|---|---|
| Project Name: | JRU DI 11 Ekalaka 823H | Turn Around | |
| Project Number: | 03C1558118 | ☒ Routine ☐ Rush | |
| Project Location: | | Due Date: | |
| Sampler's Name: | Connor Whitman | TAT starts the day received by the lab, if received by 4:30pm | |
| PO #: | | | |

| SAMPLE RECEIPT | | | |
|---|---|---|---|
| Temp Blank: | (Yes) No | Wet Ice: | (Yes) No |
| Samples Received Intact: | (Yes) No | Thermometer ID: | TW Meo 7 |
| 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**

Pres. Code

Parameters: CHLORIDES (EPA: 3000.0); TPH (8015); BTEX (8021)




**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 |
|---|---|---|---|---|---|---|
| FS09 | S | 8/29/23 | 955 | 2' | C | 1 |
| FS10 | | | 1000 | | | 1 |
| FS11 | | | 1005 | | | 1 |
| FS12 | | | 1010 | | | 1 |
| FS13 | | | 1015 | | | 1 |
| FS14 | | | 1020 | | | 1 |
| FS15 | | | 1025 | | | 1 |
| FS16 | | | 1030 | | | 1 |
| SW02 | | | 1045 | 0-2' | | 1 |
| FS17 | | | 1055 | 2' | | 1 |

**Sample Comments**

Incident ID:
nAPP2224527297
Cost Center:
2104541001
AFE:
DD.2019.06665.CAP.CMP

**Total 200.7 / 6010 200.8 / 6020:** 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag $SiO_2$ Na Sr Tl Sn U V Zn

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

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

| Relinquished by: (Signature) | Received by: (Signature) | Date/Time | Relinquished by: (Signature) | Received by: (Signature) | Date/Time |
|---|---|---|---|---|---|
| 1 | | 8-29-23 15:35 | 2 | | |
| 3 | | | 4 | | |
| 5 | | | 6 | | |

Revised Date: 08/25/2020 Rev. 2020.2

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# Chain of Custody

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

**Work Order No:** _____

www.xenco.com Page 2 of 2

| | | | |
|---|---|---|---|
| Project Manager: | Ben Belill | Bill to: (If different) | Garrett Green |
| Company Name: | Ensolum | Company Name: | XTO Energy |
| Address: | 3122 National Parks Hwy | Address: | 3104 E. Green St. |
| City, State ZIP: | Carlsbad, NM 88220 | City, State ZIP: | Carlsbad, NM 88220 |
| Phone: | 303-887-2946 | Email: | Garrett.Green@ExxonMobil.com |

**Work Order Comments**

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

| | | | |
|---|---|---|---|
| Project Name: | JRU DI 11 Ekalaka 823H | Turn Around | |
| Project Number: | 03C1558118 | ☒ Routine ☐ Rush | |
| Project Location: | | Due Date: | |
| Sampler's Name: | Connor Whitman | TAT starts the day received by the lab, if received by 4:30pm | |
| PO #: | | | |

| SAMPLE RECEIPT | | | | |
|---|---|---|---|---|
| Temp Blank: | Yes No | Wet Ice: | Yes No | |
| Samples Received Intact: | Yes No | Thermometer ID: | IR#007 | |
| Cooler Custody Seals: | Yes No N/A | Correction Factor: | -0.2 | |
| Sample Custody Seals: | Yes No N/A | Temperature Reading: | 4.8 | |
| Total Containers: | | Corrected Temperature: | 4.6 | |

**Preservative Codes**

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

| Sample Identification | Matrix | Date Sampled | Time Sampled | Depth | Grab/ Comp | # of Cont | Pres. Code | CHLORIDES (EPA: 3000.0) | TPH (8015) | BTEX (8021) |
|---|---|---|---|---|---|---|---|---|---|---|
| FS16 | S | 8/29/23 | 1100 | 2 | C | 1 | | | | |
| FS17 | | | 1105 | 2 | | 1 | | | | |
| SW03 | | | 1130 | 0-2 | | 1 | | | | |
| FS20 | | | 1205 | 2 | | 1 | | | | |
| FS21 | | | 145 | 9 | | 1 | | | | |
| FS22 | | | 150 | 9 | | 1 | | | | |
| FS23 | | | 155 | 9 | | 1 | | | | |
| FS24 | | | 210 | 6 | | 1 | | | | |

**Sample Comments**

Incident ID: nAPP2224527297
Cost Center: 2104541001
AFE: DD.2019.06665.CAP.CMP

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

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

| Relinquished by: (Signature) | Received by: (Signature) | Date/Time | Relinquished by: (Signature) | Received by: (Signature) | Date/Time |
|---|---|---|---|---|---|
| 1 | | 8-29-23 15:32 | 2 | | |
| 3 | | | 4 | | |
| 5 | | | 6 | | |

Revised Date: 08/25/2020 Rev. 2020.2

# Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5178-1
SDG Number: 03C1558118

**Login Number: 5178**
**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: 890-5178-1
SDG Number: 03C1558118

**Login Number: 5178**
**List Number: 2**
**Creator: Rodriguez, Leticia**

**List Source: Eurofins Midland**
**List Creation: 08/31/23 10:49 AM**

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

eurofins | Environment Testing



# ANALYTICAL REPORT

## PREPARED FOR

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

Generated 9/6/2023 8:44:16 AM

## JOB DESCRIPTION

JRU DI 11 EKALAKA 823H
SDG NUMBER 03C1558118

## JOB NUMBER

890-5185-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.





my EOL

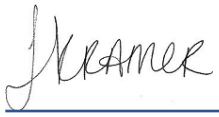
# Eurofins Carlsbad

## Job Notes

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
9/6/2023 8:44:16 AM

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

# Table of Contents

# Definitions/Glossary

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

## Qualifiers

### GC VOA

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

### GC Semi VOA

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

### HPLC/IC

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

## Glossary

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

# Case Narrative

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

## Job ID: 890-5185-1

**Laboratory: Eurofins Carlsbad**

**Narrative**

**Job Narrative**
**890-5185-1**

**Receipt**
The samples were received on 8/30/2023 3:15 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 4.0°C

**Receipt Exceptions**
The following samples were received and analyzed from an unpreserved bulk soil jar: FS25 (890-5185-1), FS26 (890-5185-2), SW04 (890-5185-3), FS27 (890-5185-4), FS28 (890-5185-5), FS29 (890-5185-6), FS30 (890-5185-7), FS31 (890-5185-8), FS32 (890-5185-9), FS33 (890-5185-10), FS34 (890-5185-11), SW05 (890-5185-12), FS35 (890-5185-13), FS36 (890-5185-14), FS37 (890-5185-15), FS38 (890-5185-16), FS39 (890-5185-17), FS40 (890-5185-18), FS41 (890-5185-19), SS06 (890-5185-20) and SS05 (890-5185-21).

**GC VOA**
Method 8021B: The continuing calibration verification (CCV) associated with batch 880-61708 recovered above the upper control limit for m-Xylene & p-Xylene and o-Xylene. The samples associated with this CCV were ran within 12 hours of passing CCV; therefore, the data have been reported.

Method 8021B: Surrogate recovery for the following samples were outside control limits: FS32 (890-5185-9), FS35 (890-5185-13), FS36 (890-5185-14) and (890-5185-A-1-F MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following samples were outside control limits: FS38 (890-5185-16) and SS06 (890-5185-20). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The method blank for preparation batch 880-61763 and analytical batch 880-61708 contained Benzene above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-61708 recovered above the upper control limit for m-Xylene & p-Xylene and o-Xylene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 880-61708/51).

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 880-61669 and analytical batch 880-61701 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: FS25 (890-5185-1), FS26 (890-5185-2), SW04 (890-5185-3), FS27 (890-5185-4), FS28 (890-5185-5), FS29 (890-5185-6), FS30 (890-5185-7), FS31 (890-5185-8), (880-32748-A-4-B), (880-32748-A-4-C MS) and (880-32748-A-4-D MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-61701/31), (CCV 880-61701/47) and (CCV 880-61701/58). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-61771 and analytical batch 880-61784 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: FS32 (890-5185-9), FS33 (890-5185-10), FS34 (890-5185-11), SW05 (890-5185-12), FS35 (890-5185-13), FS36 (890-5185-14), FS37 (890-5185-15), FS38 (890-5185-16), FS39 (890-5185-17), FS40 (890-5185-18), FS41 (890-5185-19), SS06 (890-5185-20), SS05 (890-5185-21), (890-5185-A-9-D MS) and

# Case Narrative

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

## Job ID: 890-5185-1 (Continued)

### Laboratory: Eurofins Carlsbad (Continued)

(890-5185-A-9-E MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (LCSD 880-61771/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-61771 and analytical batch 880-61784 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

**HPLC/IC**

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

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

## Client Sample ID: FS25

**Lab Sample ID: 890-5185-1**
**Matrix: Solid**
**Date Collected: 08/30/23 09:40**
**Date Received: 08/30/23 15:15**
**Sample Depth: 3**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00198 | U | 0.00198 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 09:29 | 1 |
| Toluene | <0.00198 | U | 0.00198 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 09:29 | 1 |
| Ethylbenzene | <0.00198 | U | 0.00198 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 09:29 | 1 |
| m-Xylene & p-Xylene | <0.00396 | U | 0.00396 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 09:29 | 1 |
| o-Xylene | <0.00198 | U | 0.00198 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 09:29 | 1 |
| Xylenes, Total | <0.00396 | U | 0.00396 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 09:29 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *101* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 09:29* | *1* |
| *1,4-Difluorobenzene (Surr)* | *89* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 09:29* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00396 | U | 0.00396 | | mg/Kg | | | 09/05/23 17:22 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.1 | U | 50.1 | | mg/Kg | | | 09/05/23 12:04 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.1 | U | 50.1 | | mg/Kg | | 09/01/23 11:20 | 09/02/23 01:23 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.1 | U | 50.1 | | mg/Kg | | 09/01/23 11:20 | 09/02/23 01:23 | 1 |
| OII Range Organics (Over C28-C36) | <50.1 | U | 50.1 | | mg/Kg | | 09/01/23 11:20 | 09/02/23 01:23 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *144* | *S1+* | *70 - 130* | *09/01/23 11:20* | *09/02/23 01:23* | *1* |
| *o-Terphenyl* | *120* | | *70 - 130* | *09/01/23 11:20* | *09/02/23 01:23* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **315** | | 4.95 | | mg/Kg | | | 09/01/23 20:22 | 1 |

## Client Sample ID: FS26

**Lab Sample ID: 890-5185-2**
**Matrix: Solid**
**Date Collected: 08/30/23 09:45**
**Date Received: 08/30/23 15:15**
**Sample Depth: 3**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00201 | U | 0.00201 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 09:49 | 1 |
| Toluene | <0.00201 | U | 0.00201 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 09:49 | 1 |
| Ethylbenzene | <0.00201 | U | 0.00201 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 09:49 | 1 |
| m-Xylene & p-Xylene | <0.00402 | U | 0.00402 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 09:49 | 1 |
| o-Xylene | <0.00201 | U | 0.00201 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 09:49 | 1 |
| Xylenes, Total | <0.00402 | U | 0.00402 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 09:49 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *107* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 09:49* | *1* |

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

## Client Sample ID: FS26

**Lab Sample ID: 890-5185-2**
**Matrix: Solid**
**Date Collected: 08/30/23 09:45**
**Date Received: 08/30/23 15:15**
**Sample Depth: 3**

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

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,4-Difluorobenzene (Surr)* | *81* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 09:49* | *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 | | | 09/05/23 17:22 | 1 |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.8 | U | 49.8 | mg/Kg | | | 09/05/23 12:04 | 1 |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.8 | U | 49.8 | mg/Kg | | 09/01/23 11:20 | 09/02/23 01:44 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.8 | U | 49.8 | mg/Kg | | 09/01/23 11:20 | 09/02/23 01:44 | 1 |
| OII Range Organics (Over C28-C36) | <49.8 | U | 49.8 | mg/Kg | | 09/01/23 11:20 | 09/02/23 01:44 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *146* | *S1+* | *70 - 130* | *09/01/23 11:20* | *09/02/23 01:44* | *1* |
| *o-Terphenyl* | *125* | | *70 - 130* | *09/01/23 11:20* | *09/02/23 01:44* | *1* |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Chloride** | **526** | | 4.97 | mg/Kg | | | 09/01/23 20:41 | 1 |

## Client Sample ID: SW04

**Lab Sample ID: 890-5185-3**
**Matrix: Solid**
**Date Collected: 08/30/23 09:55**
**Date Received: 08/30/23 15:15**
**Sample Depth: 0 - 3**

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00201 | U | 0.00201 | mg/Kg | | 09/01/23 12:47 | 09/02/23 10:10 | 1 |
| Toluene | <0.00201 | U | 0.00201 | mg/Kg | | 09/01/23 12:47 | 09/02/23 10:10 | 1 |
| Ethylbenzene | <0.00201 | U | 0.00201 | mg/Kg | | 09/01/23 12:47 | 09/02/23 10:10 | 1 |
| m-Xylene & p-Xylene | <0.00402 | U | 0.00402 | mg/Kg | | 09/01/23 12:47 | 09/02/23 10:10 | 1 |
| o-Xylene | <0.00201 | U | 0.00201 | mg/Kg | | 09/01/23 12:47 | 09/02/23 10:10 | 1 |
| Xylenes, Total | <0.00402 | U | 0.00402 | mg/Kg | | 09/01/23 12:47 | 09/02/23 10:10 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *105* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 10:10* | *1* |
| *1,4-Difluorobenzene (Surr)* | *83* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 10:10* | *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 | | | 09/05/23 17:22 | 1 |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.9 | U | 49.9 | mg/Kg | | | 09/05/23 12:04 | 1 |

Eurofins Carlsbad

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

## Client Sample ID: SW04

**Lab Sample ID: 890-5185-3**
**Matrix: Solid**
**Date Collected: 08/30/23 09:55**
**Date Received: 08/30/23 15:15**
**Sample Depth: 0 - 3**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U | 49.9 | | mg/Kg | | 09/01/23 11:20 | 09/02/23 02:05 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 09/01/23 11:20 | 09/02/23 02:05 | 1 |
| OII Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 09/01/23 11:20 | 09/02/23 02:05 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *149* | *S1+* | *70 - 130* | *09/01/23 11:20* | *09/02/23 02:05* | *1* |
| *o-Terphenyl* | *126* | | *70 - 130* | *09/01/23 11:20* | *09/02/23 02:05* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **660** | | 5.00 | | mg/Kg | | | 09/01/23 20:48 | 1 |

## Client Sample ID: FS27

**Lab Sample ID: 890-5185-4**
**Matrix: Solid**
**Date Collected: 08/30/23 10:05**
**Date Received: 08/30/23 15:15**
**Sample Depth: 3**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 10:30 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 10:30 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 10:30 | 1 |
| m-Xylene & p-Xylene | <0.00401 | U | 0.00401 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 10:30 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 10:30 | 1 |
| Xylenes, Total | <0.00401 | U | 0.00401 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 10:30 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *106* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 10:30* | *1* |
| *1,4-Difluorobenzene (Surr)* | *86* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 10:30* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00401 | U | 0.00401 | | mg/Kg | | | 09/05/23 17:22 | 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 | | | 09/05/23 12:04 | 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 | | 09/01/23 11:20 | 09/02/23 02:26 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.3 | U | 50.3 | | mg/Kg | | 09/01/23 11:20 | 09/02/23 02:26 | 1 |
| OII Range Organics (Over C28-C36) | <50.3 | U | 50.3 | | mg/Kg | | 09/01/23 11:20 | 09/02/23 02:26 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *141* | *S1+* | *70 - 130* | *09/01/23 11:20* | *09/02/23 02:26* | *1* |
| *o-Terphenyl* | *120* | | *70 - 130* | *09/01/23 11:20* | *09/02/23 02:26* | *1* |

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

## Client Sample ID: FS27

**Lab Sample ID: 890-5185-4**
**Matrix: Solid**
**Date Collected: 08/30/23 10:05**
**Date Received: 08/30/23 15:15**
**Sample Depth: 3**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 983 | | 4.99 | | mg/Kg | | | 09/01/23 20:54 | 1 |

## Client Sample ID: FS28

**Lab Sample ID: 890-5185-5**
**Matrix: Solid**
**Date Collected: 08/30/23 10:10**
**Date Received: 08/30/23 15:15**
**Sample Depth: 3**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 10:51 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 10:51 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 10:51 | 1 |
| m-Xylene & p-Xylene | <0.00398 | U | 0.00398 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 10:51 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 10:51 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 10:51 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *104* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 10:51* | *1* |
| *1,4-Difluorobenzene (Surr)* | *83* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 10:51* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00398 | U | 0.00398 | | mg/Kg | | | 09/05/23 17:22 | 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 | | | 09/05/23 12:04 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.2 | U | 50.2 | | mg/Kg | | 09/01/23 11:20 | 09/02/23 02:47 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.2 | U | 50.2 | | mg/Kg | | 09/01/23 11:20 | 09/02/23 02:47 | 1 |
| OII Range Organics (Over C28-C36) | <50.2 | U | 50.2 | | mg/Kg | | 09/01/23 11:20 | 09/02/23 02:47 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *138* | *S1+* | *70 - 130* | *09/01/23 11:20* | *09/02/23 02:47* | *1* |
| *o-Terphenyl* | *119* | | *70 - 130* | *09/01/23 11:20* | *09/02/23 02:47* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 625 | | 4.96 | | mg/Kg | | | 09/01/23 21:00 | 1 |

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

## Client Sample ID: FS29

**Lab Sample ID: 890-5185-6**
**Matrix: Solid**
**Date Collected: 08/30/23 10:15**
**Date Received: 08/30/23 15:15**
**Sample Depth: 2**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 11:11 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 11:11 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 11:11 | 1 |
| m-Xylene & p-Xylene | <0.00399 | U | 0.00399 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 11:11 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 11:11 | 1 |
| Xylenes, Total | <0.00399 | U | 0.00399 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 11:11 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *103* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 11:11* | *1* |
| *1,4-Difluorobenzene (Surr)* | *83* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 11:11* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00399 | U | 0.00399 | | mg/Kg | | | 09/05/23 17:22 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.1 | U | 50.1 | | mg/Kg | | | 09/05/23 12:04 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.1 | U | 50.1 | | mg/Kg | | 09/01/23 11:20 | 09/02/23 03:08 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.1 | U | 50.1 | | mg/Kg | | 09/01/23 11:20 | 09/02/23 03:08 | 1 |
| OII Range Organics (Over C28-C36) | <50.1 | U | 50.1 | | mg/Kg | | 09/01/23 11:20 | 09/02/23 03:08 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *136* | *S1+* | *70 - 130* | *09/01/23 11:20* | *09/02/23 03:08* | *1* |
| *o-Terphenyl* | *117* | | *70 - 130* | *09/01/23 11:20* | *09/02/23 03:08* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **942** | | 5.04 | | mg/Kg | | | 09/01/23 21:20 | 1 |

## Client Sample ID: FS30

**Lab Sample ID: 890-5185-7**
**Matrix: Solid**
**Date Collected: 08/30/23 10:20**
**Date Received: 08/30/23 15:15**
**Sample Depth: 2**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 11:32 | 1 |
| Toluene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 11:32 | 1 |
| Ethylbenzene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 11:32 | 1 |
| m-Xylene & p-Xylene | <0.00404 | U | 0.00404 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 11:32 | 1 |
| o-Xylene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 11:32 | 1 |
| Xylenes, Total | <0.00404 | U | 0.00404 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 11:32 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *103* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 11:32* | *1* |

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

## Client Sample ID: FS30

**Lab Sample ID: 890-5185-7**
**Matrix: Solid**
**Date Collected: 08/30/23 10:20**
**Date Received: 08/30/23 15:15**
**Sample Depth: 2**

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

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,4-Difluorobenzene (Surr)* | *88* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 11:32* | *1* |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00404 | U | 0.00404 | mg/Kg | | | 09/05/23 17:22 | 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 | | | 09/05/23 12:04 | 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 | | 09/01/23 11:20 | 09/02/23 03:29 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.6 | U | 49.6 | mg/Kg | | 09/01/23 11:20 | 09/02/23 03:29 | 1 |
| OII Range Organics (Over C28-C36) | <49.6 | U | 49.6 | mg/Kg | | 09/01/23 11:20 | 09/02/23 03:29 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *136* | *S1+* | *70 - 130* | *09/01/23 11:20* | *09/02/23 03:29* | *1* |
| *o-Terphenyl* | *116* | | *70 - 130* | *09/01/23 11:20* | *09/02/23 03:29* | *1* |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Chloride** | **859** | | 4.98 | mg/Kg | | | 09/01/23 21:26 | 1 |

## Client Sample ID: FS31

**Lab Sample ID: 890-5185-8**
**Matrix: Solid**
**Date Collected: 08/30/23 10:50**
**Date Received: 08/30/23 15:15**
**Sample Depth: 2**

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | mg/Kg | | 09/01/23 12:47 | 09/02/23 11:53 | 1 |
| Toluene | <0.00200 | U | 0.00200 | mg/Kg | | 09/01/23 12:47 | 09/02/23 11:53 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | mg/Kg | | 09/01/23 12:47 | 09/02/23 11:53 | 1 |
| m-Xylene & p-Xylene | <0.00401 | U | 0.00401 | mg/Kg | | 09/01/23 12:47 | 09/02/23 11:53 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | mg/Kg | | 09/01/23 12:47 | 09/02/23 11:53 | 1 |
| Xylenes, Total | <0.00401 | U | 0.00401 | mg/Kg | | 09/01/23 12:47 | 09/02/23 11:53 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *101* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 11:53* | *1* |
| *1,4-Difluorobenzene (Surr)* | *80* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 11:53* | *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 | | | 09/05/23 17:22 | 1 |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Total TPH** | **53.0** | | 49.9 | mg/Kg | | | 09/05/23 12:04 | 1 |

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# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

## Client Sample ID: FS31

**Lab Sample ID: 890-5185-8**
**Matrix: Solid**
**Date Collected: 08/30/23 10:50**
**Date Received: 08/30/23 15:15**
**Sample Depth: 2**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U | 49.9 | | mg/Kg | | 09/01/23 11:20 | 09/02/23 03:50 | 1 |
| **Diesel Range Organics (Over C10-C28)** | **53.0** | | 49.9 | | mg/Kg | | 09/01/23 11:20 | 09/02/23 03:50 | 1 |
| OII Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 09/01/23 11:20 | 09/02/23 03:50 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *135* | *S1+* | *70 - 130* | *09/01/23 11:20* | *09/02/23 03:50* | *1* |
| *o-Terphenyl* | *115* | | *70 - 130* | *09/01/23 11:20* | *09/02/23 03:50* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **193** | | 4.97 | | mg/Kg | | | 09/01/23 21:32 | 1 |

## Client Sample ID: FS32

**Lab Sample ID: 890-5185-9**
**Matrix: Solid**
**Date Collected: 08/30/23 10:55**
**Date Received: 08/30/23 15:15**
**Sample Depth: 2**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 12:13 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 12:13 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 12:13 | 1 |
| m-Xylene & p-Xylene | <0.00400 | U | 0.00400 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 12:13 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 12:13 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 12:13 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *97* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 12:13* | *1* |
| *1,4-Difluorobenzene (Surr)* | *64* | *S1-* | *70 - 130* | *09/01/23 12:47* | *09/02/23 12:13* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00400 | U | 0.00400 | | mg/Kg | | | 09/05/23 17:22 | 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 | | | 09/06/23 09:18 | 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 | | 09/01/23 15:18 | 09/05/23 11:45 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.6 | U F1 | 49.6 | | mg/Kg | | 09/01/23 15:18 | 09/05/23 11:45 | 1 |
| OII Range Organics (Over C28-C36) | <49.6 | U | 49.6 | | mg/Kg | | 09/01/23 15:18 | 09/05/23 11:45 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *154* | *S1+* | *70 - 130* | *09/01/23 15:18* | *09/05/23 11:45* | *1* |
| *o-Terphenyl* | *130* | | *70 - 130* | *09/01/23 15:18* | *09/05/23 11:45* | *1* |

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

## Client Sample ID: FS32

**Lab Sample ID: 890-5185-9**
**Matrix: Solid**
**Date Collected: 08/30/23 10:55**
**Date Received: 08/30/23 15:15**
**Sample Depth: 2**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **198** | | 5.02 | | mg/Kg | | | 09/01/23 21:39 | 1 |

## Client Sample ID: FS33

**Lab Sample ID: 890-5185-10**
**Matrix: Solid**
**Date Collected: 08/30/23 11:00**
**Date Received: 08/30/23 15:15**
**Sample Depth: 2**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00198 | U | 0.00198 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 12:34 | 1 |
| Toluene | <0.00198 | U | 0.00198 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 12:34 | 1 |
| Ethylbenzene | <0.00198 | U | 0.00198 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 12:34 | 1 |
| m-Xylene & p-Xylene | <0.00396 | U | 0.00396 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 12:34 | 1 |
| o-Xylene | <0.00198 | U | 0.00198 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 12:34 | 1 |
| Xylenes, Total | <0.00396 | U | 0.00396 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 12:34 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *100* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 12:34* | *1* |
| *1,4-Difluorobenzene (Surr)* | *76* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 12:34* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00396 | U | 0.00396 | | mg/Kg | | | 09/05/23 17:22 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total TPH** | **115** | | 50.0 | | mg/Kg | | | 09/06/23 09:18 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 09/01/23 15:18 | 09/05/23 12:52 | 1 |
| **Diesel Range Organics (Over C10-C28)** | **115** | | 50.0 | | mg/Kg | | 09/01/23 15:18 | 09/05/23 12:52 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 09/01/23 15:18 | 09/05/23 12:52 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *169* | *S1+* | *70 - 130* | *09/01/23 15:18* | *09/05/23 12:52* | *1* |
| *o-Terphenyl* | *143* | *S1+* | *70 - 130* | *09/01/23 15:18* | *09/05/23 12:52* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **602** | | 5.01 | | mg/Kg | | | 09/01/23 21:45 | 1 |

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

## Client Sample ID: FS34

**Lab Sample ID: 890-5185-11**
**Matrix: Solid**
**Date Collected: 08/30/23 11:05**
**Date Received: 08/30/23 15:15**
**Sample Depth: 2**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 13:58 | 1 |
| Toluene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 13:58 | 1 |
| Ethylbenzene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 13:58 | 1 |
| m-Xylene & p-Xylene | <0.00403 | U | 0.00403 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 13:58 | 1 |
| o-Xylene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 13:58 | 1 |
| Xylenes, Total | <0.00403 | U | 0.00403 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 13:58 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *92* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 13:58* | *1* |
| *1,4-Difluorobenzene (Surr)* | *81* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 13:58* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00403 | U | 0.00403 | | mg/Kg | | | 09/05/23 17:22 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total TPH** | **120** | | 49.8 | | mg/Kg | | | 09/06/23 09:18 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.8 | U | 49.8 | | mg/Kg | | 09/01/23 15:18 | 09/05/23 13:15 | 1 |
| **Diesel Range Organics (Over C10-C28)** | **120** | | 49.8 | | mg/Kg | | 09/01/23 15:18 | 09/05/23 13:15 | 1 |
| OII Range Organics (Over C28-C36) | <49.8 | U | 49.8 | | mg/Kg | | 09/01/23 15:18 | 09/05/23 13:15 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *164* | *S1+* | *70 - 130* | *09/01/23 15:18* | *09/05/23 13:15* | *1* |
| *o-Terphenyl* | *139* | *S1+* | *70 - 130* | *09/01/23 15:18* | *09/05/23 13:15* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **540** | | 4.98 | | mg/Kg | | | 09/01/23 21:51 | 1 |

## Client Sample ID: SW05

**Lab Sample ID: 890-5185-12**
**Matrix: Solid**
**Date Collected: 08/30/23 11:15**
**Date Received: 08/30/23 15:15**
**Sample Depth: 0 - 2**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 14:19 | 1 |
| Toluene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 14:19 | 1 |
| Ethylbenzene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 14:19 | 1 |
| m-Xylene & p-Xylene | <0.00404 | U | 0.00404 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 14:19 | 1 |
| o-Xylene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 14:19 | 1 |
| Xylenes, Total | <0.00404 | U | 0.00404 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 14:19 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *98* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 14:19* | *1* |

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# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

## Client Sample ID: SW05

**Lab Sample ID: 890-5185-12**
**Matrix: Solid**
**Date Collected: 08/30/23 11:15**
**Date Received: 08/30/23 15:15**
**Sample Depth: 0 - 2**

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

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,4-Difluorobenzene (Surr)* | *79* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 14:19* | *1* |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00404 | U | 0.00404 | mg/Kg | | | 09/05/23 17:22 | 1 |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Total TPH** | **51.4** | | 50.4 | mg/Kg | | | 09/06/23 09:18 | 1 |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.4 | U | 50.4 | mg/Kg | | 09/01/23 15:18 | 09/05/23 13:37 | 1 |
| **Diesel Range Organics (Over C10-C28)** | **51.4** | | 50.4 | mg/Kg | | 09/01/23 15:18 | 09/05/23 13:37 | 1 |
| OII Range Organics (Over C28-C36) | <50.4 | U | 50.4 | mg/Kg | | 09/01/23 15:18 | 09/05/23 13:37 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *161* | *S1+* | *70 - 130* | *09/01/23 15:18* | *09/05/23 13:37* | *1* |
| *o-Terphenyl* | *138* | *S1+* | *70 - 130* | *09/01/23 15:18* | *09/05/23 13:37* | *1* |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Chloride** | **226** | | 5.03 | mg/Kg | | | 09/01/23 22:11 | 1 |

## Client Sample ID: FS35

**Lab Sample ID: 890-5185-13**
**Matrix: Solid**
**Date Collected: 08/30/23 12:20**
**Date Received: 08/30/23 15:15**
**Sample Depth: 3**

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00198 | U | 0.00198 | mg/Kg | | 09/01/23 12:47 | 09/02/23 14:39 | 1 |
| Toluene | <0.00198 | U | 0.00198 | mg/Kg | | 09/01/23 12:47 | 09/02/23 14:39 | 1 |
| Ethylbenzene | <0.00198 | U | 0.00198 | mg/Kg | | 09/01/23 12:47 | 09/02/23 14:39 | 1 |
| m-Xylene & p-Xylene | <0.00397 | U | 0.00397 | mg/Kg | | 09/01/23 12:47 | 09/02/23 14:39 | 1 |
| o-Xylene | <0.00198 | U | 0.00198 | mg/Kg | | 09/01/23 12:47 | 09/02/23 14:39 | 1 |
| Xylenes, Total | <0.00397 | U | 0.00397 | mg/Kg | | 09/01/23 12:47 | 09/02/23 14:39 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *99* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 14:39* | *1* |
| *1,4-Difluorobenzene (Surr)* | *64* | *S1-* | *70 - 130* | *09/01/23 12:47* | *09/02/23 14:39* | *1* |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00397 | U | 0.00397 | mg/Kg | | | 09/05/23 17:22 | 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 | | | 09/06/23 09:18 | 1 |

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

## Client Sample ID: FS35

**Lab Sample ID: 890-5185-13**
**Matrix: Solid**
**Date Collected: 08/30/23 12:20**
**Date Received: 08/30/23 15:15**
**Sample Depth: 3**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.5 | U | 50.5 | | mg/Kg | | 09/01/23 15:18 | 09/05/23 13:59 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.5 | U | 50.5 | | mg/Kg | | 09/01/23 15:18 | 09/05/23 13:59 | 1 |
| Oil Range Organics (Over C28-C36) | <50.5 | U | 50.5 | | mg/Kg | | 09/01/23 15:18 | 09/05/23 13:59 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *140* | *S1+* | *70 - 130* | *09/01/23 15:18* | *09/05/23 13:59* | *1* |
| *o-Terphenyl* | *124* | | *70 - 130* | *09/01/23 15:18* | *09/05/23 13:59* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **426** | | 5.04 | | mg/Kg | | | 09/01/23 22:17 | 1 |

## Client Sample ID: FS36

**Lab Sample ID: 890-5185-14**
**Matrix: Solid**
**Date Collected: 08/30/23 12:25**
**Date Received: 08/30/23 15:15**
**Sample Depth: 3**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 15:00 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 15:00 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 15:00 | 1 |
| m-Xylene & p-Xylene | <0.00398 | U | 0.00398 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 15:00 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 15:00 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 15:00 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *97* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 15:00* | *1* |
| *1,4-Difluorobenzene (Surr)* | *62* | *S1-* | *70 - 130* | *09/01/23 12:47* | *09/02/23 15:00* | *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 | | | 09/05/23 17:22 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.7 | U | 49.7 | | mg/Kg | | | 09/06/23 09:18 | 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 | <49.7 | U | 49.7 | | mg/Kg | | 09/01/23 15:18 | 09/05/23 14:21 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.7 | U | 49.7 | | mg/Kg | | 09/01/23 15:18 | 09/05/23 14:21 | 1 |
| Oil Range Organics (Over C28-C36) | <49.7 | U | 49.7 | | mg/Kg | | 09/01/23 15:18 | 09/05/23 14:21 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *162* | *S1+* | *70 - 130* | *09/01/23 15:18* | *09/05/23 14:21* | *1* |
| *o-Terphenyl* | *140* | *S1+* | *70 - 130* | *09/01/23 15:18* | *09/05/23 14:21* | *1* |

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

## Client Sample ID: FS36

**Lab Sample ID: 890-5185-14**
**Matrix: Solid**
**Date Collected: 08/30/23 12:25**
**Date Received: 08/30/23 15:15**
**Sample Depth: 3**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 398 | | 5.05 | | mg/Kg | | | 09/01/23 22:36 | 1 |

## Client Sample ID: FS37

**Lab Sample ID: 890-5185-15**
**Matrix: Solid**
**Date Collected: 08/30/23 12:30**
**Date Received: 08/30/23 15:15**
**Sample Depth: 3**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 15:21 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 15:21 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 15:21 | 1 |
| m-Xylene & p-Xylene | <0.00399 | U | 0.00399 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 15:21 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 15:21 | 1 |
| Xylenes, Total | <0.00399 | U | 0.00399 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 15:21 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *101* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 15:21* | *1* |
| *1,4-Difluorobenzene (Surr)* | *88* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 15:21* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00399 | U | 0.00399 | | mg/Kg | | | 09/05/23 17:22 | 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 | | | 09/06/23 09:18 | 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 | | 09/01/23 15:18 | 09/05/23 14:43 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.6 | U | 49.6 | | mg/Kg | | 09/01/23 15:18 | 09/05/23 14:43 | 1 |
| OII Range Organics (Over C28-C36) | <49.6 | U | 49.6 | | mg/Kg | | 09/01/23 15:18 | 09/05/23 14:43 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *140* | *S1+* | *70 - 130* | *09/01/23 15:18* | *09/05/23 14:43* | *1* |
| *o-Terphenyl* | *124* | | *70 - 130* | *09/01/23 15:18* | *09/05/23 14:43* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 362 | | 4.97 | | mg/Kg | | | 09/01/23 22:43 | 1 |

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

## Client Sample ID: FS38

**Lab Sample ID: 890-5185-16**
**Matrix: Solid**
**Date Collected: 08/30/23 12:35**
**Date Received: 08/30/23 15:15**
**Sample Depth: 2**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 15:41 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 15:41 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 15:41 | 1 |
| m-Xylene & p-Xylene | <0.00400 | U | 0.00400 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 15:41 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 15:41 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 15:41 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *102* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 15:41* | *1* |
| *1,4-Difluorobenzene (Surr)* | *65* | *S1-* | *70 - 130* | *09/01/23 12:47* | *09/02/23 15:41* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00400 | U | 0.00400 | | mg/Kg | | | 09/05/23 17:22 | 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 | | | 09/06/23 09:18 | 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 | | 09/01/23 15:18 | 09/05/23 15:06 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.5 | U | 50.5 | | mg/Kg | | 09/01/23 15:18 | 09/05/23 15:06 | 1 |
| OII Range Organics (Over C28-C36) | <50.5 | U | 50.5 | | mg/Kg | | 09/01/23 15:18 | 09/05/23 15:06 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *169* | *S1+* | *70 - 130* | *09/01/23 15:18* | *09/05/23 15:06* | *1* |
| *o-Terphenyl* | *147* | *S1+* | *70 - 130* | *09/01/23 15:18* | *09/05/23 15:06* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **410** | | 5.00 | | mg/Kg | | | 09/01/23 22:49 | 1 |

## Client Sample ID: FS39

**Lab Sample ID: 890-5185-17**
**Matrix: Solid**
**Date Collected: 08/30/23 12:50**
**Date Received: 08/30/23 15:15**
**Sample Depth: 3**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00198 | U | 0.00198 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 16:02 | 1 |
| Toluene | <0.00198 | U | 0.00198 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 16:02 | 1 |
| Ethylbenzene | <0.00198 | U | 0.00198 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 16:02 | 1 |
| m-Xylene & p-Xylene | <0.00396 | U | 0.00396 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 16:02 | 1 |
| o-Xylene | <0.00198 | U | 0.00198 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 16:02 | 1 |
| Xylenes, Total | <0.00396 | U | 0.00396 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 16:02 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *101* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 16:02* | *1* |

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

## Client Sample ID: FS39

**Lab Sample ID: 890-5185-17**
**Matrix: Solid**
**Date Collected: 08/30/23 12:50**
**Date Received: 08/30/23 15:15**
**Sample Depth: 3**

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

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,4-Difluorobenzene (Surr)* | *74* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 16:02* | *1* |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00396 | U | 0.00396 | mg/Kg | | | 09/05/23 17:22 | 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 | | | 09/06/23 09:18 | 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 | | 09/01/23 15:18 | 09/05/23 15:28 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.3 | U | 50.3 | mg/Kg | | 09/01/23 15:18 | 09/05/23 15:28 | 1 |
| OII Range Organics (Over C28-C36) | <50.3 | U | 50.3 | mg/Kg | | 09/01/23 15:18 | 09/05/23 15:28 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *140* | *S1+* | *70 - 130* | *09/01/23 15:18* | *09/05/23 15:28* | *1* |
| *o-Terphenyl* | *123* | | *70 - 130* | *09/01/23 15:18* | *09/05/23 15:28* | *1* |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Chloride** | **244** | | 5.01 | mg/Kg | | | 09/01/23 22:55 | 1 |

## Client Sample ID: FS40

**Lab Sample ID: 890-5185-18**
**Matrix: Solid**
**Date Collected: 08/30/23 12:55**
**Date Received: 08/30/23 15:15**
**Sample Depth: 2**

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00201 | U | 0.00201 | mg/Kg | | 09/01/23 12:47 | 09/02/23 16:23 | 1 |
| Toluene | <0.00201 | U | 0.00201 | mg/Kg | | 09/01/23 12:47 | 09/02/23 16:23 | 1 |
| Ethylbenzene | <0.00201 | U | 0.00201 | mg/Kg | | 09/01/23 12:47 | 09/02/23 16:23 | 1 |
| m-Xylene & p-Xylene | <0.00402 | U | 0.00402 | mg/Kg | | 09/01/23 12:47 | 09/02/23 16:23 | 1 |
| o-Xylene | <0.00201 | U | 0.00201 | mg/Kg | | 09/01/23 12:47 | 09/02/23 16:23 | 1 |
| Xylenes, Total | <0.00402 | U | 0.00402 | mg/Kg | | 09/01/23 12:47 | 09/02/23 16:23 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *101* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 16:23* | *1* |
| *1,4-Difluorobenzene (Surr)* | *76* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 16:23* | *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 | | | 09/05/23 17:22 | 1 |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.4 | U | 50.4 | mg/Kg | | | 09/06/23 09:18 | 1 |

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# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

## Client Sample ID: FS40

**Lab Sample ID: 890-5185-18**
**Matrix: Solid**
**Date Collected: 08/30/23 12:55**
**Date Received: 08/30/23 15:15**
**Sample Depth: 2**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.4 | U | 50.4 | | mg/Kg | | 09/01/23 15:18 | 09/05/23 15:50 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.4 | U | 50.4 | | mg/Kg | | 09/01/23 15:18 | 09/05/23 15:50 | 1 |
| OII Range Organics (Over C28-C36) | <50.4 | U | 50.4 | | mg/Kg | | 09/01/23 15:18 | 09/05/23 15:50 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *168* | *S1+* | *70 - 130* | *09/01/23 15:18* | *09/05/23 15:50* | *1* |
| *o-Terphenyl* | *146* | *S1+* | *70 - 130* | *09/01/23 15:18* | *09/05/23 15:50* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **162** | | 4.98 | | mg/Kg | | | 09/01/23 23:02 | 1 |

## Client Sample ID: FS41

**Lab Sample ID: 890-5185-19**
**Matrix: Solid**
**Date Collected: 08/30/23 13:00**
**Date Received: 08/30/23 15:15**
**Sample Depth: 2**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 16:43 | 1 |
| Toluene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 16:43 | 1 |
| Ethylbenzene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 16:43 | 1 |
| m-Xylene & p-Xylene | <0.00403 | U | 0.00403 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 16:43 | 1 |
| o-Xylene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 16:43 | 1 |
| Xylenes, Total | <0.00403 | U | 0.00403 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 16:43 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *90* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 16:43* | *1* |
| *1,4-Difluorobenzene (Surr)* | *93* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 16:43* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00403 | U | 0.00403 | | mg/Kg | | | 09/05/23 17:22 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.1 | U | 50.1 | | mg/Kg | | | 09/06/23 09:18 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.1 | U | 50.1 | | mg/Kg | | 09/01/23 15:18 | 09/05/23 16:34 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.1 | U | 50.1 | | mg/Kg | | 09/01/23 15:18 | 09/05/23 16:34 | 1 |
| OII Range Organics (Over C28-C36) | <50.1 | U | 50.1 | | mg/Kg | | 09/01/23 15:18 | 09/05/23 16:34 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *167* | *S1+* | *70 - 130* | *09/01/23 15:18* | *09/05/23 16:34* | *1* |
| *o-Terphenyl* | *146* | *S1+* | *70 - 130* | *09/01/23 15:18* | *09/05/23 16:34* | *1* |

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

## Client Sample ID: FS41

**Lab Sample ID: 890-5185-19**
**Matrix: Solid**
**Date Collected: 08/30/23 13:00**
**Date Received: 08/30/23 15:15**
**Sample Depth: 2**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 123 | | 5.00 | | mg/Kg | | | 09/01/23 23:08 | 1 |

## Client Sample ID: SS06

**Lab Sample ID: 890-5185-20**
**Matrix: Solid**
**Date Collected: 08/30/23 13:20**
**Date Received: 08/30/23 15:15**
**Sample Depth: 0.5**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 17:04 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 17:04 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 17:04 | 1 |
| m-Xylene & p-Xylene | <0.00401 | U | 0.00401 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 17:04 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 17:04 | 1 |
| Xylenes, Total | <0.00401 | U | 0.00401 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 17:04 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *99* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 17:04* | *1* |
| *1,4-Difluorobenzene (Surr)* | *64* | *S1-* | *70 - 130* | *09/01/23 12:47* | *09/02/23 17:04* | *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 | | | 09/05/23 17:22 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.1 | U | 50.1 | | mg/Kg | | | 09/06/23 09:18 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.1 | U | 50.1 | | mg/Kg | | 09/01/23 15:18 | 09/05/23 16:57 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.1 | U | 50.1 | | mg/Kg | | 09/01/23 15:18 | 09/05/23 16:57 | 1 |
| OII Range Organics (Over C28-C36) | <50.1 | U | 50.1 | | mg/Kg | | 09/01/23 15:18 | 09/05/23 16:57 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *156* | *S1+* | *70 - 130* | *09/01/23 15:18* | *09/05/23 16:57* | *1* |
| *o-Terphenyl* | *134* | *S1+* | *70 - 130* | *09/01/23 15:18* | *09/05/23 16:57* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 195 | | 4.96 | | mg/Kg | | | 09/01/23 23:14 | 1 |

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

## Client Sample ID: SS05

**Date Collected: 08/30/23 13:30**
**Date Received: 08/30/23 15:15**
**Sample Depth: 0.5**

## Lab Sample ID: 890-5185-21

**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00201 | U | 0.00201 | | mg/Kg | | 09/05/23 09:19 | 09/05/23 12:18 | 1 |
| Toluene | <0.00201 | U | 0.00201 | | mg/Kg | | 09/05/23 09:19 | 09/05/23 12:18 | 1 |
| Ethylbenzene | <0.00201 | U | 0.00201 | | mg/Kg | | 09/05/23 09:19 | 09/05/23 12:18 | 1 |
| m-Xylene & p-Xylene | <0.00402 | U | 0.00402 | | mg/Kg | | 09/05/23 09:19 | 09/05/23 12:18 | 1 |
| o-Xylene | <0.00201 | U | 0.00201 | | mg/Kg | | 09/05/23 09:19 | 09/05/23 12:18 | 1 |
| Xylenes, Total | <0.00402 | U | 0.00402 | | mg/Kg | | 09/05/23 09:19 | 09/05/23 12:18 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *93* | | *70 - 130* | *09/05/23 09:19* | *09/05/23 12:18* | *1* |
| *1,4-Difluorobenzene (Surr)* | *105* | | *70 - 130* | *09/05/23 09:19* | *09/05/23 12:18* | *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 | | | 09/05/23 17:36 | 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 | | | 09/06/23 09:18 | 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 | | 09/01/23 15:18 | 09/05/23 17:19 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.5 | U | 50.5 | | mg/Kg | | 09/01/23 15:18 | 09/05/23 17:19 | 1 |
| OII Range Organics (Over C28-C36) | <50.5 | U | 50.5 | | mg/Kg | | 09/01/23 15:18 | 09/05/23 17:19 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *146* | *S1+* | *70 - 130* | *09/01/23 15:18* | *09/05/23 17:19* | *1* |
| *o-Terphenyl* | *128* | | *70 - 130* | *09/01/23 15:18* | *09/05/23 17:19* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **230** | | 24.8 | | mg/Kg | | | 09/01/23 19:31 | 5 |

# Surrogate Summary

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

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

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

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| | | BFB1 | DFBZ1 |
| Lab Sample ID | Client Sample ID | (70-130) | (70-130) |
| 880-32807-A-1-B MS | Matrix Spike | 94 | 104 |
| 880-32807-A-1-C MSD | Matrix Spike Duplicate | 103 | 101 |
| 890-5185-1 | FS25 | 101 | 89 |
| 890-5185-1 MS | FS25 | 125 | 113 |
| 890-5185-1 MSD | FS25 | 133 S1+ | 113 |
| 890-5185-2 | FS26 | 107 | 81 |
| 890-5185-3 | SW04 | 105 | 83 |
| 890-5185-4 | FS27 | 106 | 86 |
| 890-5185-5 | FS28 | 104 | 83 |
| 890-5185-6 | FS29 | 103 | 83 |
| 890-5185-7 | FS30 | 103 | 88 |
| 890-5185-8 | FS31 | 101 | 80 |
| 890-5185-9 | FS32 | 97 | 64 S1- |
| 890-5185-10 | FS33 | 100 | 76 |
| 890-5185-11 | FS34 | 92 | 81 |
| 890-5185-12 | SW05 | 98 | 79 |
| 890-5185-13 | FS35 | 99 | 64 S1- |
| 890-5185-14 | FS36 | 97 | 62 S1- |
| 890-5185-15 | FS37 | 101 | 88 |
| 890-5185-16 | FS38 | 102 | 65 S1- |
| 890-5185-17 | FS39 | 101 | 74 |
| 890-5185-18 | FS40 | 101 | 76 |
| 890-5185-19 | FS41 | 90 | 93 |
| 890-5185-20 | SS06 | 99 | 64 S1- |
| 890-5185-21 | SS05 | 93 | 105 |
| LCS 880-61764/1-A | Lab Control Sample | 114 | 112 |
| LCS 880-61792/1-A | Lab Control Sample | 109 | 100 |
| LCSD 880-61764/2-A | Lab Control Sample Dup | 125 | 112 |
| LCSD 880-61792/2-A | Lab Control Sample Dup | 94 | 96 |
| MB 880-61763/5-A | Method Blank | 98 | 97 |
| MB 880-61764/5-A | Method Blank | 77 | 93 |
| MB 880-61792/5-A | Method Blank | 82 | 89 |

**Surrogate Legend**

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

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

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

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| | | 1CO1 | OTPH1 |
| Lab Sample ID | Client Sample ID | (70-130) | (70-130) |
| 880-32748-A-4-C MS | Matrix Spike | 138 S1+ | 107 |
| 880-32748-A-4-D MSD | Matrix Spike Duplicate | 138 S1+ | 107 |
| 890-5185-1 | FS25 | 144 S1+ | 120 |
| 890-5185-2 | FS26 | 146 S1+ | 125 |
| 890-5185-3 | SW04 | 149 S1+ | 126 |
| 890-5185-4 | FS27 | 141 S1+ | 120 |
| 890-5185-5 | FS28 | 138 S1+ | 119 |

# Surrogate Summary

Client: Ensolum Job ID: 890-5185-1
Project/Site: JRU DI 11 EKALAKA 823H SDG: 03C1558118

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

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

| | | Percent Surrogate Recovery (Acceptance Limits) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab Sample ID | Client Sample ID | 1CO1 (70-130) | OTPH1 (70-130) | | | | | | | | |
| 890-5185-6 | FS29 | 136 S1+ | 117 | | | | | | | | |
| 890-5185-7 | FS30 | 136 S1+ | 116 | | | | | | | | |
| 890-5185-8 | FS31 | 135 S1+ | 115 | | | | | | | | |
| 890-5185-9 | FS32 | 154 S1+ | 130 | | | | | | | | |
| 890-5185-9 MS | FS32 | 152 S1+ | 120 | | | | | | | | |
| 890-5185-9 MSD | FS32 | 153 S1+ | 116 | | | | | | | | |
| 890-5185-10 | FS33 | 169 S1+ | 143 S1+ | | | | | | | | |
| 890-5185-11 | FS34 | 164 S1+ | 139 S1+ | | | | | | | | |
| 890-5185-12 | SW05 | 161 S1+ | 138 S1+ | | | | | | | | |
| 890-5185-13 | FS35 | 140 S1+ | 124 | | | | | | | | |
| 890-5185-14 | FS36 | 162 S1+ | 140 S1+ | | | | | | | | |
| 890-5185-15 | FS37 | 140 S1+ | 124 | | | | | | | | |
| 890-5185-16 | FS38 | 169 S1+ | 147 S1+ | | | | | | | | |
| 890-5185-17 | FS39 | 140 S1+ | 123 | | | | | | | | |
| 890-5185-18 | FS40 | 168 S1+ | 146 S1+ | | | | | | | | |
| 890-5185-19 | FS41 | 167 S1+ | 146 S1+ | | | | | | | | |
| 890-5185-20 | SS06 | 156 S1+ | 134 S1+ | | | | | | | | |
| 890-5185-21 | SS05 | 146 S1+ | 128 | | | | | | | | |
| LCS 880-61669/2-A | Lab Control Sample | 111 | 113 | | | | | | | | |
| LCS 880-61771/2-A | Lab Control Sample | 124 | 127 | | | | | | | | |
| LCSD 880-61669/3-A | Lab Control Sample Dup | 118 | 114 | | | | | | | | |
| LCSD 880-61771/3-A | Lab Control Sample Dup | 135 S1+ | 119 | | | | | | | | |
| MB 880-61669/1-A | Method Blank | 161 S1+ | 145 S1+ | | | | | | | | |
| MB 880-61771/1-A | Method Blank | 164 S1+ | 151 S1+ | | | | | | | | |

**Surrogate Legend**

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

# QC Sample Results

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

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

**Lab Sample ID: MB 880-61763/5-A**
**Matrix: Solid**
**Analysis Batch: 61708**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 61763**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:40 | 09/01/23 22:33 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:40 | 09/01/23 22:33 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:40 | 09/01/23 22:33 | 1 |
| m-Xylene & p-Xylene | <0.00400 | U | 0.00400 | | mg/Kg | | 09/01/23 12:40 | 09/01/23 22:33 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:40 | 09/01/23 22:33 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 09/01/23 12:40 | 09/01/23 22:33 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *98* | | *70 - 130* | *09/01/23 12:40* | *09/01/23 22:33* | *1* |
| *1,4-Difluorobenzene (Surr)* | *97* | | *70 - 130* | *09/01/23 12:40* | *09/01/23 22:33* | *1* |

**Lab Sample ID: MB 880-61764/5-A**
**Matrix: Solid**
**Analysis Batch: 61708**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 61764**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 09:07 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 09:07 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 09:07 | 1 |
| m-Xylene & p-Xylene | <0.00400 | U | 0.00400 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 09:07 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 09:07 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 09/01/23 12:47 | 09/02/23 09:07 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *77* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 09:07* | *1* |
| *1,4-Difluorobenzene (Surr)* | *93* | | *70 - 130* | *09/01/23 12:47* | *09/02/23 09:07* | *1* |

**Lab Sample ID: LCS 880-61764/1-A**
**Matrix: Solid**
**Analysis Batch: 61708**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 61764**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.09919 | | mg/Kg | | 99 | 70 - 130 | | |
| Toluene | | | 0.100 | 0.1031 | | mg/Kg | | 103 | 70 - 130 | | |
| Ethylbenzene | | | 0.100 | 0.09675 | | mg/Kg | | 97 | 70 - 130 | | |
| m-Xylene & p-Xylene | | | 0.200 | 0.2108 | | mg/Kg | | 105 | 70 - 130 | | |
| o-Xylene | | | 0.100 | 0.1048 | | mg/Kg | | 105 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *114* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *112* | | *70 - 130* |

**Lab Sample ID: LCSD 880-61764/2-A**
**Matrix: Solid**
**Analysis Batch: 61708**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 61764**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.09276 | | mg/Kg | | 93 | 70 - 130 | 7 | 35 |

# QC Sample Results

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

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

**Lab Sample ID: LCSD 880-61764/2-A** — **Client Sample ID: Lab Control Sample Dup**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 61708** — **Prep Batch: 61764**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | | | 0.100 | 0.09940 | | mg/Kg | | 99 | 70 - 130 | 4 | 35 |
| Ethylbenzene | | | 0.100 | 0.09735 | | mg/Kg | | 97 | 70 - 130 | 1 | 35 |
| m-Xylene & p-Xylene | | | 0.200 | 0.2130 | | mg/Kg | | 107 | 70 - 130 | 1 | 35 |
| o-Xylene | | | 0.100 | 0.1070 | | mg/Kg | | 107 | 70 - 130 | 2 | 35 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *125* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *112* | | *70 - 130* |

**Lab Sample ID: 890-5185-1 MS** — **Client Sample ID: FS25**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 61708** — **Prep Batch: 61764**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00198 | U | 0.0996 | 0.09051 | | mg/Kg | | 90 | 70 - 130 |
| Toluene | <0.00198 | U | 0.0996 | 0.1009 | | mg/Kg | | 101 | 70 - 130 |
| Ethylbenzene | <0.00198 | U | 0.0996 | 0.1007 | | mg/Kg | | 101 | 70 - 130 |
| m-Xylene & p-Xylene | <0.00396 | U | 0.199 | 0.2220 | | mg/Kg | | 111 | 70 - 130 |
| o-Xylene | <0.00198 | U | 0.0996 | 0.1091 | | mg/Kg | | 110 | 70 - 130 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *125* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *113* | | *70 - 130* |

**Lab Sample ID: 890-5185-1 MSD** — **Client Sample ID: FS25**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 61708** — **Prep Batch: 61764**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00198 | U | 0.100 | 0.09018 | | mg/Kg | | 89 | 70 - 130 | 0 | 35 |
| Toluene | <0.00198 | U | 0.100 | 0.1016 | | mg/Kg | | 101 | 70 - 130 | 1 | 35 |
| Ethylbenzene | <0.00198 | U | 0.100 | 0.1042 | | mg/Kg | | 104 | 70 - 130 | 3 | 35 |
| m-Xylene & p-Xylene | <0.00396 | U | 0.200 | 0.2305 | | mg/Kg | | 115 | 70 - 130 | 4 | 35 |
| o-Xylene | <0.00198 | U | 0.100 | 0.1137 | | mg/Kg | | 113 | 70 - 130 | 4 | 35 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *133* | *S1+* | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *113* | | *70 - 130* |

**Lab Sample ID: MB 880-61792/5-A** — **Client Sample ID: Method Blank**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 61790** — **Prep Batch: 61792**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/05/23 09:19 | 09/05/23 11:36 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/05/23 09:19 | 09/05/23 11:36 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/05/23 09:19 | 09/05/23 11:36 | 1 |
| m-Xylene & p-Xylene | <0.00400 | U | 0.00400 | | mg/Kg | | 09/05/23 09:19 | 09/05/23 11:36 | 1 |

# QC Sample Results

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

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

**Lab Sample ID: MB 880-61792/5-A**
**Matrix: Solid**
**Analysis Batch: 61790**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 61792**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/05/23 09:19 | 09/05/23 11:36 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 09/05/23 09:19 | 09/05/23 11:36 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *82* | | *70 - 130* | *09/05/23 09:19* | *09/05/23 11:36* | *1* |
| *1,4-Difluorobenzene (Surr)* | *89* | | *70 - 130* | *09/05/23 09:19* | *09/05/23 11:36* | *1* |

**Lab Sample ID: LCS 880-61792/1-A**
**Matrix: Solid**
**Analysis Batch: 61790**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 61792**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.07257 | | mg/Kg | | 73 | 70 - 130 | | |
| Toluene | | | 0.100 | 0.08360 | | mg/Kg | | 84 | 70 - 130 | | |
| Ethylbenzene | | | 0.100 | 0.09101 | | mg/Kg | | 91 | 70 - 130 | | |
| m-Xylene & p-Xylene | | | 0.200 | 0.1929 | | mg/Kg | | 96 | 70 - 130 | | |
| o-Xylene | | | 0.100 | 0.09226 | | mg/Kg | | 92 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *109* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *100* | | *70 - 130* |

**Lab Sample ID: LCSD 880-61792/2-A**
**Matrix: Solid**
**Analysis Batch: 61790**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 61792**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.07131 | | mg/Kg | | 71 | 70 - 130 | 2 | 35 |
| Toluene | | | 0.100 | 0.07437 | | mg/Kg | | 74 | 70 - 130 | 12 | 35 |
| Ethylbenzene | | | 0.100 | 0.07582 | | mg/Kg | | 76 | 70 - 130 | 18 | 35 |
| m-Xylene & p-Xylene | | | 0.200 | 0.1548 | | mg/Kg | | 77 | 70 - 130 | 22 | 35 |
| o-Xylene | | | 0.100 | 0.07453 | | mg/Kg | | 75 | 70 - 130 | 21 | 35 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *94* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *96* | | *70 - 130* |

**Lab Sample ID: 880-32807-A-1-B MS**
**Matrix: Solid**
**Analysis Batch: 61790**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 61792**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.0996 | 0.07683 | | mg/Kg | | 77 | 70 - 130 | | |
| Toluene | <0.00199 | U | 0.0996 | 0.07608 | | mg/Kg | | 76 | 70 - 130 | | |
| Ethylbenzene | <0.00199 | U | 0.0996 | 0.07529 | | mg/Kg | | 76 | 70 - 130 | | |
| m-Xylene & p-Xylene | <0.00398 | U | 0.199 | 0.1509 | | mg/Kg | | 76 | 70 - 130 | | |
| o-Xylene | <0.00199 | U | 0.0996 | 0.07090 | | mg/Kg | | 71 | 70 - 130 | | |

# QC Sample Results

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

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

**Lab Sample ID: 880-32807-A-1-B MS**
**Matrix: Solid**
**Analysis Batch: 61790**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 61792**

| Surrogate | MS %Recovery | MS Qualifier | Limits |
|---|---|---|---|
| 4-Bromofluorobenzene (Surr) | 94 | | 70 - 130 |
| 1,4-Difluorobenzene (Surr) | 104 | | 70 - 130 |

**Lab Sample ID: 880-32807-A-1-C MSD**
**Matrix: Solid**
**Analysis Batch: 61790**

**Client Sample ID: Matrix Spike Duplicate**
**Prep Type: Total/NA**
**Prep Batch: 61792**

| 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 | 0.08037 | | mg/Kg | | 80 | 70 - 130 | 5 | 35 |
| Toluene | <0.00199 | U | 0.100 | 0.08412 | | mg/Kg | | 84 | 70 - 130 | 10 | 35 |
| Ethylbenzene | <0.00199 | U | 0.100 | 0.08422 | | mg/Kg | | 84 | 70 - 130 | 11 | 35 |
| m-Xylene & p-Xylene | <0.00398 | U | 0.200 | 0.1706 | | mg/Kg | | 85 | 70 - 130 | 12 | 35 |
| o-Xylene | <0.00199 | U | 0.100 | 0.08032 | | mg/Kg | | 80 | 70 - 130 | 12 | 35 |

| Surrogate | MSD %Recovery | MSD Qualifier | Limits |
|---|---|---|---|
| 4-Bromofluorobenzene (Surr) | 103 | | 70 - 130 |
| 1,4-Difluorobenzene (Surr) | 101 | | 70 - 130 |

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

**Lab Sample ID: MB 880-61669/1-A**
**Matrix: Solid**
**Analysis Batch: 61701**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 61669**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 08/31/23 13:54 | 09/01/23 19:02 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 08/31/23 13:54 | 09/01/23 19:02 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 08/31/23 13:54 | 09/01/23 19:02 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 161 | S1+ | 70 - 130 | 08/31/23 13:54 | 09/01/23 19:02 | 1 |
| o-Terphenyl | 145 | S1+ | 70 - 130 | 08/31/23 13:54 | 09/01/23 19:02 | 1 |

**Lab Sample ID: LCS 880-61669/2-A**
**Matrix: Solid**
**Analysis Batch: 61701**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 61669**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 990.0 | | mg/Kg | | 99 | 70 - 130 | | |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 923.8 | | mg/Kg | | 92 | 70 - 130 | | |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane | 111 | | 70 - 130 |
| o-Terphenyl | 113 | | 70 - 130 |

# QC Sample Results

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

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

**Lab Sample ID: LCSD 880-61669/3-A**
**Matrix: Solid**
**Analysis Batch: 61701**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 61669**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 1026 | | mg/Kg | | 103 | 70 - 130 | 4 | 20 |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 909.5 | | mg/Kg | | 91 | 70 - 130 | 2 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane* | *118* | | *70 - 130* |
| *o-Terphenyl* | *114* | | *70 - 130* |

**Lab Sample ID: 880-32748-A-4-C MS**
**Matrix: Solid**
**Analysis Batch: 61701**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 61669**

| 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 | 995 | 957.1 | | mg/Kg | | 91 | 70 - 130 |
| Diesel Range Organics (Over C10-C28) | <50.4 | U | 995 | 1276 | | mg/Kg | | 125 | 70 - 130 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane* | *138* | *S1+* | *70 - 130* |
| *o-Terphenyl* | *107* | | *70 - 130* |

**Lab Sample ID: 880-32748-A-4-D MSD**
**Matrix: Solid**
**Analysis Batch: 61701**

**Client Sample ID: Matrix Spike Duplicate**
**Prep Type: Total/NA**
**Prep Batch: 61669**

| 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 | 995 | 969.1 | | mg/Kg | | 92 | 70 - 130 | 1 | 20 |
| Diesel Range Organics (Over C10-C28) | <50.4 | U | 995 | 1282 | | mg/Kg | | 125 | 70 - 130 | 0 | 20 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane* | *138* | *S1+* | *70 - 130* |
| *o-Terphenyl* | *107* | | *70 - 130* |

**Lab Sample ID: MB 880-61771/1-A**
**Matrix: Solid**
**Analysis Batch: 61784**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 61771**

| 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 | | 09/01/23 15:18 | 09/05/23 08:20 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 09/01/23 15:18 | 09/05/23 08:20 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 09/01/23 15:18 | 09/05/23 08:20 | 1 |

# QC Sample Results

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

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

**Lab Sample ID: MB 880-61771/1-A**
**Matrix: Solid**
**Analysis Batch: 61784**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 61771**

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 164 | S1+ | 70 - 130 | 09/01/23 15:18 | 09/05/23 08:20 | 1 |
| o-Terphenyl | 151 | S1+ | 70 - 130 | 09/01/23 15:18 | 09/05/23 08:20 | 1 |

**Lab Sample ID: LCS 880-61771/2-A**
**Matrix: Solid**
**Analysis Batch: 61784**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 61771**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 1128 | | mg/Kg | | 113 | 70 - 130 | | |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 1049 | | mg/Kg | | 105 | 70 - 130 | | |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane | 124 | | 70 - 130 |
| o-Terphenyl | 127 | | 70 - 130 |

**Lab Sample ID: LCSD 880-61771/3-A**
**Matrix: Solid**
**Analysis Batch: 61784**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 61771**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 1176 | | mg/Kg | | 118 | 70 - 130 | 4 | 20 |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 1013 | | mg/Kg | | 101 | 70 - 130 | 4 | 20 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane | 135 | S1+ | 70 - 130 |
| o-Terphenyl | 119 | | 70 - 130 |

**Lab Sample ID: 890-5185-9 MS**
**Matrix: Solid**
**Analysis Batch: 61784**

**Client Sample ID: FS32**
**Prep Type: Total/NA**
**Prep Batch: 61771**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.6 | U | 991 | 1070 | | mg/Kg | | 104 | 70 - 130 | | |
| Diesel Range Organics (Over C10-C28) | <49.6 | U F1 | 991 | 1441 | F1 | mg/Kg | | 142 | 70 - 130 | | |

| Surrogate | MS %Recovery | MS Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane | 152 | S1+ | 70 - 130 |
| o-Terphenyl | 120 | | 70 - 130 |

# QC Sample Results

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

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

**Lab Sample ID: 890-5185-9 MSD** — **Client Sample ID: FS32**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 61784** — **Prep Batch: 61771**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.6 | U | 991 | 1070 | | mg/Kg | | 104 | 70 - 130 | 0 | 20 |
| Diesel Range Organics (Over C10-C28) | <49.6 | U F1 | 991 | 1406 | F1 | mg/Kg | | 138 | 70 - 130 | 2 | 20 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane* | *153* | *S1+* | *70 - 130* |
| *o-Terphenyl* | *116* | | *70 - 130* |

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 880-61640/1-A** — **Client Sample ID: Method Blank**
**Matrix: Solid** — **Prep Type: Soluble**
**Analysis Batch: 61766**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <5.00 | U | 5.00 | | mg/Kg | | | 09/01/23 16:44 | 1 |

**Lab Sample ID: LCS 880-61640/2-A** — **Client Sample ID: Lab Control Sample**
**Matrix: Solid** — **Prep Type: Soluble**
**Analysis Batch: 61766**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 250 | 253.1 | | mg/Kg | | 101 | 90 - 110 | | |

**Lab Sample ID: LCSD 880-61640/3-A** — **Client Sample ID: Lab Control Sample Dup**
**Matrix: Solid** — **Prep Type: Soluble**
**Analysis Batch: 61766**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 250 | 252.9 | | mg/Kg | | 101 | 90 - 110 | 0 | 20 |

**Lab Sample ID: 880-32730-A-4-B MS** — **Client Sample ID: Matrix Spike**
**Matrix: Solid** — **Prep Type: Soluble**
**Analysis Batch: 61766**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 42.2 | | 249 | 291.3 | | mg/Kg | | 100 | 90 - 110 | | |

**Lab Sample ID: 880-32730-A-4-C MSD** — **Client Sample ID: Matrix Spike Duplicate**
**Matrix: Solid** — **Prep Type: Soluble**
**Analysis Batch: 61766**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 42.2 | | 249 | 291.7 | | mg/Kg | | 100 | 90 - 110 | 0 | 20 |

# QC Sample Results

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

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

**Lab Sample ID: MB 880-61716/1-A**
**Matrix: Solid**
**Analysis Batch: 61767**

**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 | | | 09/01/23 20:03 | 1 |

**Lab Sample ID: LCS 880-61716/2-A**
**Matrix: Solid**
**Analysis Batch: 61767**

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

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 250 | 255.4 | | mg/Kg | | 102 | 90 - 110 | | |

**Lab Sample ID: LCSD 880-61716/3-A**
**Matrix: Solid**
**Analysis Batch: 61767**

**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 | 255.8 | | mg/Kg | | 102 | 90 - 110 | 0 | 20 |

**Lab Sample ID: 890-5185-1 MS**
**Matrix: Solid**
**Analysis Batch: 61767**

**Client Sample ID: FS25**
**Prep Type: Soluble**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 315 | | 248 | 557.0 | | mg/Kg | | 98 | 90 - 110 | | |

**Lab Sample ID: 890-5185-1 MSD**
**Matrix: Solid**
**Analysis Batch: 61767**

**Client Sample ID: FS25**
**Prep Type: Soluble**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 315 | | 248 | 557.2 | | mg/Kg | | 98 | 90 - 110 | 0 | 20 |

**Lab Sample ID: 890-5185-11 MS**
**Matrix: Solid**
**Analysis Batch: 61767**

**Client Sample ID: FS34**
**Prep Type: Soluble**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 540 | | 249 | 772.7 | | mg/Kg | | 94 | 90 - 110 | | |

**Lab Sample ID: 890-5185-11 MSD**
**Matrix: Solid**
**Analysis Batch: 61767**

**Client Sample ID: FS34**
**Prep Type: Soluble**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 540 | | 249 | 774.2 | | mg/Kg | | 94 | 90 - 110 | 0 | 20 |

# QC Association Summary

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

## GC VOA

### Analysis Batch: 61708

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5185-1 | FS25 | Total/NA | Solid | 8021B | 61764 |
| 890-5185-2 | FS26 | Total/NA | Solid | 8021B | 61764 |
| 890-5185-3 | SW04 | Total/NA | Solid | 8021B | 61764 |
| 890-5185-4 | FS27 | Total/NA | Solid | 8021B | 61764 |
| 890-5185-5 | FS28 | Total/NA | Solid | 8021B | 61764 |
| 890-5185-6 | FS29 | Total/NA | Solid | 8021B | 61764 |
| 890-5185-7 | FS30 | Total/NA | Solid | 8021B | 61764 |
| 890-5185-8 | FS31 | Total/NA | Solid | 8021B | 61764 |
| 890-5185-9 | FS32 | Total/NA | Solid | 8021B | 61764 |
| 890-5185-10 | FS33 | Total/NA | Solid | 8021B | 61764 |
| 890-5185-11 | FS34 | Total/NA | Solid | 8021B | 61764 |
| 890-5185-12 | SW05 | Total/NA | Solid | 8021B | 61764 |
| 890-5185-13 | FS35 | Total/NA | Solid | 8021B | 61764 |
| 890-5185-14 | FS36 | Total/NA | Solid | 8021B | 61764 |
| 890-5185-15 | FS37 | Total/NA | Solid | 8021B | 61764 |
| 890-5185-16 | FS38 | Total/NA | Solid | 8021B | 61764 |
| 890-5185-17 | FS39 | Total/NA | Solid | 8021B | 61764 |
| 890-5185-18 | FS40 | Total/NA | Solid | 8021B | 61764 |
| 890-5185-19 | FS41 | Total/NA | Solid | 8021B | 61764 |
| 890-5185-20 | SS06 | Total/NA | Solid | 8021B | 61764 |
| MB 880-61763/5-A | Method Blank | Total/NA | Solid | 8021B | 61763 |
| MB 880-61764/5-A | Method Blank | Total/NA | Solid | 8021B | 61764 |
| LCS 880-61764/1-A | Lab Control Sample | Total/NA | Solid | 8021B | 61764 |
| LCSD 880-61764/2-A | Lab Control Sample Dup | Total/NA | Solid | 8021B | 61764 |
| 890-5185-1 MS | FS25 | Total/NA | Solid | 8021B | 61764 |
| 890-5185-1 MSD | FS25 | Total/NA | Solid | 8021B | 61764 |

### Prep Batch: 61763

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| MB 880-61763/5-A | Method Blank | Total/NA | Solid | 5035 | |

### Prep Batch: 61764

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5185-1 | FS25 | Total/NA | Solid | 5035 | |
| 890-5185-2 | FS26 | Total/NA | Solid | 5035 | |
| 890-5185-3 | SW04 | Total/NA | Solid | 5035 | |
| 890-5185-4 | FS27 | Total/NA | Solid | 5035 | |
| 890-5185-5 | FS28 | Total/NA | Solid | 5035 | |
| 890-5185-6 | FS29 | Total/NA | Solid | 5035 | |
| 890-5185-7 | FS30 | Total/NA | Solid | 5035 | |
| 890-5185-8 | FS31 | Total/NA | Solid | 5035 | |
| 890-5185-9 | FS32 | Total/NA | Solid | 5035 | |
| 890-5185-10 | FS33 | Total/NA | Solid | 5035 | |
| 890-5185-11 | FS34 | Total/NA | Solid | 5035 | |
| 890-5185-12 | SW05 | Total/NA | Solid | 5035 | |
| 890-5185-13 | FS35 | Total/NA | Solid | 5035 | |
| 890-5185-14 | FS36 | Total/NA | Solid | 5035 | |
| 890-5185-15 | FS37 | Total/NA | Solid | 5035 | |
| 890-5185-16 | FS38 | Total/NA | Solid | 5035 | |
| 890-5185-17 | FS39 | Total/NA | Solid | 5035 | |
| 890-5185-18 | FS40 | Total/NA | Solid | 5035 | |

# QC Association Summary

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

## GC VOA (Continued)

### Prep Batch: 61764 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5185-19 | FS41 | Total/NA | Solid | 5035 | |
| 890-5185-20 | SS06 | Total/NA | Solid | 5035 | |
| MB 880-61764/5-A | Method Blank | Total/NA | Solid | 5035 | |
| LCS 880-61764/1-A | Lab Control Sample | Total/NA | Solid | 5035 | |
| LCSD 880-61764/2-A | Lab Control Sample Dup | Total/NA | Solid | 5035 | |
| 890-5185-1 MS | FS25 | Total/NA | Solid | 5035 | |
| 890-5185-1 MSD | FS25 | Total/NA | Solid | 5035 | |

### Analysis Batch: 61790

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5185-21 | SS05 | Total/NA | Solid | 8021B | 61792 |
| MB 880-61792/5-A | Method Blank | Total/NA | Solid | 8021B | 61792 |
| LCS 880-61792/1-A | Lab Control Sample | Total/NA | Solid | 8021B | 61792 |
| LCSD 880-61792/2-A | Lab Control Sample Dup | Total/NA | Solid | 8021B | 61792 |
| 880-32807-A-1-B MS | Matrix Spike | Total/NA | Solid | 8021B | 61792 |
| 880-32807-A-1-C MSD | Matrix Spike Duplicate | Total/NA | Solid | 8021B | 61792 |

### Prep Batch: 61792

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5185-21 | SS05 | Total/NA | Solid | 5035 | |
| MB 880-61792/5-A | Method Blank | Total/NA | Solid | 5035 | |
| LCS 880-61792/1-A | Lab Control Sample | Total/NA | Solid | 5035 | |
| LCSD 880-61792/2-A | Lab Control Sample Dup | Total/NA | Solid | 5035 | |
| 880-32807-A-1-B MS | Matrix Spike | Total/NA | Solid | 5035 | |
| 880-32807-A-1-C MSD | Matrix Spike Duplicate | Total/NA | Solid | 5035 | |

### Analysis Batch: 61861

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5185-1 | FS25 | Total/NA | Solid | Total BTEX | |
| 890-5185-2 | FS26 | Total/NA | Solid | Total BTEX | |
| 890-5185-3 | SW04 | Total/NA | Solid | Total BTEX | |
| 890-5185-4 | FS27 | Total/NA | Solid | Total BTEX | |
| 890-5185-5 | FS28 | Total/NA | Solid | Total BTEX | |
| 890-5185-6 | FS29 | Total/NA | Solid | Total BTEX | |
| 890-5185-7 | FS30 | Total/NA | Solid | Total BTEX | |
| 890-5185-8 | FS31 | Total/NA | Solid | Total BTEX | |
| 890-5185-9 | FS32 | Total/NA | Solid | Total BTEX | |
| 890-5185-10 | FS33 | Total/NA | Solid | Total BTEX | |
| 890-5185-11 | FS34 | Total/NA | Solid | Total BTEX | |
| 890-5185-12 | SW05 | Total/NA | Solid | Total BTEX | |
| 890-5185-13 | FS35 | Total/NA | Solid | Total BTEX | |
| 890-5185-14 | FS36 | Total/NA | Solid | Total BTEX | |
| 890-5185-15 | FS37 | Total/NA | Solid | Total BTEX | |
| 890-5185-16 | FS38 | Total/NA | Solid | Total BTEX | |
| 890-5185-17 | FS39 | Total/NA | Solid | Total BTEX | |
| 890-5185-18 | FS40 | Total/NA | Solid | Total BTEX | |
| 890-5185-19 | FS41 | Total/NA | Solid | Total BTEX | |
| 890-5185-20 | SS06 | Total/NA | Solid | Total BTEX | |
| 890-5185-21 | SS05 | Total/NA | Solid | Total BTEX | |

# QC Association Summary

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

## GC Semi VOA

### Prep Batch: 61669

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5185-1 | FS25 | Total/NA | Solid | 8015NM Prep | |
| 890-5185-2 | FS26 | Total/NA | Solid | 8015NM Prep | |
| 890-5185-3 | SW04 | Total/NA | Solid | 8015NM Prep | |
| 890-5185-4 | FS27 | Total/NA | Solid | 8015NM Prep | |
| 890-5185-5 | FS28 | Total/NA | Solid | 8015NM Prep | |
| 890-5185-6 | FS29 | Total/NA | Solid | 8015NM Prep | |
| 890-5185-7 | FS30 | Total/NA | Solid | 8015NM Prep | |
| 890-5185-8 | FS31 | Total/NA | Solid | 8015NM Prep | |
| MB 880-61669/1-A | Method Blank | Total/NA | Solid | 8015NM Prep | |
| LCS 880-61669/2-A | Lab Control Sample | Total/NA | Solid | 8015NM Prep | |
| LCSD 880-61669/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015NM Prep | |
| 880-32748-A-4-C MS | Matrix Spike | Total/NA | Solid | 8015NM Prep | |
| 880-32748-A-4-D MSD | Matrix Spike Duplicate | Total/NA | Solid | 8015NM Prep | |

### Analysis Batch: 61701

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5185-1 | FS25 | Total/NA | Solid | 8015B NM | 61669 |
| 890-5185-2 | FS26 | Total/NA | Solid | 8015B NM | 61669 |
| 890-5185-3 | SW04 | Total/NA | Solid | 8015B NM | 61669 |
| 890-5185-4 | FS27 | Total/NA | Solid | 8015B NM | 61669 |
| 890-5185-5 | FS28 | Total/NA | Solid | 8015B NM | 61669 |
| 890-5185-6 | FS29 | Total/NA | Solid | 8015B NM | 61669 |
| 890-5185-7 | FS30 | Total/NA | Solid | 8015B NM | 61669 |
| 890-5185-8 | FS31 | Total/NA | Solid | 8015B NM | 61669 |
| MB 880-61669/1-A | Method Blank | Total/NA | Solid | 8015B NM | 61669 |
| LCS 880-61669/2-A | Lab Control Sample | Total/NA | Solid | 8015B NM | 61669 |
| LCSD 880-61669/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015B NM | 61669 |
| 880-32748-A-4-C MS | Matrix Spike | Total/NA | Solid | 8015B NM | 61669 |
| 880-32748-A-4-D MSD | Matrix Spike Duplicate | Total/NA | Solid | 8015B NM | 61669 |

### Prep Batch: 61771

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5185-9 | FS32 | Total/NA | Solid | 8015NM Prep | |
| 890-5185-10 | FS33 | Total/NA | Solid | 8015NM Prep | |
| 890-5185-11 | FS34 | Total/NA | Solid | 8015NM Prep | |
| 890-5185-12 | SW05 | Total/NA | Solid | 8015NM Prep | |
| 890-5185-13 | FS35 | Total/NA | Solid | 8015NM Prep | |
| 890-5185-14 | FS36 | Total/NA | Solid | 8015NM Prep | |
| 890-5185-15 | FS37 | Total/NA | Solid | 8015NM Prep | |
| 890-5185-16 | FS38 | Total/NA | Solid | 8015NM Prep | |
| 890-5185-17 | FS39 | Total/NA | Solid | 8015NM Prep | |
| 890-5185-18 | FS40 | Total/NA | Solid | 8015NM Prep | |
| 890-5185-19 | FS41 | Total/NA | Solid | 8015NM Prep | |
| 890-5185-20 | SS06 | Total/NA | Solid | 8015NM Prep | |
| 890-5185-21 | SS05 | Total/NA | Solid | 8015NM Prep | |
| MB 880-61771/1-A | Method Blank | Total/NA | Solid | 8015NM Prep | |
| LCS 880-61771/2-A | Lab Control Sample | Total/NA | Solid | 8015NM Prep | |
| LCSD 880-61771/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015NM Prep | |
| 890-5185-9 MS | FS32 | Total/NA | Solid | 8015NM Prep | |
| 890-5185-9 MSD | FS32 | Total/NA | Solid | 8015NM Prep | |

# QC Association Summary

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

## GC Semi VOA

### Analysis Batch: 61784

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5185-9 | FS32 | Total/NA | Solid | 8015B NM | 61771 |
| 890-5185-10 | FS33 | Total/NA | Solid | 8015B NM | 61771 |
| 890-5185-11 | FS34 | Total/NA | Solid | 8015B NM | 61771 |
| 890-5185-12 | SW05 | Total/NA | Solid | 8015B NM | 61771 |
| 890-5185-13 | FS35 | Total/NA | Solid | 8015B NM | 61771 |
| 890-5185-14 | FS36 | Total/NA | Solid | 8015B NM | 61771 |
| 890-5185-15 | FS37 | Total/NA | Solid | 8015B NM | 61771 |
| 890-5185-16 | FS38 | Total/NA | Solid | 8015B NM | 61771 |
| 890-5185-17 | FS39 | Total/NA | Solid | 8015B NM | 61771 |
| 890-5185-18 | FS40 | Total/NA | Solid | 8015B NM | 61771 |
| 890-5185-19 | FS41 | Total/NA | Solid | 8015B NM | 61771 |
| 890-5185-20 | SS06 | Total/NA | Solid | 8015B NM | 61771 |
| 890-5185-21 | SS05 | Total/NA | Solid | 8015B NM | 61771 |
| MB 880-61771/1-A | Method Blank | Total/NA | Solid | 8015B NM | 61771 |
| LCS 880-61771/2-A | Lab Control Sample | Total/NA | Solid | 8015B NM | 61771 |
| LCSD 880-61771/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015B NM | 61771 |
| 890-5185-9 MS | FS32 | Total/NA | Solid | 8015B NM | 61771 |
| 890-5185-9 MSD | FS32 | Total/NA | Solid | 8015B NM | 61771 |

### Analysis Batch: 61805

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5185-1 | FS25 | Total/NA | Solid | 8015 NM | |
| 890-5185-2 | FS26 | Total/NA | Solid | 8015 NM | |
| 890-5185-3 | SW04 | Total/NA | Solid | 8015 NM | |
| 890-5185-4 | FS27 | Total/NA | Solid | 8015 NM | |
| 890-5185-5 | FS28 | Total/NA | Solid | 8015 NM | |
| 890-5185-6 | FS29 | Total/NA | Solid | 8015 NM | |
| 890-5185-7 | FS30 | Total/NA | Solid | 8015 NM | |
| 890-5185-8 | FS31 | Total/NA | Solid | 8015 NM | |
| 890-5185-9 | FS32 | Total/NA | Solid | 8015 NM | |
| 890-5185-10 | FS33 | Total/NA | Solid | 8015 NM | |
| 890-5185-11 | FS34 | Total/NA | Solid | 8015 NM | |
| 890-5185-12 | SW05 | Total/NA | Solid | 8015 NM | |
| 890-5185-13 | FS35 | Total/NA | Solid | 8015 NM | |
| 890-5185-14 | FS36 | Total/NA | Solid | 8015 NM | |
| 890-5185-15 | FS37 | Total/NA | Solid | 8015 NM | |
| 890-5185-16 | FS38 | Total/NA | Solid | 8015 NM | |
| 890-5185-17 | FS39 | Total/NA | Solid | 8015 NM | |
| 890-5185-18 | FS40 | Total/NA | Solid | 8015 NM | |
| 890-5185-19 | FS41 | Total/NA | Solid | 8015 NM | |
| 890-5185-20 | SS06 | Total/NA | Solid | 8015 NM | |
| 890-5185-21 | SS05 | Total/NA | Solid | 8015 NM | |

## HPLC/IC

### Leach Batch: 61640

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5185-21 | SS05 | Soluble | Solid | DI Leach | |
| MB 880-61640/1-A | Method Blank | Soluble | Solid | DI Leach | |
| LCS 880-61640/2-A | Lab Control Sample | Soluble | Solid | DI Leach | |
| LCSD 880-61640/3-A | Lab Control Sample Dup | Soluble | Solid | DI Leach | |

# QC Association Summary

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

## HPLC/IC (Continued)

### Leach Batch: 61640 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-32730-A-4-B MS | Matrix Spike | Soluble | Solid | DI Leach | |
| 880-32730-A-4-C MSD | Matrix Spike Duplicate | Soluble | Solid | DI Leach | |

### Leach Batch: 61716

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5185-1 | FS25 | Soluble | Solid | DI Leach | |
| 890-5185-2 | FS26 | Soluble | Solid | DI Leach | |
| 890-5185-3 | SW04 | Soluble | Solid | DI Leach | |
| 890-5185-4 | FS27 | Soluble | Solid | DI Leach | |
| 890-5185-5 | FS28 | Soluble | Solid | DI Leach | |
| 890-5185-6 | FS29 | Soluble | Solid | DI Leach | |
| 890-5185-7 | FS30 | Soluble | Solid | DI Leach | |
| 890-5185-8 | FS31 | Soluble | Solid | DI Leach | |
| 890-5185-9 | FS32 | Soluble | Solid | DI Leach | |
| 890-5185-10 | FS33 | Soluble | Solid | DI Leach | |
| 890-5185-11 | FS34 | Soluble | Solid | DI Leach | |
| 890-5185-12 | SW05 | Soluble | Solid | DI Leach | |
| 890-5185-13 | FS35 | Soluble | Solid | DI Leach | |
| 890-5185-14 | FS36 | Soluble | Solid | DI Leach | |
| 890-5185-15 | FS37 | Soluble | Solid | DI Leach | |
| 890-5185-16 | FS38 | Soluble | Solid | DI Leach | |
| 890-5185-17 | FS39 | Soluble | Solid | DI Leach | |
| 890-5185-18 | FS40 | Soluble | Solid | DI Leach | |
| 890-5185-19 | FS41 | Soluble | Solid | DI Leach | |
| 890-5185-20 | SS06 | Soluble | Solid | DI Leach | |
| MB 880-61716/1-A | Method Blank | Soluble | Solid | DI Leach | |
| LCS 880-61716/2-A | Lab Control Sample | Soluble | Solid | DI Leach | |
| LCSD 880-61716/3-A | Lab Control Sample Dup | Soluble | Solid | DI Leach | |
| 890-5185-1 MS | FS25 | Soluble | Solid | DI Leach | |
| 890-5185-1 MSD | FS25 | Soluble | Solid | DI Leach | |
| 890-5185-11 MS | FS34 | Soluble | Solid | DI Leach | |
| 890-5185-11 MSD | FS34 | Soluble | Solid | DI Leach | |

### Analysis Batch: 61766

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5185-21 | SS05 | Soluble | Solid | 300.0 | 61640 |
| MB 880-61640/1-A | Method Blank | Soluble | Solid | 300.0 | 61640 |
| LCS 880-61640/2-A | Lab Control Sample | Soluble | Solid | 300.0 | 61640 |
| LCSD 880-61640/3-A | Lab Control Sample Dup | Soluble | Solid | 300.0 | 61640 |
| 880-32730-A-4-B MS | Matrix Spike | Soluble | Solid | 300.0 | 61640 |
| 880-32730-A-4-C MSD | Matrix Spike Duplicate | Soluble | Solid | 300.0 | 61640 |

### Analysis Batch: 61767

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5185-1 | FS25 | Soluble | Solid | 300.0 | 61716 |
| 890-5185-2 | FS26 | Soluble | Solid | 300.0 | 61716 |
| 890-5185-3 | SW04 | Soluble | Solid | 300.0 | 61716 |
| 890-5185-4 | FS27 | Soluble | Solid | 300.0 | 61716 |
| 890-5185-5 | FS28 | Soluble | Solid | 300.0 | 61716 |
| 890-5185-6 | FS29 | Soluble | Solid | 300.0 | 61716 |
| 890-5185-7 | FS30 | Soluble | Solid | 300.0 | 61716 |

# QC Association Summary

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

## HPLC/IC (Continued)

### Analysis Batch: 61767 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5185-8 | FS31 | Soluble | Solid | 300.0 | 61716 |
| 890-5185-9 | FS32 | Soluble | Solid | 300.0 | 61716 |
| 890-5185-10 | FS33 | Soluble | Solid | 300.0 | 61716 |
| 890-5185-11 | FS34 | Soluble | Solid | 300.0 | 61716 |
| 890-5185-12 | SW05 | Soluble | Solid | 300.0 | 61716 |
| 890-5185-13 | FS35 | Soluble | Solid | 300.0 | 61716 |
| 890-5185-14 | FS36 | Soluble | Solid | 300.0 | 61716 |
| 890-5185-15 | FS37 | Soluble | Solid | 300.0 | 61716 |
| 890-5185-16 | FS38 | Soluble | Solid | 300.0 | 61716 |
| 890-5185-17 | FS39 | Soluble | Solid | 300.0 | 61716 |
| 890-5185-18 | FS40 | Soluble | Solid | 300.0 | 61716 |
| 890-5185-19 | FS41 | Soluble | Solid | 300.0 | 61716 |
| 890-5185-20 | SS06 | Soluble | Solid | 300.0 | 61716 |
| MB 880-61716/1-A | Method Blank | Soluble | Solid | 300.0 | 61716 |
| LCS 880-61716/2-A | Lab Control Sample | Soluble | Solid | 300.0 | 61716 |
| LCSD 880-61716/3-A | Lab Control Sample Dup | Soluble | Solid | 300.0 | 61716 |
| 890-5185-1 MS | FS25 | Soluble | Solid | 300.0 | 61716 |
| 890-5185-1 MSD | FS25 | Soluble | Solid | 300.0 | 61716 |
| 890-5185-11 MS | FS34 | Soluble | Solid | 300.0 | 61716 |
| 890-5185-11 MSD | FS34 | Soluble | Solid | 300.0 | 61716 |

# Lab Chronicle

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

## Client Sample ID: FS25

**Lab Sample ID: 890-5185-1**
**Matrix: Solid**
**Date Collected: 08/30/23 09:40**
**Date Received: 08/30/23 15:15**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.05 g | 5 mL | 61764 | 09/01/23 12:47 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/02/23 09:29 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61861 | 09/05/23 17:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61805 | 09/05/23 12:04 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.98 g | 10 mL | 61669 | 09/01/23 11:20 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61701 | 09/02/23 01:23 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.05 g | 50 mL | 61716 | 09/01/23 09:47 | CH | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61767 | 09/01/23 20:22 | CH | EET MID |

## Client Sample ID: FS26

**Lab Sample ID: 890-5185-2**
**Matrix: Solid**
**Date Collected: 08/30/23 09:45**
**Date Received: 08/30/23 15:15**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.98 g | 5 mL | 61764 | 09/01/23 12:47 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/02/23 09:49 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61861 | 09/05/23 17:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61805 | 09/05/23 12:04 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.05 g | 10 mL | 61669 | 09/01/23 11:20 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61701 | 09/02/23 01:44 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.03 g | 50 mL | 61716 | 09/01/23 09:47 | CH | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61767 | 09/01/23 20:41 | CH | EET MID |

## Client Sample ID: SW04

**Lab Sample ID: 890-5185-3**
**Matrix: Solid**
**Date Collected: 08/30/23 09:55**
**Date Received: 08/30/23 15:15**

| 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 | 61764 | 09/01/23 12:47 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/02/23 10:10 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61861 | 09/05/23 17:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61805 | 09/05/23 12:04 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.03 g | 10 mL | 61669 | 09/01/23 11:20 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61701 | 09/02/23 02:05 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5 g | 50 mL | 61716 | 09/01/23 09:47 | CH | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61767 | 09/01/23 20:48 | CH | EET MID |

## Client Sample ID: FS27

**Lab Sample ID: 890-5185-4**
**Matrix: Solid**
**Date Collected: 08/30/23 10:05**
**Date Received: 08/30/23 15:15**

| 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 | 61764 | 09/01/23 12:47 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/02/23 10:30 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61861 | 09/05/23 17:22 | SM | EET MID |

# Lab Chronicle

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

## Client Sample ID: FS27

**Date Collected: 08/30/23 10:05**
**Date Received: 08/30/23 15:15**

**Lab Sample ID: 890-5185-4**
**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 | | | 61805 | 09/05/23 12:04 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.94 g | 10 mL | 61669 | 09/01/23 11:20 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61701 | 09/02/23 02:26 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.01 g | 50 mL | 61716 | 09/01/23 09:47 | CH | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61767 | 09/01/23 20:54 | CH | EET MID |

## Client Sample ID: FS28

**Date Collected: 08/30/23 10:10**
**Date Received: 08/30/23 15:15**

**Lab Sample ID: 890-5185-5**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.03 g | 5 mL | 61764 | 09/01/23 12:47 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/02/23 10:51 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61861 | 09/05/23 17:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61805 | 09/05/23 12:04 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.97 g | 10 mL | 61669 | 09/01/23 11:20 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61701 | 09/02/23 02:47 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.04 g | 50 mL | 61716 | 09/01/23 09:47 | CH | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61767 | 09/01/23 21:00 | CH | EET MID |

## Client Sample ID: FS29

**Date Collected: 08/30/23 10:15**
**Date Received: 08/30/23 15:15**

**Lab Sample ID: 890-5185-6**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.01 g | 5 mL | 61764 | 09/01/23 12:47 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/02/23 11:11 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61861 | 09/05/23 17:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61805 | 09/05/23 12:04 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.99 g | 10 mL | 61669 | 09/01/23 11:20 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61701 | 09/02/23 03:08 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.96 g | 50 mL | 61716 | 09/01/23 09:47 | CH | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61767 | 09/01/23 21:20 | CH | EET MID |

## Client Sample ID: FS30

**Date Collected: 08/30/23 10:20**
**Date Received: 08/30/23 15:15**

**Lab Sample ID: 890-5185-7**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.95 g | 5 mL | 61764 | 09/01/23 12:47 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/02/23 11:32 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61861 | 09/05/23 17:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61805 | 09/05/23 12:04 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.09 g | 10 mL | 61669 | 09/01/23 11:20 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61701 | 09/02/23 03:29 | SM | EET MID |

# Lab Chronicle

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

## Client Sample ID: FS30

**Date Collected: 08/30/23 10:20**
**Date Received: 08/30/23 15:15**

## Lab Sample ID: 890-5185-7

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Soluble | Leach | DI Leach | | | 5.02 g | 50 mL | 61716 | 09/01/23 09:47 | CH | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61767 | 09/01/23 21:26 | CH | EET MID |

## Client Sample ID: FS31

**Date Collected: 08/30/23 10:50**
**Date Received: 08/30/23 15:15**

## Lab Sample ID: 890-5185-8

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.99 g | 5 mL | 61764 | 09/01/23 12:47 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/02/23 11:53 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61861 | 09/05/23 17:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61805 | 09/05/23 12:04 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.02 g | 10 mL | 61669 | 09/01/23 11:20 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61701 | 09/02/23 03:50 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.03 g | 50 mL | 61716 | 09/01/23 09:47 | CH | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61767 | 09/01/23 21:32 | CH | EET MID |

## Client Sample ID: FS32

**Date Collected: 08/30/23 10:55**
**Date Received: 08/30/23 15:15**

## Lab Sample ID: 890-5185-9

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.00 g | 5 mL | 61764 | 09/01/23 12:47 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/02/23 12:13 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61861 | 09/05/23 17:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61805 | 09/06/23 09:18 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.08 g | 10 mL | 61771 | 09/01/23 15:18 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61784 | 09/05/23 11:45 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.98 g | 50 mL | 61716 | 09/01/23 09:47 | CH | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61767 | 09/01/23 21:39 | CH | EET MID |

## Client Sample ID: FS33

**Date Collected: 08/30/23 11:00**
**Date Received: 08/30/23 15:15**

## Lab Sample ID: 890-5185-10

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.05 g | 5 mL | 61764 | 09/01/23 12:47 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/02/23 12:34 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61861 | 09/05/23 17:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61805 | 09/06/23 09:18 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 61771 | 09/01/23 15:18 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61784 | 09/05/23 12:52 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.99 g | 50 mL | 61716 | 09/01/23 09:47 | CH | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61767 | 09/01/23 21:45 | CH | EET MID |

# Lab Chronicle

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

## Client Sample ID: FS34

**Lab Sample ID: 890-5185-11**
**Matrix: Solid**
**Date Collected: 08/30/23 11:05**
**Date Received: 08/30/23 15:15**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.96 g | 5 mL | 61764 | 09/01/23 12:47 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/02/23 13:58 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61861 | 09/05/23 17:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61805 | 09/06/23 09:18 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.04 g | 10 mL | 61771 | 09/01/23 15:18 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61784 | 09/05/23 13:15 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.02 g | 50 mL | 61716 | 09/01/23 09:47 | CH | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61767 | 09/01/23 21:51 | CH | EET MID |

## Client Sample ID: SW05

**Lab Sample ID: 890-5185-12**
**Matrix: Solid**
**Date Collected: 08/30/23 11:15**
**Date Received: 08/30/23 15:15**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.95 g | 5 mL | 61764 | 09/01/23 12:47 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/02/23 14:19 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61861 | 09/05/23 17:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61805 | 09/06/23 09:18 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.92 g | 10 mL | 61771 | 09/01/23 15:18 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61784 | 09/05/23 13:37 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.97 g | 50 mL | 61716 | 09/01/23 09:47 | CH | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61767 | 09/01/23 22:11 | CH | EET MID |

## Client Sample ID: FS35

**Lab Sample ID: 890-5185-13**
**Matrix: Solid**
**Date Collected: 08/30/23 12:20**
**Date Received: 08/30/23 15:15**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.04 g | 5 mL | 61764 | 09/01/23 12:47 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/02/23 14:39 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61861 | 09/05/23 17:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61805 | 09/06/23 09:18 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.90 g | 10 mL | 61771 | 09/01/23 15:18 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61784 | 09/05/23 13:59 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.96 g | 50 mL | 61716 | 09/01/23 09:47 | CH | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61767 | 09/01/23 22:17 | CH | EET MID |

## Client Sample ID: FS36

**Lab Sample ID: 890-5185-14**
**Matrix: Solid**
**Date Collected: 08/30/23 12:25**
**Date Received: 08/30/23 15:15**

| 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 | 61764 | 09/01/23 12:47 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/02/23 15:00 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61861 | 09/05/23 17:22 | SM | EET MID |

# Lab Chronicle

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

## Client Sample ID: FS36

**Lab Sample ID: 890-5185-14**
**Matrix: Solid**
**Date Collected: 08/30/23 12:25**
**Date Received: 08/30/23 15:15**

| 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 | | | 61805 | 09/06/23 09:18 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.06 g | 10 mL | 61771 | 09/01/23 15:18 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61784 | 09/05/23 14:21 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.95 g | 50 mL | 61716 | 09/01/23 09:47 | CH | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61767 | 09/01/23 22:36 | CH | EET MID |

## Client Sample ID: FS37

**Lab Sample ID: 890-5185-15**
**Matrix: Solid**
**Date Collected: 08/30/23 12:30**
**Date Received: 08/30/23 15:15**

| 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 | 61764 | 09/01/23 12:47 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/02/23 15:21 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61861 | 09/05/23 17:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61805 | 09/06/23 09:18 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.09 g | 10 mL | 61771 | 09/01/23 15:18 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61784 | 09/05/23 14:43 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.03 g | 50 mL | 61716 | 09/01/23 09:47 | CH | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61767 | 09/01/23 22:43 | CH | EET MID |

## Client Sample ID: FS38

**Lab Sample ID: 890-5185-16**
**Matrix: Solid**
**Date Collected: 08/30/23 12:35**
**Date Received: 08/30/23 15:15**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.00 g | 5 mL | 61764 | 09/01/23 12:47 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/02/23 15:41 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61861 | 09/05/23 17:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61805 | 09/06/23 09:18 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.91 g | 10 mL | 61771 | 09/01/23 15:18 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61784 | 09/05/23 15:06 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5 g | 50 mL | 61716 | 09/01/23 09:47 | CH | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61767 | 09/01/23 22:49 | CH | EET MID |

## Client Sample ID: FS39

**Lab Sample ID: 890-5185-17**
**Matrix: Solid**
**Date Collected: 08/30/23 12:50**
**Date Received: 08/30/23 15:15**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.05 g | 5 mL | 61764 | 09/01/23 12:47 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/02/23 16:02 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61861 | 09/05/23 17:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61805 | 09/06/23 09:18 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.95 g | 10 mL | 61771 | 09/01/23 15:18 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61784 | 09/05/23 15:28 | SM | EET MID |

Eurofins Carlsbad

# Lab Chronicle

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

## Client Sample ID: FS39

**Date Collected: 08/30/23 12:50**
**Date Received: 08/30/23 15:15**

**Lab Sample ID: 890-5185-17**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Soluble | Leach | DI Leach | | | 4.99 g | 50 mL | 61716 | 09/01/23 09:47 | CH | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61767 | 09/01/23 22:55 | CH | EET MID |

## Client Sample ID: FS40

**Date Collected: 08/30/23 12:55**
**Date Received: 08/30/23 15:15**

**Lab Sample ID: 890-5185-18**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.98 g | 5 mL | 61764 | 09/01/23 12:47 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/02/23 16:23 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61861 | 09/05/23 17:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61805 | 09/06/23 09:18 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.93 g | 10 mL | 61771 | 09/01/23 15:18 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61784 | 09/05/23 15:50 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.02 g | 50 mL | 61716 | 09/01/23 09:47 | CH | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61767 | 09/01/23 23:02 | CH | EET MID |

## Client Sample ID: FS41

**Date Collected: 08/30/23 13:00**
**Date Received: 08/30/23 15:15**

**Lab Sample ID: 890-5185-19**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.96 g | 5 mL | 61764 | 09/01/23 12:47 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/02/23 16:43 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61861 | 09/05/23 17:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61805 | 09/06/23 09:18 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.99 g | 10 mL | 61771 | 09/01/23 15:18 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61784 | 09/05/23 16:34 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5 g | 50 mL | 61716 | 09/01/23 09:47 | CH | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61767 | 09/01/23 23:08 | CH | EET MID |

## Client Sample ID: SS06

**Date Collected: 08/30/23 13:20**
**Date Received: 08/30/23 15:15**

**Lab Sample ID: 890-5185-20**
**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 | 61764 | 09/01/23 12:47 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61708 | 09/02/23 17:04 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61861 | 09/05/23 17:22 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61805 | 09/06/23 09:18 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.98 g | 10 mL | 61771 | 09/01/23 15:18 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61784 | 09/05/23 16:57 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.04 g | 50 mL | 61716 | 09/01/23 09:47 | CH | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 61767 | 09/01/23 23:14 | CH | EET MID |

# Lab Chronicle

Client: Ensolum
Project/Site: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

## Client Sample ID: SS05

**Date Collected: 08/30/23 13:30**
**Date Received: 08/30/23 15:15**

## Lab Sample ID: 890-5185-21

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.98 g | 5 mL | 61792 | 09/05/23 09:19 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 61790 | 09/05/23 12:18 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 61861 | 09/05/23 17:36 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 61805 | 09/06/23 09:18 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.90 g | 10 mL | 61771 | 09/01/23 15:18 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 61784 | 09/05/23 17:19 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.04 g | 50 mL | 61640 | 08/31/23 17:06 | SMC | EET MID |
| Soluble | Analysis | 300.0 | | 5 | | | 61766 | 09/01/23 19:31 | 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: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

## 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: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

| 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: JRU DI 11 EKALAKA 823H

Job ID: 890-5185-1
SDG: 03C1558118

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Depth |
|---|---|---|---|---|---|
| 890-5185-1 | FS25 | Solid | 08/30/23 09:40 | 08/30/23 15:15 | 3 |
| 890-5185-2 | FS26 | Solid | 08/30/23 09:45 | 08/30/23 15:15 | 3 |
| 890-5185-3 | SW04 | Solid | 08/30/23 09:55 | 08/30/23 15:15 | 0 - 3 |
| 890-5185-4 | FS27 | Solid | 08/30/23 10:05 | 08/30/23 15:15 | 3 |
| 890-5185-5 | FS28 | Solid | 08/30/23 10:10 | 08/30/23 15:15 | 3 |
| 890-5185-6 | FS29 | Solid | 08/30/23 10:15 | 08/30/23 15:15 | 2 |
| 890-5185-7 | FS30 | Solid | 08/30/23 10:20 | 08/30/23 15:15 | 2 |
| 890-5185-8 | FS31 | Solid | 08/30/23 10:50 | 08/30/23 15:15 | 2 |
| 890-5185-9 | FS32 | Solid | 08/30/23 10:55 | 08/30/23 15:15 | 2 |
| 890-5185-10 | FS33 | Solid | 08/30/23 11:00 | 08/30/23 15:15 | 2 |
| 890-5185-11 | FS34 | Solid | 08/30/23 11:05 | 08/30/23 15:15 | 2 |
| 890-5185-12 | SW05 | Solid | 08/30/23 11:15 | 08/30/23 15:15 | 0 - 2 |
| 890-5185-13 | FS35 | Solid | 08/30/23 12:20 | 08/30/23 15:15 | 3 |
| 890-5185-14 | FS36 | Solid | 08/30/23 12:25 | 08/30/23 15:15 | 3 |
| 890-5185-15 | FS37 | Solid | 08/30/23 12:30 | 08/30/23 15:15 | 3 |
| 890-5185-16 | FS38 | Solid | 08/30/23 12:35 | 08/30/23 15:15 | 2 |
| 890-5185-17 | FS39 | Solid | 08/30/23 12:50 | 08/30/23 15:15 | 3 |
| 890-5185-18 | FS40 | Solid | 08/30/23 12:55 | 08/30/23 15:15 | 2 |
| 890-5185-19 | FS41 | Solid | 08/30/23 13:00 | 08/30/23 15:15 | 2 |
| 890-5185-20 | SS06 | Solid | 08/30/23 13:20 | 08/30/23 15:15 | 0.5 |
| 890-5185-21 | SS05 | Solid | 08/30/23 13:30 | 08/30/23 15:15 | 0.5 |

# Chain of Custody

eurofins | Environment Testing Xenco

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

**Work Order No:** _____

www.xenco.com Page 1 of 3

| | | | |
|---|---|---|---|
| Project Manager: | Ben Belill | Bill to: (if different) | Garrett Green |
| Company Name: | Ensolum | Company Name: | XTO Energy |
| Address: | 3122 National Parks Hwy | Address: | 3104 E. Green St. |
| City, State ZIP: | Carlsbad, NM 88220 | City, State ZIP: | Carlsbad, NM 88220 |
| Phone: | 303-887-2946 | Email: | Garrett.Green@ExxonMobil.com |

**Work Order Comments**

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

| | | | |
|---|---|---|---|
| Project Name: | JRU DI 11 Ekalaka 823H | Turn Around | |
| Project Number: | 03C1558118 | ☑ Routine ☐ Rush | |
| Project Location: | | Due Date: | |
| Sampler's Name: | Connor Whitman | 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: | 4.2 |
| Total Containers: | | Corrected Temperature: | 4.0 |

**ANALYSIS REQUEST**

Pres. Code | Parameters: CHLORIDES (EPA: 3000.0) | TPH (8015) | BTEX (8021)

890-5185 Chain of Custody

**Preservative Codes**

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

| Sample Identification | Matrix | Date Sampled | Time Sampled | Depth | Grab/ Comp | # of Cont |
|---|---|---|---|---|---|---|
| FS25 | S | 8/30/23 | 940 | 3 | C | 1 |
| FS26 | | | 945 | 3 | | 1 |
| 3 WP | | | 955 | 0-3 | | 1 |
| FS27 | | | 1005 | 3 | | 1 |
| FS28 | | | 1010 | 3 | | 1 |
| FS29 | | | 1015 | 2 | | 1 |
| FS30 | | | 1020 | 2 | | 1 |
| FS31 | | | 1050 | 2 | | 1 |
| FS32 | | | 1055 | 2 | | 1 |
| FS33 | | | 1100 | 2 | | 1 |

**Sample Comments**

Incident ID: nAPP2224527297
Cost Center: 2104541001
AFE: DD.2019.06665.CAP.CMP

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



| Relinquished by: (Signature) | Received by: (Signature) | Date/Time | Relinquished by: (Signature) | Received by: (Signature) | Date/Time |
|---|---|---|---|---|---|
| 1 | | 8.30.23 1515 | | | |
| 3 | | | 4 | | |
| 5 | | | 6 | | |

Revised Date: 08/25/2020 Rev. 2020.2

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# Chain of Custody

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

**Work Order No:** _____

www.xenco.com Page 2 of 3

| | | | |
|---|---|---|---|
| Project Manager: | Ben Belill | Bill to: (if different) | Garrett Green |
| Company Name: | Ensolum | Company Name: | XTO Energy |
| Address: | 3122 National Parks Hwy | Address: | 3104 E. Green St. |
| City, State ZIP: | Carlsbad, NM 88220 | City, State ZIP: | Carlsbad, NM 88220 |
| Phone: | 303-887-2946 | Email: | Garrett.Green@ExxonMobil.com |

**Work Order Comments**

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

| | | | |
|---|---|---|---|
| Project Name: | JRU DI 11 Ekalaka 823H | Turn Around | |
| Project Number: | 03C1558118 | ☑ Routine ☐ Rush | |
| Project Location: | | Due Date: | |
| Sampler's Name: | Connor Whitman | TAT starts the day received by the lab, if received by 4:30pm | |
| PO #: | | | |

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

**Preservative Codes**

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

| Sample Identification | Matrix | Date Sampled | Time Sampled | Depth | Grab/ Comp | # of Cont | Pres. Code | Parameters: CHLORIDES (EPA: 3000.0) | TPH (8015) | BTEX (8021) |
|---|---|---|---|---|---|---|---|---|---|---|
| FS34 | S | 8/30/23 | 1105 | 2 | C | 1 | | | | |
| SW05 | | | 1115 | 0-2 | | 1 | | | | |
| FS35 | | | 1220 | 3 | | 1 | | | | |
| FS36 | | | 1225 | 3 | | 1 | | | | |
| FS37 | | | 1230 | 3 | | 1 | | | | |
| FS38 | | | 1235 | 2 | | 1 | | | | |
| FS39 | | | 1250 | 3 | | 1 | | | | |
| FS40 | | | 1255 | 2 | | 1 | | | | |
| FS41 | | | 100 | 2 | | 1 | | | | |
| SS06 | | | 120 | .5 | G | 1 | | | | |

**Sample Comments**

Incident ID: nAPP2224527297

Cost Center: 2104541001

AFE: DD.2019.06665.CAP.CMP

**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 | Ice Cup | 8.30.23 1515 | 2 | | |
| 3 | | | 4 | | |
| 5 | | | 6 | | |

Revised Date: 08/25/2020 Rev: 2020.2

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# Chain of Custody

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

**Work Order No:** _____

www.xenco.com Page 3 of 3

| | | | |
|---|---|---|---|
| Project Manager: | Ben Belill | Bill to: (if different) | Garrett Green |
| Company Name: | Ensolum | Company Name: | XTO Energy |
| Address: | 3122 National Parks Hwy | Address: | 3104 E. Green St. |
| City, State ZIP: | Carlsbad, NM 88220 | City, State ZIP: | Carlsbad, NM 88220 |
| Phone: | 303-887-2946 | Email: | Garrett.Green@ExxonMobil.com |

**Work Order Comments**

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

| | | | |
|---|---|---|---|
| Project Name: | JRU DI 11 Ekalaka 823H | Turn Around | |
| Project Number: | 03C1558118 | ☑ Routine ☐ Rush | |
| Project Location: | | Due Date: | |
| Sampler's Name: | Connor Whitman | TAT starts the day received by the lab, if received by 4:30pm | |
| PO #: | | | |

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

**Preservative Codes**

None: NO DI Water: $H_2O$
Cool: Cool MeOH: Me
HCL: HC $HNO_3$: HN
$H_2S0_4$: $H_2$ 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 | CHLORIDES (EPA: 3000.0) | TPH (8015) | BTEX (8021) |
|---|---|---|---|---|---|---|---|---|---|---|
| SS05 | S | 8/30/23 | 130 | .5 | G | 1 | | 1 | 1 | 1 |

**Sample Comments**

Incident ID:
nAPP2224527297

Cost Center:
2104541001

AFE:
DD.2019.06665.CAP.CMP

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

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

| Relinquished by: (Signature) | Received by: (Signature) | Date/Time | Relinquished by: (Signature) | Received by: (Signature) | Date/Time |
|---|---|---|---|---|---|
| 1 | | 8.30.23 1515 | 4 | | |
| 3 | | | 6 | | |
| 5 | | | | | |

Revised Date: 08/25/2020 Rev. 2020.2

# Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5185-1
SDG Number: 03C1558118

**Login Number: 5185**
**List Number: 1**
**Creator: Clifton, Cloe**

**List Source: Eurofins Carlsbad**

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

# Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5185-1
SDG Number: 03C1558118

**Login Number: 5185**
**List Number: 2**
**Creator: Rodriguez, Leticia**

**List Source: Eurofins Midland**
**List Creation: 09/01/23 10:43 AM**

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

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# ANALYTICAL REPORT

## PREPARED FOR

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

Generated 9/12/2023 3:45:53 PM

## JOB DESCRIPTION

JRU DI 11 Ekalaka 823H
SDG NUMBER 03C1558118

## JOB NUMBER

890-5220-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.





my EOL

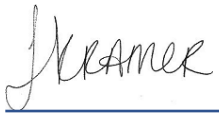
# Eurofins Carlsbad

## Job Notes

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
9/12/2023 3:45:53 PM

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

# Table of Contents

# Definitions/Glossary

Client: Ensolum Job ID: 890-5220-1
Project/Site: JRU DI 11 Ekalaka 823H SDG: 03C1558118

## Qualifiers

### GC VOA

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

### GC Semi VOA

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

### HPLC/IC

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

## Glossary

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

# Case Narrative

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5220-1
SDG: 03C1558118

## Job ID: 890-5220-1

**Laboratory: Eurofins Carlsbad**

**Narrative**

**Job Narrative**
**890-5220-1**

**Receipt**
The samples were received on 9/7/2023 3:15 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 6.0°C

**Receipt Exceptions**
The following samples were received and analyzed from an unpreserved bulk soil jar: FS04A (890-5220-1), SW06 (890-5220-2), FS34A (890-5220-3), FS33A (890-5220-4), FS27A (890-5220-5), FS28A (890-5220-6), FS30A (890-5220-7) and FS29A (890-5220-8).

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

**GC Semi VOA**
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: FS28A (890-5220-6). 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 880-62116/20) and (CCV 880-62116/5). Evidence of matrix interferences is not obvious.

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

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

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5220-1
SDG: 03C1558118

## Client Sample ID: FS04A

**Lab Sample ID: 890-5220-1**
**Matrix: Solid**
**Date Collected: 09/07/23 10:05**
**Date Received: 09/07/23 15:15**
**Sample Depth: 3**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 12:02 | 1 |
| Toluene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 12:02 | 1 |
| Ethylbenzene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 12:02 | 1 |
| m-Xylene & p-Xylene | <0.00403 | U | 0.00403 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 12:02 | 1 |
| o-Xylene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 12:02 | 1 |
| Xylenes, Total | <0.00403 | U | 0.00403 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 12:02 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *82* | | *70 - 130* | *09/11/23 08:29* | *09/11/23 12:02* | *1* |
| *1,4-Difluorobenzene (Surr)* | *91* | | *70 - 130* | *09/11/23 08:29* | *09/11/23 12:02* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00403 | U | 0.00403 | | mg/Kg | | | 09/11/23 16:06 | 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 18:07 | 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 | | 09/11/23 10:05 | 09/11/23 11:05 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.3 | U | 50.3 | | mg/Kg | | 09/11/23 10:05 | 09/11/23 11:05 | 1 |
| OII Range Organics (Over C28-C36) | <50.3 | U | 50.3 | | mg/Kg | | 09/11/23 10:05 | 09/11/23 11:05 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *101* | | *70 - 130* | *09/11/23 10:05* | *09/11/23 11:05* | *1* |
| *o-Terphenyl* | *86* | | *70 - 130* | *09/11/23 10:05* | *09/11/23 11:05* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **64.6** | | 4.96 | | mg/Kg | | | 09/12/23 14:55 | 1 |

## Client Sample ID: SW06

**Lab Sample ID: 890-5220-2**
**Matrix: Solid**
**Date Collected: 09/07/23 10:20**
**Date Received: 09/07/23 15:15**
**Sample Depth: 0-3**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 12:22 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 12:22 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 12:22 | 1 |
| m-Xylene & p-Xylene | <0.00401 | U | 0.00401 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 12:22 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 12:22 | 1 |
| Xylenes, Total | <0.00401 | U | 0.00401 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 12:22 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *78* | | *70 - 130* | *09/11/23 08:29* | *09/11/23 12:22* | *1* |

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5220-1
SDG: 03C1558118

## Client Sample ID: SW06

**Lab Sample ID: 890-5220-2**
**Matrix: Solid**
**Date Collected: 09/07/23 10:20**
**Date Received: 09/07/23 15:15**
**Sample Depth: 0-3**

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

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| *1,4-Difluorobenzene (Surr)* | *95* | | *70 - 130* | *09/11/23 08:29* | *09/11/23 12:22* | *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 16:06 | 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 18:07 | 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 | | 09/11/23 10:05 | 09/11/23 12:11 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.6 | U | 49.6 | mg/Kg | | 09/11/23 10:05 | 09/11/23 12:11 | 1 |
| OII Range Organics (Over C28-C36) | <49.6 | U | 49.6 | mg/Kg | | 09/11/23 10:05 | 09/11/23 12:11 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *107* | | *70 - 130* | *09/11/23 10:05* | *09/11/23 12:11* | *1* |
| *o-Terphenyl* | *89* | | *70 - 130* | *09/11/23 10:05* | *09/11/23 12:11* | *1* |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Chloride** | **525** | | 25.1 | mg/Kg | | | 09/12/23 15:13 | 5 |

## Client Sample ID: FS34A

**Lab Sample ID: 890-5220-3**
**Matrix: Solid**
**Date Collected: 09/07/23 10:30**
**Date Received: 09/07/23 15:15**
**Sample Depth: 3**

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | mg/Kg | | 09/11/23 08:29 | 09/11/23 12:43 | 1 |
| Toluene | <0.00200 | U | 0.00200 | mg/Kg | | 09/11/23 08:29 | 09/11/23 12:43 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | mg/Kg | | 09/11/23 08:29 | 09/11/23 12:43 | 1 |
| m-Xylene & p-Xylene | <0.00399 | U | 0.00399 | mg/Kg | | 09/11/23 08:29 | 09/11/23 12:43 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | mg/Kg | | 09/11/23 08:29 | 09/11/23 12:43 | 1 |
| Xylenes, Total | <0.00399 | U | 0.00399 | mg/Kg | | 09/11/23 08:29 | 09/11/23 12:43 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *78* | | *70 - 130* | *09/11/23 08:29* | *09/11/23 12:43* | *1* |
| *1,4-Difluorobenzene (Surr)* | *92* | | *70 - 130* | *09/11/23 08:29* | *09/11/23 12:43* | *1* |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00399 | U | 0.00399 | mg/Kg | | | 09/11/23 16:06 | 1 |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Total TPH** | **638** | | 49.5 | mg/Kg | | | 09/11/23 18:07 | 1 |

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# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5220-1
SDG: 03C1558118

## Client Sample ID: FS34A

**Lab Sample ID: 890-5220-3**
**Matrix: Solid**
**Date Collected: 09/07/23 10:30**
**Date Received: 09/07/23 15:15**
**Sample Depth: 3**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.5 | U | 49.5 | | mg/Kg | | 09/11/23 10:05 | 09/11/23 12:34 | 1 |
| **Diesel Range Organics (Over C10-C28)** | **638** | | 49.5 | | mg/Kg | | 09/11/23 10:05 | 09/11/23 12:34 | 1 |
| OII Range Organics (Over C28-C36) | <49.5 | U | 49.5 | | mg/Kg | | 09/11/23 10:05 | 09/11/23 12:34 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *102* | | *70 - 130* | *09/11/23 10:05* | *09/11/23 12:34* | *1* |
| *o-Terphenyl* | *85* | | *70 - 130* | *09/11/23 10:05* | *09/11/23 12:34* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **871** | | 24.9 | | mg/Kg | | | 09/12/23 15:19 | 5 |

## Client Sample ID: FS33A

**Lab Sample ID: 890-5220-4**
**Matrix: Solid**
**Date Collected: 09/07/23 10:55**
**Date Received: 09/07/23 15:15**
**Sample Depth: 3**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00198 | U | 0.00198 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 13:03 | 1 |
| Toluene | <0.00198 | U | 0.00198 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 13:03 | 1 |
| Ethylbenzene | <0.00198 | U | 0.00198 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 13:03 | 1 |
| m-Xylene & p-Xylene | <0.00396 | U | 0.00396 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 13:03 | 1 |
| o-Xylene | <0.00198 | U | 0.00198 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 13:03 | 1 |
| Xylenes, Total | <0.00396 | U | 0.00396 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 13:03 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *84* | | *70 - 130* | *09/11/23 08:29* | *09/11/23 13:03* | *1* |
| *1,4-Difluorobenzene (Surr)* | *96* | | *70 - 130* | *09/11/23 08:29* | *09/11/23 13:03* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00396 | U | 0.00396 | | mg/Kg | | | 09/11/23 16:06 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total TPH** | **553** | | 49.9 | | mg/Kg | | | 09/11/23 18:07 | 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 | | 09/11/23 10:05 | 09/11/23 12:56 | 1 |
| **Diesel Range Organics (Over C10-C28)** | **553** | | 49.9 | | mg/Kg | | 09/11/23 10:05 | 09/11/23 12:56 | 1 |
| OII Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 09/11/23 10:05 | 09/11/23 12:56 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *115* | | *70 - 130* | *09/11/23 10:05* | *09/11/23 12:56* | *1* |
| *o-Terphenyl* | *99* | | *70 - 130* | *09/11/23 10:05* | *09/11/23 12:56* | *1* |

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5220-1
SDG: 03C1558118

## Client Sample ID: FS33A

**Lab Sample ID: 890-5220-4**
**Matrix: Solid**
**Date Collected: 09/07/23 10:55**
**Date Received: 09/07/23 15:15**
**Sample Depth: 3**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 475 | | 24.9 | | mg/Kg | | | 09/12/23 15:36 | 5 |

## Client Sample ID: FS27A

**Lab Sample ID: 890-5220-5**
**Matrix: Solid**
**Date Collected: 09/07/23 11:25**
**Date Received: 09/07/23 15:15**
**Sample Depth: 4**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00198 | U | 0.00198 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 13:24 | 1 |
| Toluene | <0.00198 | U | 0.00198 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 13:24 | 1 |
| Ethylbenzene | <0.00198 | U | 0.00198 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 13:24 | 1 |
| m-Xylene & p-Xylene | <0.00396 | U | 0.00396 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 13:24 | 1 |
| o-Xylene | <0.00198 | U | 0.00198 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 13:24 | 1 |
| Xylenes, Total | <0.00396 | U | 0.00396 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 13:24 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *82* | | *70 - 130* | *09/11/23 08:29* | *09/11/23 13:24* | *1* |
| *1,4-Difluorobenzene (Surr)* | *97* | | *70 - 130* | *09/11/23 08:29* | *09/11/23 13:24* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00396 | U | 0.00396 | | mg/Kg | | | 09/11/23 16:06 | 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 18:07 | 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 | | 09/11/23 10:05 | 09/11/23 13:18 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.5 | U | 49.5 | | mg/Kg | | 09/11/23 10:05 | 09/11/23 13:18 | 1 |
| OII Range Organics (Over C28-C36) | <49.5 | U | 49.5 | | mg/Kg | | 09/11/23 10:05 | 09/11/23 13:18 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *115* | | *70 - 130* | *09/11/23 10:05* | *09/11/23 13:18* | *1* |
| *o-Terphenyl* | *98* | | *70 - 130* | *09/11/23 10:05* | *09/11/23 13:18* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 410 | | 24.9 | | mg/Kg | | | 09/12/23 15:42 | 5 |

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5220-1
SDG: 03C1558118

## Client Sample ID: FS28A

**Lab Sample ID: 890-5220-6**
**Matrix: Solid**
**Date Collected: 09/07/23 11:30**
**Date Received: 09/07/23 15:15**
**Sample Depth: 4**

### 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 | | 09/11/23 08:29 | 09/11/23 13:44 | 1 |
| Toluene | <0.00201 | U | 0.00201 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 13:44 | 1 |
| Ethylbenzene | <0.00201 | U | 0.00201 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 13:44 | 1 |
| m-Xylene & p-Xylene | <0.00402 | U | 0.00402 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 13:44 | 1 |
| o-Xylene | <0.00201 | U | 0.00201 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 13:44 | 1 |
| Xylenes, Total | <0.00402 | U | 0.00402 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 13:44 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *85* | | *70 - 130* | *09/11/23 08:29* | *09/11/23 13:44* | *1* |
| *1,4-Difluorobenzene (Surr)* | *98* | | *70 - 130* | *09/11/23 08:29* | *09/11/23 13:44* | *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 16:06 | 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 18:07 | 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 | | 09/11/23 10:05 | 09/11/23 13:40 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.3 | U | 50.3 | | mg/Kg | | 09/11/23 10:05 | 09/11/23 13:40 | 1 |
| OII Range Organics (Over C28-C36) | <50.3 | U | 50.3 | | mg/Kg | | 09/11/23 10:05 | 09/11/23 13:40 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *137* | *S1+* | *70 - 130* | *09/11/23 10:05* | *09/11/23 13:40* | *1* |
| *o-Terphenyl* | *117* | | *70 - 130* | *09/11/23 10:05* | *09/11/23 13:40* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **405** | | 25.3 | | mg/Kg | | | 09/12/23 15:48 | 5 |

## Client Sample ID: FS30A

**Lab Sample ID: 890-5220-7**
**Matrix: Solid**
**Date Collected: 09/07/23 12:30**
**Date Received: 09/07/23 15:15**
**Sample Depth: 3**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 14:05 | 1 |
| Toluene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 14:05 | 1 |
| Ethylbenzene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 14:05 | 1 |
| m-Xylene & p-Xylene | <0.00403 | U | 0.00403 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 14:05 | 1 |
| o-Xylene | <0.00202 | U | 0.00202 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 14:05 | 1 |
| Xylenes, Total | <0.00403 | U | 0.00403 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 14:05 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *81* | | *70 - 130* | *09/11/23 08:29* | *09/11/23 14:05* | *1* |

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# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5220-1
SDG: 03C1558118

## Client Sample ID: FS30A

**Lab Sample ID: 890-5220-7**
**Matrix: Solid**
**Date Collected: 09/07/23 12:30**
**Date Received: 09/07/23 15:15**
**Sample Depth: 3**

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

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,4-Difluorobenzene (Surr)* | *95* | | *70 - 130* | *09/11/23 08:29* | *09/11/23 14:05* | *1* |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00403 | U | 0.00403 | mg/Kg | | | 09/11/23 16:06 | 1 |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.1 | U | 50.1 | mg/Kg | | | 09/11/23 18:07 | 1 |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.1 | U | 50.1 | mg/Kg | | 09/11/23 10:05 | 09/11/23 14:02 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.1 | U | 50.1 | mg/Kg | | 09/11/23 10:05 | 09/11/23 14:02 | 1 |
| OII Range Organics (Over C28-C36) | <50.1 | U | 50.1 | mg/Kg | | 09/11/23 10:05 | 09/11/23 14:02 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *117* | | *70 - 130* | *09/11/23 10:05* | *09/11/23 14:02* | *1* |
| *o-Terphenyl* | *99* | | *70 - 130* | *09/11/23 10:05* | *09/11/23 14:02* | *1* |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Chloride** | **412** | | 25.0 | mg/Kg | | | 09/12/23 15:54 | 5 |

## Client Sample ID: FS29A

**Lab Sample ID: 890-5220-8**
**Matrix: Solid**
**Date Collected: 09/07/23 12:35**
**Date Received: 09/07/23 15:15**
**Sample Depth: 3**

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | mg/Kg | | 09/11/23 08:29 | 09/11/23 14:25 | 1 |
| Toluene | <0.00199 | U | 0.00199 | mg/Kg | | 09/11/23 08:29 | 09/11/23 14:25 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | mg/Kg | | 09/11/23 08:29 | 09/11/23 14:25 | 1 |
| m-Xylene & p-Xylene | <0.00398 | U | 0.00398 | mg/Kg | | 09/11/23 08:29 | 09/11/23 14:25 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | mg/Kg | | 09/11/23 08:29 | 09/11/23 14:25 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | mg/Kg | | 09/11/23 08:29 | 09/11/23 14:25 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *98* | | *70 - 130* | *09/11/23 08:29* | *09/11/23 14:25* | *1* |
| *1,4-Difluorobenzene (Surr)* | *97* | | *70 - 130* | *09/11/23 08:29* | *09/11/23 14:25* | *1* |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00398 | U | 0.00398 | mg/Kg | | | 09/11/23 16:06 | 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 18:07 | 1 |

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5220-1
SDG: 03C1558118

## Client Sample ID: FS29A

**Date Collected: 09/07/23 12:35**
**Date Received: 09/07/23 15:15**
**Sample Depth: 3**

## Lab Sample ID: 890-5220-8

**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.5 | U | 50.5 | | mg/Kg | | 09/11/23 10:05 | 09/11/23 14:24 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.5 | U | 50.5 | | mg/Kg | | 09/11/23 10:05 | 09/11/23 14:24 | 1 |
| Oil Range Organics (Over C28-C36) | <50.5 | U | 50.5 | | mg/Kg | | 09/11/23 10:05 | 09/11/23 14:24 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *123* | | *70 - 130* | *09/11/23 10:05* | *09/11/23 14:24* | *1* |
| *o-Terphenyl* | *109* | | *70 - 130* | *09/11/23 10:05* | *09/11/23 14:24* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **453** | | 24.8 | | mg/Kg | | | 09/12/23 16:00 | 5 |

# Surrogate Summary

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5220-1
SDG: 03C1558118

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

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

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | BFB1 (70-130) | DFBZ1 (70-130) |
| 890-5220-1 | FS04A | 82 | 91 |
| 890-5220-1 MS | FS04A | 93 | 88 |
| 890-5220-1 MSD | FS04A | 88 | 97 |
| 890-5220-2 | SW06 | 78 | 95 |
| 890-5220-3 | FS34A | 78 | 92 |
| 890-5220-4 | FS33A | 84 | 96 |
| 890-5220-5 | FS27A | 82 | 97 |
| 890-5220-6 | FS28A | 85 | 98 |
| 890-5220-7 | FS30A | 81 | 95 |
| 890-5220-8 | FS29A | 98 | 97 |
| LCS 880-62128/1-A | Lab Control Sample | 88 | 93 |
| LCSD 880-62128/2-A | Lab Control Sample Dup | 88 | 92 |
| MB 880-62128/5-A | Method Blank | 107 | 110 |

**Surrogate Legend**

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

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

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

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | 1CO1 (70-130) | OTPH1 (70-130) |
| 890-5220-1 | FS04A | 101 | 86 |
| 890-5220-1 MS | FS04A | 106 | 79 |
| 890-5220-1 MSD | FS04A | 122 | 93 |
| 890-5220-2 | SW06 | 107 | 89 |
| 890-5220-3 | FS34A | 102 | 85 |
| 890-5220-4 | FS33A | 115 | 99 |
| 890-5220-5 | FS27A | 115 | 98 |
| 890-5220-6 | FS28A | 137 S1+ | 117 |
| 890-5220-7 | FS30A | 117 | 99 |
| 890-5220-8 | FS29A | 123 | 109 |
| LCS 880-62150/2-A | Lab Control Sample | 109 | 104 |
| LCSD 880-62150/3-A | Lab Control Sample Dup | 111 | 102 |
| MB 880-62150/1-A | Method Blank | 124 | 108 |

**Surrogate Legend**

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

# QC Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5220-1
SDG: 03C1558118

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

**Lab Sample ID: MB 880-62128/5-A**
**Matrix: Solid**
**Analysis Batch: 62126**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 62128**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 11:33 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 11:33 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 11:33 | 1 |
| m-Xylene & p-Xylene | <0.00400 | U | 0.00400 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 11:33 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 11:33 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 09/11/23 08:29 | 09/11/23 11:33 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *107* | | *70 - 130* | *09/11/23 08:29* | *09/11/23 11:33* | *1* |
| *1,4-Difluorobenzene (Surr)* | *110* | | *70 - 130* | *09/11/23 08:29* | *09/11/23 11:33* | *1* |

**Lab Sample ID: LCS 880-62128/1-A**
**Matrix: Solid**
**Analysis Batch: 62126**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 62128**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.09879 | | mg/Kg | | 99 | 70 - 130 | | |
| Toluene | | | 0.100 | 0.09526 | | mg/Kg | | 95 | 70 - 130 | | |
| Ethylbenzene | | | 0.100 | 0.08903 | | mg/Kg | | 89 | 70 - 130 | | |
| m-Xylene & p-Xylene | | | 0.200 | 0.1700 | | mg/Kg | | 85 | 70 - 130 | | |
| o-Xylene | | | 0.100 | 0.07593 | | mg/Kg | | 76 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *88* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *93* | | *70 - 130* |

**Lab Sample ID: LCSD 880-62128/2-A**
**Matrix: Solid**
**Analysis Batch: 62126**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 62128**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.1039 | | mg/Kg | | 104 | 70 - 130 | 5 | 35 |
| Toluene | | | 0.100 | 0.09601 | | mg/Kg | | 96 | 70 - 130 | 1 | 35 |
| Ethylbenzene | | | 0.100 | 0.09230 | | mg/Kg | | 92 | 70 - 130 | 4 | 35 |
| m-Xylene & p-Xylene | | | 0.200 | 0.1839 | | mg/Kg | | 92 | 70 - 130 | 8 | 35 |
| o-Xylene | | | 0.100 | 0.08759 | | mg/Kg | | 88 | 70 - 130 | 14 | 35 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *88* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *92* | | *70 - 130* |

**Lab Sample ID: 890-5220-1 MS**
**Matrix: Solid**
**Analysis Batch: 62126**

**Client Sample ID: FS04A**
**Prep Type: Total/NA**
**Prep Batch: 62128**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U | 0.0996 | 0.08712 | | mg/Kg | | 87 | 70 - 130 | | |
| Toluene | <0.00202 | U | 0.0996 | 0.08911 | | mg/Kg | | 89 | 70 - 130 | | |

# QC Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5220-1
SDG: 03C1558118

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

**Lab Sample ID: 890-5220-1 MS** — **Client Sample ID: FS04A**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 62126** — **Prep Batch: 62128**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | <0.00202 | U | 0.0996 | 0.08695 | | mg/Kg | | 87 | 70 - 130 |
| m-Xylene & p-Xylene | <0.00403 | U | 0.199 | 0.1783 | | mg/Kg | | 90 | 70 - 130 |
| o-Xylene | <0.00202 | U | 0.0996 | 0.08376 | | mg/Kg | | 84 | 70 - 130 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *93* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *88* | | *70 - 130* |

**Lab Sample ID: 890-5220-1 MSD** — **Client Sample ID: FS04A**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 62126** — **Prep Batch: 62128**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U | 0.101 | 0.1085 | | mg/Kg | | 108 | 70 - 130 | 22 | 35 |
| Toluene | <0.00202 | U | 0.101 | 0.09862 | | mg/Kg | | 98 | 70 - 130 | 10 | 35 |
| Ethylbenzene | <0.00202 | U | 0.101 | 0.08606 | | mg/Kg | | 85 | 70 - 130 | 1 | 35 |
| m-Xylene & p-Xylene | <0.00403 | U | 0.202 | 0.1670 | | mg/Kg | | 83 | 70 - 130 | 7 | 35 |
| o-Xylene | <0.00202 | U | 0.101 | 0.08790 | | mg/Kg | | 87 | 70 - 130 | 5 | 35 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *88* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *97* | | *70 - 130* |

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

**Lab Sample ID: MB 880-62150/1-A** — **Client Sample ID: Method Blank**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 62116** — **Prep Batch: 62150**

| 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 | | 09/11/23 08:00 | 09/11/23 08:30 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 09/11/23 08:00 | 09/11/23 08:30 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 09/11/23 08:00 | 09/11/23 08:30 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *124* | | *70 - 130* | *09/11/23 08:00* | *09/11/23 08:30* | *1* |
| *o-Terphenyl* | *108* | | *70 - 130* | *09/11/23 08:00* | *09/11/23 08:30* | *1* |

**Lab Sample ID: LCS 880-62150/2-A** — **Client Sample ID: Lab Control Sample**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 62116** — **Prep Batch: 62150**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 1053 | | mg/Kg | | 105 | 70 - 130 |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 978.7 | | mg/Kg | | 98 | 70 - 130 |

# QC Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5220-1
SDG: 03C1558118

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

**Lab Sample ID: LCS 880-62150/2-A**
**Matrix: Solid**
**Analysis Batch: 62116**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 62150**

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane | 109 | | 70 - 130 |
| o-Terphenyl | 104 | | 70 - 130 |

**Lab Sample ID: LCSD 880-62150/3-A**
**Matrix: Solid**
**Analysis Batch: 62116**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 62150**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 1066 | | mg/Kg | | 107 | 70 - 130 | 1 | 20 |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 1014 | | mg/Kg | | 101 | 70 - 130 | 4 | 20 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane | 111 | | 70 - 130 |
| o-Terphenyl | 102 | | 70 - 130 |

**Lab Sample ID: 890-5220-1 MS**
**Matrix: Solid**
**Analysis Batch: 62116**

**Client Sample ID: FS04A**
**Prep Type: Total/NA**
**Prep Batch: 62150**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.3 | U | 997 | 1060 | | mg/Kg | | 105 | 70 - 130 |
| Diesel Range Organics (Over C10-C28) | <50.3 | U | 997 | 1023 | | mg/Kg | | 101 | 70 - 130 |

| Surrogate | MS %Recovery | MS Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane | 106 | | 70 - 130 |
| o-Terphenyl | 79 | | 70 - 130 |

**Lab Sample ID: 890-5220-1 MSD**
**Matrix: Solid**
**Analysis Batch: 62116**

**Client Sample ID: FS04A**
**Prep Type: Total/NA**
**Prep Batch: 62150**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.3 | U | 997 | 1266 | | mg/Kg | | 125 | 70 - 130 | 18 | 20 |
| Diesel Range Organics (Over C10-C28) | <50.3 | U | 997 | 1196 | | mg/Kg | | 118 | 70 - 130 | 16 | 20 |

| Surrogate | MSD %Recovery | MSD Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane | 122 | | 70 - 130 |
| o-Terphenyl | 93 | | 70 - 130 |

# QC Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5220-1
SDG: 03C1558118

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 880-62170/1-A**
**Matrix: Solid**
**Analysis Batch: 62277**

**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 13:16 | 1 |

**Lab Sample ID: LCS 880-62170/2-A**
**Matrix: Solid**
**Analysis Batch: 62277**

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

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 250 | 237.7 | | mg/Kg | | 95 | 90 - 110 | | |

**Lab Sample ID: LCSD 880-62170/3-A**
**Matrix: Solid**
**Analysis Batch: 62277**

**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 | 225.0 | | mg/Kg | | 90 | 90 - 110 | 5 | 20 |

**Lab Sample ID: 890-5220-1 MS**
**Matrix: Solid**
**Analysis Batch: 62277**

**Client Sample ID: FS04A**
**Prep Type: Soluble**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 64.6 | | 248 | 304.9 | | mg/Kg | | 97 | 90 - 110 | | |

**Lab Sample ID: 890-5220-1 MSD**
**Matrix: Solid**
**Analysis Batch: 62277**

**Client Sample ID: FS04A**
**Prep Type: Soluble**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 64.6 | | 248 | 335.7 | | mg/Kg | | 109 | 90 - 110 | 10 | 20 |

# QC Association Summary

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5220-1
SDG: 03C1558118

## GC VOA

### Analysis Batch: 62126

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5220-1 | FS04A | Total/NA | Solid | 8021B | 62128 |
| 890-5220-2 | SW06 | Total/NA | Solid | 8021B | 62128 |
| 890-5220-3 | FS34A | Total/NA | Solid | 8021B | 62128 |
| 890-5220-4 | FS33A | Total/NA | Solid | 8021B | 62128 |
| 890-5220-5 | FS27A | Total/NA | Solid | 8021B | 62128 |
| 890-5220-6 | FS28A | Total/NA | Solid | 8021B | 62128 |
| 890-5220-7 | FS30A | Total/NA | Solid | 8021B | 62128 |
| 890-5220-8 | FS29A | Total/NA | Solid | 8021B | 62128 |
| MB 880-62128/5-A | Method Blank | Total/NA | Solid | 8021B | 62128 |
| LCS 880-62128/1-A | Lab Control Sample | Total/NA | Solid | 8021B | 62128 |
| LCSD 880-62128/2-A | Lab Control Sample Dup | Total/NA | Solid | 8021B | 62128 |
| 890-5220-1 MS | FS04A | Total/NA | Solid | 8021B | 62128 |
| 890-5220-1 MSD | FS04A | Total/NA | Solid | 8021B | 62128 |

### Prep Batch: 62128

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5220-1 | FS04A | Total/NA | Solid | 5035 | |
| 890-5220-2 | SW06 | Total/NA | Solid | 5035 | |
| 890-5220-3 | FS34A | Total/NA | Solid | 5035 | |
| 890-5220-4 | FS33A | Total/NA | Solid | 5035 | |
| 890-5220-5 | FS27A | Total/NA | Solid | 5035 | |
| 890-5220-6 | FS28A | Total/NA | Solid | 5035 | |
| 890-5220-7 | FS30A | Total/NA | Solid | 5035 | |
| 890-5220-8 | FS29A | Total/NA | Solid | 5035 | |
| MB 880-62128/5-A | Method Blank | Total/NA | Solid | 5035 | |
| LCS 880-62128/1-A | Lab Control Sample | Total/NA | Solid | 5035 | |
| LCSD 880-62128/2-A | Lab Control Sample Dup | Total/NA | Solid | 5035 | |
| 890-5220-1 MS | FS04A | Total/NA | Solid | 5035 | |
| 890-5220-1 MSD | FS04A | Total/NA | Solid | 5035 | |

### Analysis Batch: 62219

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5220-1 | FS04A | Total/NA | Solid | Total BTEX | |
| 890-5220-2 | SW06 | Total/NA | Solid | Total BTEX | |
| 890-5220-3 | FS34A | Total/NA | Solid | Total BTEX | |
| 890-5220-4 | FS33A | Total/NA | Solid | Total BTEX | |
| 890-5220-5 | FS27A | Total/NA | Solid | Total BTEX | |
| 890-5220-6 | FS28A | Total/NA | Solid | Total BTEX | |
| 890-5220-7 | FS30A | Total/NA | Solid | Total BTEX | |
| 890-5220-8 | FS29A | Total/NA | Solid | Total BTEX | |

## GC Semi VOA

### Analysis Batch: 62116

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5220-1 | FS04A | Total/NA | Solid | 8015B NM | 62150 |
| 890-5220-2 | SW06 | Total/NA | Solid | 8015B NM | 62150 |
| 890-5220-3 | FS34A | Total/NA | Solid | 8015B NM | 62150 |
| 890-5220-4 | FS33A | Total/NA | Solid | 8015B NM | 62150 |
| 890-5220-5 | FS27A | Total/NA | Solid | 8015B NM | 62150 |
| 890-5220-6 | FS28A | Total/NA | Solid | 8015B NM | 62150 |

# QC Association Summary

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5220-1
SDG: 03C1558118

## GC Semi VOA (Continued)

### Analysis Batch: 62116 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5220-7 | FS30A | Total/NA | Solid | 8015B NM | 62150 |
| 890-5220-8 | FS29A | Total/NA | Solid | 8015B NM | 62150 |
| MB 880-62150/1-A | Method Blank | Total/NA | Solid | 8015B NM | 62150 |
| LCS 880-62150/2-A | Lab Control Sample | Total/NA | Solid | 8015B NM | 62150 |
| LCSD 880-62150/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015B NM | 62150 |
| 890-5220-1 MS | FS04A | Total/NA | Solid | 8015B NM | 62150 |
| 890-5220-1 MSD | FS04A | Total/NA | Solid | 8015B NM | 62150 |

### Prep Batch: 62150

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5220-1 | FS04A | Total/NA | Solid | 8015NM Prep | |
| 890-5220-2 | SW06 | Total/NA | Solid | 8015NM Prep | |
| 890-5220-3 | FS34A | Total/NA | Solid | 8015NM Prep | |
| 890-5220-4 | FS33A | Total/NA | Solid | 8015NM Prep | |
| 890-5220-5 | FS27A | Total/NA | Solid | 8015NM Prep | |
| 890-5220-6 | FS28A | Total/NA | Solid | 8015NM Prep | |
| 890-5220-7 | FS30A | Total/NA | Solid | 8015NM Prep | |
| 890-5220-8 | FS29A | Total/NA | Solid | 8015NM Prep | |
| MB 880-62150/1-A | Method Blank | Total/NA | Solid | 8015NM Prep | |
| LCS 880-62150/2-A | Lab Control Sample | Total/NA | Solid | 8015NM Prep | |
| LCSD 880-62150/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015NM Prep | |
| 890-5220-1 MS | FS04A | Total/NA | Solid | 8015NM Prep | |
| 890-5220-1 MSD | FS04A | Total/NA | Solid | 8015NM Prep | |

### Analysis Batch: 62226

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5220-1 | FS04A | Total/NA | Solid | 8015 NM | |
| 890-5220-2 | SW06 | Total/NA | Solid | 8015 NM | |
| 890-5220-3 | FS34A | Total/NA | Solid | 8015 NM | |
| 890-5220-4 | FS33A | Total/NA | Solid | 8015 NM | |
| 890-5220-5 | FS27A | Total/NA | Solid | 8015 NM | |
| 890-5220-6 | FS28A | Total/NA | Solid | 8015 NM | |
| 890-5220-7 | FS30A | Total/NA | Solid | 8015 NM | |
| 890-5220-8 | FS29A | Total/NA | Solid | 8015 NM | |

## HPLC/IC

### Leach Batch: 62170

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5220-1 | FS04A | Soluble | Solid | DI Leach | |
| 890-5220-2 | SW06 | Soluble | Solid | DI Leach | |
| 890-5220-3 | FS34A | Soluble | Solid | DI Leach | |
| 890-5220-4 | FS33A | Soluble | Solid | DI Leach | |
| 890-5220-5 | FS27A | Soluble | Solid | DI Leach | |
| 890-5220-6 | FS28A | Soluble | Solid | DI Leach | |
| 890-5220-7 | FS30A | Soluble | Solid | DI Leach | |
| 890-5220-8 | FS29A | Soluble | Solid | DI Leach | |
| MB 880-62170/1-A | Method Blank | Soluble | Solid | DI Leach | |
| LCS 880-62170/2-A | Lab Control Sample | Soluble | Solid | DI Leach | |
| LCSD 880-62170/3-A | Lab Control Sample Dup | Soluble | Solid | DI Leach | |
| 890-5220-1 MS | FS04A | Soluble | Solid | DI Leach | |

# QC Association Summary

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5220-1
SDG: 03C1558118

## HPLC/IC (Continued)

### Leach Batch: 62170 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5220-1 MSD | FS04A | Soluble | Solid | DI Leach | |

### Analysis Batch: 62277

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5220-1 | FS04A | Soluble | Solid | 300.0 | 62170 |
| 890-5220-2 | SW06 | Soluble | Solid | 300.0 | 62170 |
| 890-5220-3 | FS34A | Soluble | Solid | 300.0 | 62170 |
| 890-5220-4 | FS33A | Soluble | Solid | 300.0 | 62170 |
| 890-5220-5 | FS27A | Soluble | Solid | 300.0 | 62170 |
| 890-5220-6 | FS28A | Soluble | Solid | 300.0 | 62170 |
| 890-5220-7 | FS30A | Soluble | Solid | 300.0 | 62170 |
| 890-5220-8 | FS29A | Soluble | Solid | 300.0 | 62170 |
| MB 880-62170/1-A | Method Blank | Soluble | Solid | 300.0 | 62170 |
| LCS 880-62170/2-A | Lab Control Sample | Soluble | Solid | 300.0 | 62170 |
| LCSD 880-62170/3-A | Lab Control Sample Dup | Soluble | Solid | 300.0 | 62170 |
| 890-5220-1 MS | FS04A | Soluble | Solid | 300.0 | 62170 |
| 890-5220-1 MSD | FS04A | Soluble | Solid | 300.0 | 62170 |

# Lab Chronicle

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5220-1
SDG: 03C1558118

## Client Sample ID: FS04A

**Lab Sample ID: 890-5220-1**
**Matrix: Solid**
**Date Collected: 09/07/23 10:05**
**Date Received: 09/07/23 15:15**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.96 g | 5 mL | 62128 | 09/11/23 08:29 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 62126 | 09/11/23 12:02 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 62219 | 09/11/23 16:06 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 62226 | 09/11/23 18:07 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.95 g | 10 mL | 62150 | 09/11/23 10:05 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 62116 | 09/11/23 11:05 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.04 g | 50 mL | 62170 | 09/11/23 10:34 | AG | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 62277 | 09/12/23 14:55 | CH | EET MID |

## Client Sample ID: SW06

**Lab Sample ID: 890-5220-2**
**Matrix: Solid**
**Date Collected: 09/07/23 10:20**
**Date Received: 09/07/23 15:15**

| 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 | 62128 | 09/11/23 08:29 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 62126 | 09/11/23 12:22 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 62219 | 09/11/23 16:06 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 62226 | 09/11/23 18:07 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.08 g | 10 mL | 62150 | 09/11/23 10:05 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 62116 | 09/11/23 12:11 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.98 g | 50 mL | 62170 | 09/11/23 10:34 | AG | EET MID |
| Soluble | Analysis | 300.0 | | 5 | | | 62277 | 09/12/23 15:13 | CH | EET MID |

## Client Sample ID: FS34A

**Lab Sample ID: 890-5220-3**
**Matrix: Solid**
**Date Collected: 09/07/23 10:30**
**Date Received: 09/07/23 15:15**

| 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 | 62128 | 09/11/23 08:29 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 62126 | 09/11/23 12:43 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 62219 | 09/11/23 16:06 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 62226 | 09/11/23 18:07 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.10 g | 10 mL | 62150 | 09/11/23 10:05 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 62116 | 09/11/23 12:34 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.03 g | 50 mL | 62170 | 09/11/23 10:34 | AG | EET MID |
| Soluble | Analysis | 300.0 | | 5 | | | 62277 | 09/12/23 15:19 | CH | EET MID |

## Client Sample ID: FS33A

**Lab Sample ID: 890-5220-4**
**Matrix: Solid**
**Date Collected: 09/07/23 10:55**
**Date Received: 09/07/23 15:15**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.05 g | 5 mL | 62128 | 09/11/23 08:29 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 62126 | 09/11/23 13:03 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 62219 | 09/11/23 16:06 | SM | EET MID |

# Lab Chronicle

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5220-1
SDG: 03C1558118

## Client Sample ID: FS33A
**Date Collected: 09/07/23 10:55**
**Date Received: 09/07/23 15:15**

## Lab Sample ID: 890-5220-4
**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 | | | 62226 | 09/11/23 18:07 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.03 g | 10 mL | 62150 | 09/11/23 10:05 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 62116 | 09/11/23 12:56 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.03 g | 50 mL | 62170 | 09/11/23 10:34 | AG | EET MID |
| Soluble | Analysis | 300.0 | | 5 | | | 62277 | 09/12/23 15:36 | CH | EET MID |

## Client Sample ID: FS27A
**Date Collected: 09/07/23 11:25**
**Date Received: 09/07/23 15:15**

## Lab Sample ID: 890-5220-5
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.05 g | 5 mL | 62128 | 09/11/23 08:29 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 62126 | 09/11/23 13:24 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 62219 | 09/11/23 16:06 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 62226 | 09/11/23 18:07 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.10 g | 10 mL | 62150 | 09/11/23 10:05 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 62116 | 09/11/23 13:18 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.02 g | 50 mL | 62170 | 09/11/23 10:34 | AG | EET MID |
| Soluble | Analysis | 300.0 | | 5 | | | 62277 | 09/12/23 15:42 | CH | EET MID |

## Client Sample ID: FS28A
**Date Collected: 09/07/23 11:30**
**Date Received: 09/07/23 15:15**

## Lab Sample ID: 890-5220-6
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.98 g | 5 mL | 62128 | 09/11/23 08:29 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 62126 | 09/11/23 13:44 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 62219 | 09/11/23 16:06 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 62226 | 09/11/23 18:07 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.94 g | 10 mL | 62150 | 09/11/23 10:05 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 62116 | 09/11/23 13:40 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.95 g | 50 mL | 62170 | 09/11/23 10:34 | AG | EET MID |
| Soluble | Analysis | 300.0 | | 5 | | | 62277 | 09/12/23 15:48 | CH | EET MID |

## Client Sample ID: FS30A
**Date Collected: 09/07/23 12:30**
**Date Received: 09/07/23 15:15**

## Lab Sample ID: 890-5220-7
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.96 g | 5 mL | 62128 | 09/11/23 08:29 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 62126 | 09/11/23 14:05 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 62219 | 09/11/23 16:06 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 62226 | 09/11/23 18:07 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.99 g | 10 mL | 62150 | 09/11/23 10:05 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 62116 | 09/11/23 14:02 | SM | EET MID |

Eurofins Carlsbad

# Lab Chronicle

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5220-1
SDG: 03C1558118

## Client Sample ID: FS30A

**Date Collected: 09/07/23 12:30**
**Date Received: 09/07/23 15:15**

## Lab Sample ID: 890-5220-7

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Soluble | Leach | DI Leach | | | 5 g | 50 mL | 62170 | 09/11/23 10:34 | AG | EET MID |
| Soluble | Analysis | 300.0 | | 5 | | | 62277 | 09/12/23 15:54 | CH | EET MID |

## Client Sample ID: FS29A

**Date Collected: 09/07/23 12:35**
**Date Received: 09/07/23 15:15**

## Lab Sample ID: 890-5220-8

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.02 g | 5 mL | 62128 | 09/11/23 08:29 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 62126 | 09/11/23 14:25 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 62219 | 09/11/23 16:06 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 62226 | 09/11/23 18:07 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.90 g | 10 mL | 62150 | 09/11/23 10:05 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 62116 | 09/11/23 14:24 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.05 g | 50 mL | 62170 | 09/11/23 10:34 | AG | EET MID |
| Soluble | Analysis | 300.0 | | 5 | | | 62277 | 09/12/23 16:00 | CH | EET MID |

**Laboratory References:**

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

# Accreditation/Certification Summary

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5220-1
SDG: 03C1558118

## 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: JRU DI 11 Ekalaka 823H

Job ID: 890-5220-1
SDG: 03C1558118

| 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: JRU DI 11 Ekalaka 823H

Job ID: 890-5220-1
SDG: 03C1558118

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Depth |
|---|---|---|---|---|---|
| 890-5220-1 | FS04A | Solid | 09/07/23 10:05 | 09/07/23 15:15 | 3 |
| 890-5220-2 | SW06 | Solid | 09/07/23 10:20 | 09/07/23 15:15 | 0-3 |
| 890-5220-3 | FS34A | Solid | 09/07/23 10:30 | 09/07/23 15:15 | 3 |
| 890-5220-4 | FS33A | Solid | 09/07/23 10:55 | 09/07/23 15:15 | 3 |
| 890-5220-5 | FS27A | Solid | 09/07/23 11:25 | 09/07/23 15:15 | 4 |
| 890-5220-6 | FS28A | Solid | 09/07/23 11:30 | 09/07/23 15:15 | 4 |
| 890-5220-7 | FS30A | Solid | 09/07/23 12:30 | 09/07/23 15:15 | 3 |
| 890-5220-8 | FS29A | Solid | 09/07/23 12:35 | 09/07/23 15:15 | 3 |

# Chain of Custody

eurofins | Environment Testing Xenco

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

**Work Order No:** _____

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| | | | |
|---|---|---|---|
| Project Manager: | Ben Belill | Bill to: (if different) | Garrett Green |
| Company Name: | Ensolum | Company Name: | XTO Energy |
| Address: | 3122 National Parks Hwy | Address: | 3104 E. Green St. |
| City, State ZIP: | Carlsbad, NM 88220 | City, State ZIP: | Carlsbad, NM 88220 |
| Phone: | 303-887-2946 | Email: | Garrett.Green@ExxonMobil.com |

**Work Order Comments**

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

| | | | |
|---|---|---|---|
| Project Name: | JRU DI 11 Ekalaka 823H | Turn Around | ☑ Routine ☒ Rush |
| Project Number: | 03C1558118 | Due Date: | 24H |
| Project Location: | | TAT starts the day received by the lab, if received by 4:30pm | |
| Sampler's Name: | Connor Whitman | | |
| PO #: | | | |

| SAMPLE RECEIPT | | | | |
|---|---|---|---|---|
| Temp Blank: | Yes (No) | Wet Ice: | (Yes) No | |
| Samples Received Intact: | (Yes) No | Thermometer ID: | TNM 007 | |
| Cooler Custody Seals: | Yes No (N/A) | Correction Factor: | -0.2 | |
| Sample Custody Seals: | Yes No (N/A) | Temperature Reading: | 6.2 | |
| Total Containers: | | Corrected Temperature: | 6.0 | |

**ANALYSIS REQUEST**

| Sample Identification | Matrix | Date Sampled | Time Sampled | Depth | Grab/ Comp | # of Cont | Pres. Code | CHLORIDES (EPA: 3000.0) | TPH (8015) | BTEX (8021) |
|---|---|---|---|---|---|---|---|---|---|---|
| FS04A | S | 9/7/23 | 1005 | 3 | C | 1 | | ✓ | ✓ | ✓ |
| SW06 | | | 1020 | 0-3 | | 1 | | ✓ | ✓ | ✓ |
| FS34A | | | 1050 | 3 | | 1 | | ✓ | ✓ | ✓ |
| FS33A | | | 1055 | 3 | | 1 | | ✓ | ✓ | ✓ |
| FS27A | | | 1125 | 4 | | 1 | | ✓ | ✓ | ✓ |
| FS28A | | | 1130 | 4 | | 1 | | ✓ | ✓ | ✓ |
| FS30A | | | 1230 | 3 | | 1 | | ✓ | ✓ | ✓ |
| FS29A | | | 1235 | 3 | | 1 | | ✓ | ✓ | ✓ |
| | | | | | | | | | | CW |

890-5220 Chain of Custody

**Preservative Codes**

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

**Sample Comments**

Incident ID:
NAPP2224527297

Cost Center:
2104541001

AFE:
DD.2019.06665.CAP.CMP

**Total 200.7 / 6010 200.8 / 6020:** 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag $SiO_2$ Na Sr Tl Sn U V Zn

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



| Relinquished by: (Signature) | Received by: (Signature) | Date/Time | Relinquished by: (Signature) | Received by: (Signature) | Date/Time |
|---|---|---|---|---|---|
| 1 | | 4-7-23 15:15 | 4 | | |
| 3 | | | 6 | | |
| 5 | | | | | |

Revised Date: 08/25/2020 Rev. 2020.2

# Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5220-1
SDG Number: 03C1558118

**Login Number: 5220**
**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: 890-5220-1
SDG Number: 03C1558118

**Login Number: 5220**
**List Number: 2**
**Creator: Rodriguez, Leticia**

**List Source: Eurofins Midland**
**List Creation: 09/11/23 08:35 AM**

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

eurofins | Environment Testing



# ANALYTICAL REPORT

## PREPARED FOR

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

Generated 10/17/2023 10:44:33 AM

## JOB DESCRIPTION

JRU DI 11 Ekalaka 823H
SDG NUMBER 03C1558118

## JOB NUMBER

890-5452-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

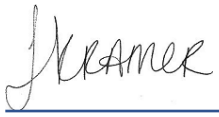
# Eurofins Carlsbad

## 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
10/17/2023 10:44:33 AM

Authorized for release by
Jessica Kramer, Project Manager
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Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Laboratory Job ID: 890-5452-1
SDG: 03C1558118

# Table of Contents

# Definitions/Glossary

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5452-1
SDG: 03C1558118

## Qualifiers

### GC VOA

| Qualifier | Qualifier Description |
|---|---|
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |
| F1 | MS and/or MSD recovery exceeds control limits. |
| S1- | Surrogate recovery exceeds control limits, low biased. |
| S1+ | Surrogate recovery exceeds control limits, high biased. |
| U | Indicates the analyte was analyzed for but not detected. |

### GC Semi VOA

| Qualifier | Qualifier Description |
|---|---|
| *1 | LCS/LCSD RPD exceeds control limits. |
| F1 | MS and/or MSD recovery exceeds control limits. |
| S1+ | Surrogate recovery exceeds control limits, high biased. |
| U | Indicates the analyte was analyzed for but not detected. |

### HPLC/IC

| Qualifier | Qualifier Description |
|---|---|
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |
| 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) |

# Definitions/Glossary

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5452-1
SDG: 03C1558118

## Glossary (Continued)

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| TNTC | Too Numerous To Count |

# Case Narrative

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5452-1
SDG: 03C1558118

## Job ID: 890-5452-1

**Laboratory: Eurofins Carlsbad**

**Narrative**

**Job Narrative**
**890-5452-1**

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

**Receipt**
The samples were received on 10/12/2023 12:42 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.4°C

**Receipt Exceptions**
The following samples were received and analyzed from an unpreserved bulk soil jar: FS33B (890-5452-1) and FS34B (890-5452-2).

**GC VOA**
Method 8021B: Surrogate recovery for the following sample was outside control limits: (LCS 880-64664/1-A). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following sample was outside control limits: FS34B (890-5452-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Batch preparation batch 880-64664 and analytical batch 880-64624 is reported without a matrix spike/matrix spike duplicate (MS/MSD). The batch MS/MSD was originally performed on another client's sample, and this test was canceled at client request. This MS/MSD result does not have immediate bearing on any samples except for the actual sample spiked. The associated laboratory control sample (LCS) met acceptance criteria and provides long-term precision and accuracy for this batch.

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 880-64629 and analytical batch 880-64616 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (880-34338-A-8-C), (880-34338-A-8-D MS) and (880-34338-A-8-E MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-64616/21), (CCV 880-64616/32) and (CCV 880-64616/8). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The method blank for preparation batch 880-64629 and analytical batch 880-64616 contained Diesel Range Organics (Over C10-C28) above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-64629 and analytical batch 880-64616 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

# Case Narrative

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5452-1
SDG: 03C1558118

## Job ID: 890-5452-1 (Continued)

### Laboratory: Eurofins Carlsbad (Continued)

Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-64629 and analytical batch 880-64616 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10 and Diesel Range Organics (Over C10-C28).

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

**HPLC/IC**

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-64791 and analytical batch 880-64856 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5452-1
SDG: 03C1558118

## Client Sample ID: FS33B

**Lab Sample ID: 890-5452-1**
**Matrix: Solid**
**Date Collected: 10/12/23 09:30**
**Date Received: 10/12/23 12:42**
**Sample Depth: 4**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U | 0.00202 | | mg/Kg | | 10/13/23 10:58 | 10/13/23 19:00 | 1 |
| Toluene | <0.00202 | U | 0.00202 | | mg/Kg | | 10/13/23 10:58 | 10/13/23 19:00 | 1 |
| Ethylbenzene | <0.00202 | U | 0.00202 | | mg/Kg | | 10/13/23 10:58 | 10/13/23 19:00 | 1 |
| m-Xylene & p-Xylene | <0.00403 | U | 0.00403 | | mg/Kg | | 10/13/23 10:58 | 10/13/23 19:00 | 1 |
| o-Xylene | <0.00202 | U | 0.00202 | | mg/Kg | | 10/13/23 10:58 | 10/13/23 19:00 | 1 |
| Xylenes, Total | <0.00403 | U | 0.00403 | | mg/Kg | | 10/13/23 10:58 | 10/13/23 19:00 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *118* | | *70 - 130* | *10/13/23 10:58* | *10/13/23 19:00* | *1* |
| *1,4-Difluorobenzene (Surr)* | *104* | | *70 - 130* | *10/13/23 10:58* | *10/13/23 19:00* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00403 | U | 0.00403 | | mg/Kg | | | 10/13/23 19:00 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.1 | U | 50.1 | | mg/Kg | | | 10/14/23 00:16 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.1 | U *1 | 50.1 | | mg/Kg | | 10/13/23 08:50 | 10/14/23 00:16 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.1 | U *1 | 50.1 | | mg/Kg | | 10/13/23 08:50 | 10/14/23 00:16 | 1 |
| OII Range Organics (Over C28-C36) | <50.1 | U | 50.1 | | mg/Kg | | 10/13/23 08:50 | 10/14/23 00:16 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *101* | | *70 - 130* | *10/13/23 08:50* | *10/14/23 00:16* | *1* |
| *o-Terphenyl* | *87* | | *70 - 130* | *10/13/23 08:50* | *10/14/23 00:16* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **323** | | 4.99 | | mg/Kg | | | 10/16/23 20:56 | 1 |

## Client Sample ID: FS34B

**Lab Sample ID: 890-5452-2**
**Matrix: Solid**
**Date Collected: 10/12/23 09:35**
**Date Received: 10/12/23 12:42**
**Sample Depth: 4**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 10/13/23 10:58 | 10/13/23 19:25 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 10/13/23 10:58 | 10/13/23 19:25 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 10/13/23 10:58 | 10/13/23 19:25 | 1 |
| m-Xylene & p-Xylene | <0.00400 | U | 0.00400 | | mg/Kg | | 10/13/23 10:58 | 10/13/23 19:25 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 10/13/23 10:58 | 10/13/23 19:25 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 10/13/23 10:58 | 10/13/23 19:25 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *131* | *S1+* | *70 - 130* | *10/13/23 10:58* | *10/13/23 19:25* | *1* |

Eurofins Carlsbad

# Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5452-1
SDG: 03C1558118

## Client Sample ID: FS34B

**Date Collected: 10/12/23 09:35**
**Date Received: 10/12/23 12:42**
**Sample Depth: 4**

## Lab Sample ID: 890-5452-2

**Matrix: Solid**

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

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,4-Difluorobenzene (Surr)* | *79* | | *70 - 130* | *10/13/23 10:58* | *10/13/23 19:25* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00400 | U | 0.00400 | | mg/Kg | | | 10/13/23 19:25 | 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 | | | 10/14/23 00:37 | 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 *1 | 50.5 | | mg/Kg | | 10/13/23 08:50 | 10/14/23 00:37 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.5 | U *1 | 50.5 | | mg/Kg | | 10/13/23 08:50 | 10/14/23 00:37 | 1 |
| OII Range Organics (Over C28-C36) | <50.5 | U | 50.5 | | mg/Kg | | 10/13/23 08:50 | 10/14/23 00:37 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *101* | | *70 - 130* | *10/13/23 08:50* | *10/14/23 00:37* | *1* |
| *o-Terphenyl* | *87* | | *70 - 130* | *10/13/23 08:50* | *10/14/23 00:37* | *1* |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **348** | | 5.00 | | mg/Kg | | | 10/16/23 21:16 | 1 |

# Surrogate Summary

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5452-1
SDG: 03C1558118

## 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) |
| 880-34402-A-5-A MS | Matrix Spike | 116 | 89 |
| 880-34402-A-5-B MSD | Matrix Spike Duplicate | 116 | 60 S1- |
| 890-5452-1 | FS33B | 118 | 104 |
| 890-5452-2 | FS34B | 131 S1+ | 79 |
| LCS 880-64664/1-A | Lab Control Sample | 131 S1+ | 93 |
| LCSD 880-64664/2-A | Lab Control Sample Dup | 115 | 87 |
| MB 880-64664/5-A | Method Blank | 76 | 90 |

**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) |
| 880-34338-A-8-D MS | Matrix Spike | 156 S1+ | 130 |
| 880-34338-A-8-E MSD | Matrix Spike Duplicate | 150 S1+ | 124 |
| 890-5452-1 | FS33B | 101 | 87 |
| 890-5452-2 | FS34B | 101 | 87 |
| LCS 880-64629/2-A | Lab Control Sample | 103 | 115 |
| LCSD 880-64629/3-A | Lab Control Sample Dup | 105 | 107 |
| MB 880-64629/1-A | Method Blank | 147 S1+ | 134 S1+ |

**Surrogate Legend**

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

# QC Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5452-1
SDG: 03C1558118

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

**Lab Sample ID: MB 880-64664/5-A**
**Matrix: Solid**
**Analysis Batch: 64624**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 64664**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 10/13/23 09:00 | 10/13/23 12:38 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 10/13/23 09:00 | 10/13/23 12:38 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 10/13/23 09:00 | 10/13/23 12:38 | 1 |
| m-Xylene & p-Xylene | <0.00400 | U | 0.00400 | | mg/Kg | | 10/13/23 09:00 | 10/13/23 12:38 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 10/13/23 09:00 | 10/13/23 12:38 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 10/13/23 09:00 | 10/13/23 12:38 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *76* | | *70 - 130* | *10/13/23 09:00* | *10/13/23 12:38* | *1* |
| *1,4-Difluorobenzene (Surr)* | *90* | | *70 - 130* | *10/13/23 09:00* | *10/13/23 12:38* | *1* |

**Lab Sample ID: LCS 880-64664/1-A**
**Matrix: Solid**
**Analysis Batch: 64624**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 64664**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.09275 | | mg/Kg | | 93 | 70 - 130 | | |
| Toluene | | | 0.100 | 0.1091 | | mg/Kg | | 109 | 70 - 130 | | |
| Ethylbenzene | | | 0.100 | 0.1052 | | mg/Kg | | 105 | 70 - 130 | | |
| m-Xylene & p-Xylene | | | 0.200 | 0.2045 | | mg/Kg | | 102 | 70 - 130 | | |
| o-Xylene | | | 0.100 | 0.1120 | | mg/Kg | | 112 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *131* | *S1+* | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *93* | | *70 - 130* |

**Lab Sample ID: LCSD 880-64664/2-A**
**Matrix: Solid**
**Analysis Batch: 64624**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 64664**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.08641 | | mg/Kg | | 86 | 70 - 130 | 7 | 35 |
| Toluene | | | 0.100 | 0.1012 | | mg/Kg | | 101 | 70 - 130 | 8 | 35 |
| Ethylbenzene | | | 0.100 | 0.09630 | | mg/Kg | | 96 | 70 - 130 | 9 | 35 |
| m-Xylene & p-Xylene | | | 0.200 | 0.1842 | | mg/Kg | | 92 | 70 - 130 | 10 | 35 |
| o-Xylene | | | 0.100 | 0.09053 | | mg/Kg | | 91 | 70 - 130 | 21 | 35 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *115* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *87* | | *70 - 130* |

**Lab Sample ID: 880-34402-A-5-A MS**
**Matrix: Solid**
**Analysis Batch: 64624**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 64664**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.533 | E | 0.0998 | 0.07664 | 4 | mg/Kg | | -458 | 70 - 130 | | |
| Toluene | 0.581 | E | 0.0998 | 0.08885 | 4 | mg/Kg | | -493 | 70 - 130 | | |

# QC Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5452-1
SDG: 03C1558118

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

**Lab Sample ID: 880-34402-A-5-A MS** — **Client Sample ID: Matrix Spike**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 64624** — **Prep Batch: 64664**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | 0.130 | | 0.0998 | 0.08619 | F1 | mg/Kg | | -43 | 70 - 130 |
| m-Xylene & p-Xylene | 0.0912 | | 0.200 | 0.1646 | F1 | mg/Kg | | 37 | 70 - 130 |
| o-Xylene | 0.120 | | 0.0998 | 0.08442 | F1 | mg/Kg | | -36 | 70 - 130 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *116* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *89* | | *70 - 130* |

**Lab Sample ID: 880-34402-A-5-B MSD** — **Client Sample ID: Matrix Spike Duplicate**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 64624** — **Prep Batch: 64664**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.533 | E | 0.100 | 0.05709 | 4 | mg/Kg | | -475 | 70 - 130 | 29 | 35 |
| Toluene | 0.581 | E | 0.100 | 0.06759 | 4 | mg/Kg | | -512 | 70 - 130 | 27 | 35 |
| Ethylbenzene | 0.130 | | 0.100 | 0.07512 | F1 | mg/Kg | | -54 | 70 - 130 | 14 | 35 |
| m-Xylene & p-Xylene | 0.0912 | | 0.200 | 0.1364 | F1 | mg/Kg | | 23 | 70 - 130 | 19 | 35 |
| o-Xylene | 0.120 | | 0.100 | 0.06814 | F1 | mg/Kg | | -52 | 70 - 130 | 21 | 35 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *116* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *60* | *S1-* | *70 - 130* |

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

**Lab Sample ID: MB 880-64629/1-A** — **Client Sample ID: Method Blank**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 64616** — **Prep Batch: 64629**

| 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 | | 10/13/23 07:30 | 10/13/23 09:29 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | mg/Kg | | 10/13/23 07:30 | 10/13/23 09:29 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | mg/Kg | | 10/13/23 07:30 | 10/13/23 09:29 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *147* | *S1+* | *70 - 130* | *10/13/23 07:30* | *10/13/23 09:29* | *1* |
| *o-Terphenyl* | *134* | *S1+* | *70 - 130* | *10/13/23 07:30* | *10/13/23 09:29* | *1* |

**Lab Sample ID: LCS 880-64629/2-A** — **Client Sample ID: Lab Control Sample**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 64616** — **Prep Batch: 64629**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | 1000 | 789.5 | | mg/Kg | | 79 | 70 - 130 |
| Diesel Range Organics (Over C10-C28) | 1000 | 743.9 | | mg/Kg | | 74 | 70 - 130 |

# QC Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5452-1
SDG: 03C1558118

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

**Lab Sample ID: LCS 880-64629/2-A**
**Matrix: Solid**
**Analysis Batch: 64616**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 64629**

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane | 103 | | 70 - 130 |
| o-Terphenyl | 115 | | 70 - 130 |

**Lab Sample ID: LCSD 880-64629/3-A**
**Matrix: Solid**
**Analysis Batch: 64616**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 64629**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 1145 | *1 | mg/Kg | | 114 | 70 - 130 | 37 | 20 |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 1132 | *1 | mg/Kg | | 113 | 70 - 130 | 41 | 20 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane | 105 | | 70 - 130 |
| o-Terphenyl | 107 | | 70 - 130 |

**Lab Sample ID: 880-34338-A-8-D MS**
**Matrix: Solid**
**Analysis Batch: 64616**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 64629**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.8 | U *1 | 1010 | 1084 | | mg/Kg | | 108 | 70 - 130 |
| Diesel Range Organics (Over C10-C28) | <49.8 | U F1 *1 | 1010 | 1568 | F1 | mg/Kg | | 154 | 70 - 130 |

| Surrogate | MS %Recovery | MS Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane | 156 | S1+ | 70 - 130 |
| o-Terphenyl | 130 | | 70 - 130 |

**Lab Sample ID: 880-34338-A-8-E MSD**
**Matrix: Solid**
**Analysis Batch: 64616**

**Client Sample ID: Matrix Spike Duplicate**
**Prep Type: Total/NA**
**Prep Batch: 64629**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.8 | U *1 | 1010 | 1069 | | mg/Kg | | 106 | 70 - 130 | 1 | 20 |
| Diesel Range Organics (Over C10-C28) | <49.8 | U F1 *1 | 1010 | 1493 | F1 | mg/Kg | | 147 | 70 - 130 | 5 | 20 |

| Surrogate | MSD %Recovery | MSD Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane | 150 | S1+ | 70 - 130 |
| o-Terphenyl | 124 | | 70 - 130 |

# QC Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5452-1
SDG: 03C1558118

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 880-64791/1-A**
**Matrix: Solid**
**Analysis Batch: 64856**

**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 | | | 10/16/23 19:57 | 1 |

**Lab Sample ID: LCS 880-64791/2-A**
**Matrix: Solid**
**Analysis Batch: 64856**

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

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 250 | 246.1 | | mg/Kg | | 98 | 90 - 110 | | |

**Lab Sample ID: LCSD 880-64791/3-A**
**Matrix: Solid**
**Analysis Batch: 64856**

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

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 250 | 246.3 | | mg/Kg | | 99 | 90 - 110 | 0 | 20 |

**Lab Sample ID: 880-34380-A-1-C MS**
**Matrix: Solid**
**Analysis Batch: 64856**

**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 | 61300 | | 12600 | 74540 | 4 | mg/Kg | | 105 | 90 - 110 | | |

**Lab Sample ID: 880-34380-A-1-D MSD**
**Matrix: Solid**
**Analysis Batch: 64856**

**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 | 61300 | | 12600 | 74390 | 4 | mg/Kg | | 104 | 90 - 110 | 0 | 20 |

# QC Association Summary

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5452-1
SDG: 03C1558118

## GC VOA

### Analysis Batch: 64624

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5452-1 | FS33B | Total/NA | Solid | 8021B | 64664 |
| 890-5452-2 | FS34B | Total/NA | Solid | 8021B | 64664 |
| MB 880-64664/5-A | Method Blank | Total/NA | Solid | 8021B | 64664 |
| LCS 880-64664/1-A | Lab Control Sample | Total/NA | Solid | 8021B | 64664 |
| LCSD 880-64664/2-A | Lab Control Sample Dup | Total/NA | Solid | 8021B | 64664 |
| 880-34402-A-5-A MS | Matrix Spike | Total/NA | Solid | 8021B | 64664 |
| 880-34402-A-5-B MSD | Matrix Spike Duplicate | Total/NA | Solid | 8021B | 64664 |

### Prep Batch: 64664

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5452-1 | FS33B | Total/NA | Solid | 5035 | |
| 890-5452-2 | FS34B | Total/NA | Solid | 5035 | |
| MB 880-64664/5-A | Method Blank | Total/NA | Solid | 5035 | |
| LCS 880-64664/1-A | Lab Control Sample | Total/NA | Solid | 5035 | |
| LCSD 880-64664/2-A | Lab Control Sample Dup | Total/NA | Solid | 5035 | |
| 880-34402-A-5-A MS | Matrix Spike | Total/NA | Solid | 5035 | |
| 880-34402-A-5-B MSD | Matrix Spike Duplicate | Total/NA | Solid | 5035 | |

### Analysis Batch: 64845

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5452-1 | FS33B | Total/NA | Solid | Total BTEX | |
| 890-5452-2 | FS34B | Total/NA | Solid | Total BTEX | |

## GC Semi VOA

### Analysis Batch: 64616

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5452-1 | FS33B | Total/NA | Solid | 8015B NM | 64629 |
| 890-5452-2 | FS34B | Total/NA | Solid | 8015B NM | 64629 |
| MB 880-64629/1-A | Method Blank | Total/NA | Solid | 8015B NM | 64629 |
| LCS 880-64629/2-A | Lab Control Sample | Total/NA | Solid | 8015B NM | 64629 |
| LCSD 880-64629/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015B NM | 64629 |
| 880-34338-A-8-D MS | Matrix Spike | Total/NA | Solid | 8015B NM | 64629 |
| 880-34338-A-8-E MSD | Matrix Spike Duplicate | Total/NA | Solid | 8015B NM | 64629 |

### Prep Batch: 64629

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5452-1 | FS33B | Total/NA | Solid | 8015NM Prep | |
| 890-5452-2 | FS34B | Total/NA | Solid | 8015NM Prep | |
| MB 880-64629/1-A | Method Blank | Total/NA | Solid | 8015NM Prep | |
| LCS 880-64629/2-A | Lab Control Sample | Total/NA | Solid | 8015NM Prep | |
| LCSD 880-64629/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015NM Prep | |
| 880-34338-A-8-D MS | Matrix Spike | Total/NA | Solid | 8015NM Prep | |
| 880-34338-A-8-E MSD | Matrix Spike Duplicate | Total/NA | Solid | 8015NM Prep | |

### Analysis Batch: 64800

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5452-1 | FS33B | Total/NA | Solid | 8015 NM | |
| 890-5452-2 | FS34B | Total/NA | Solid | 8015 NM | |

# QC Association Summary

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5452-1
SDG: 03C1558118

## HPLC/IC

### Leach Batch: 64791

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5452-1 | FS33B | Soluble | Solid | DI Leach | |
| 890-5452-2 | FS34B | Soluble | Solid | DI Leach | |
| MB 880-64791/1-A | Method Blank | Soluble | Solid | DI Leach | |
| LCS 880-64791/2-A | Lab Control Sample | Soluble | Solid | DI Leach | |
| LCSD 880-64791/3-A | Lab Control Sample Dup | Soluble | Solid | DI Leach | |
| 880-34380-A-1-C MS | Matrix Spike | Soluble | Solid | DI Leach | |
| 880-34380-A-1-D MSD | Matrix Spike Duplicate | Soluble | Solid | DI Leach | |

### Analysis Batch: 64856

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 890-5452-1 | FS33B | Soluble | Solid | 300.0 | 64791 |
| 890-5452-2 | FS34B | Soluble | Solid | 300.0 | 64791 |
| MB 880-64791/1-A | Method Blank | Soluble | Solid | 300.0 | 64791 |
| LCS 880-64791/2-A | Lab Control Sample | Soluble | Solid | 300.0 | 64791 |
| LCSD 880-64791/3-A | Lab Control Sample Dup | Soluble | Solid | 300.0 | 64791 |
| 880-34380-A-1-C MS | Matrix Spike | Soluble | Solid | 300.0 | 64791 |
| 880-34380-A-1-D MSD | Matrix Spike Duplicate | Soluble | Solid | 300.0 | 64791 |

# Lab Chronicle

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 823H

Job ID: 890-5452-1
SDG: 03C1558118

## Client Sample ID: FS33B

**Date Collected: 10/12/23 09:30**
**Date Received: 10/12/23 12:42**

## Lab Sample ID: 890-5452-1

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.96 g | 5 mL | 64664 | 10/13/23 10:58 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 64624 | 10/13/23 19:00 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 64845 | 10/13/23 19:00 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 64800 | 10/14/23 00:16 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.99 g | 10 mL | 64629 | 10/13/23 08:50 | AJ | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 64616 | 10/14/23 00:16 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.01 g | 50 mL | 64791 | 10/16/23 11:44 | SMC | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 64856 | 10/16/23 20:56 | CH | EET MID |

## Client Sample ID: FS34B

**Date Collected: 10/12/23 09:35**
**Date Received: 10/12/23 12:42**

## Lab Sample ID: 890-5452-2

**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 | | | 5.00 g | 5 mL | 64664 | 10/13/23 10:58 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 64624 | 10/13/23 19:25 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 64845 | 10/13/23 19:25 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 64800 | 10/14/23 00:37 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.90 g | 10 mL | 64629 | 10/13/23 08:50 | AJ | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 64616 | 10/14/23 00:37 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5 g | 50 mL | 64791 | 10/16/23 11:44 | SMC | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 64856 | 10/16/23 21:16 | 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: JRU DI 11 Ekalaka 823H

Job ID: 890-5452-1
SDG: 03C1558118

## 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: JRU DI 11 Ekalaka 823H

Job ID: 890-5452-1
SDG: 03C1558118

| 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: JRU DI 11 Ekalaka 823H

Job ID: 890-5452-1
SDG: 03C1558118

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Depth |
|---|---|---|---|---|---|
| 890-5452-1 | FS33B | Solid | 10/12/23 09:30 | 10/12/23 12:42 | 4 |
| 890-5452-2 | FS34B | Solid | 10/12/23 09:35 | 10/12/23 12:42 | 4 |

# Chain of Custody

eurofins | Environment Testing | Xenco

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

Work Order No: _____

www.xenco.com Page 1 of 1

| | | | |
|---|---|---|---|
| Project Manager: | Ben Belill | Bill to: (if different) | Garrett Green |
| Company Name: | Ensolum | Company Name: | XTO Energy |
| Address: | 3122 National Parks Hwy | Address: | 3104 E. Green St. |
| City, State ZIP: | Carlsbad, NM 88220 | City, State ZIP: | Carlsbad, NM 88220 |
| Phone: | 303-887-2946 | Email: | Garrett.Green@ExxonMobil.com |

**Work Order Comments**

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

| | | | |
|---|---|---|---|
| Project Name: | JRU DI 11 Ekalaka 823H | Turn Around | ☑ Routine ☐ Rush |
| Project Number: | 03C1558118 | Due Date: | |
| Project Location: | | TAT starts the day received by the lab, if received by 4:30pm | |
| Sampler's Name: | Connor Whitman | | |
| PO #: | | | |

| SAMPLE RECEIPT | | | |
|---|---|---|---|
| Temp Blank: | Yes No | Wet Ice: | Yes No |
| Samples Received Intact: | Yes No | Thermometer ID: | Thm007 |
| Cooler Custody Seals: | Yes No N/A | Correction Factor: | -0.2 |
| Sample Custody Seals: | Yes No N/A | Temperature Reading: | 3.6 |
| Total Containers: | | Corrected Temperature: | 3.4 |

**ANALYSIS REQUEST**

| Sample Identification | Matrix | Date Sampled | Time Sampled | Depth | Grab/ Comp | # of Cont | Pres. Code | CHLORIDES (EPA: 3000.0) | TPH (8015) | BTEX (8021) |
|---|---|---|---|---|---|---|---|---|---|---|
| FS33B | S | 10/12/23 | 9:30 | 4 | C | 1 | | / | / | / |
| FS34B | S | 1 | 9:35 | 4 | C | 1 | | / | / | / |

890-5452 Chain of Custody

**Preservative Codes**

None: NO DI Water: $H_2O$
Cool: Cool MeOH: Me
HCL: HC $HNO_3$: HN
$H_2S0_4$: $H_2$ NaOH: Na
$H_3PO_4$: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

**Sample Comments**

Incident ID:
nAPP2224527297

Cost Center:
2104541001

AFE:
DD.2019.06665.CAP.CMP

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



| Relinquished by: (Signature) | Received by: (Signature) | Date/Time | Relinquished by: (Signature) | Received by: (Signature) | Date/Time |
|---|---|---|---|---|---|
| 1 | | 12:42 10/19/23 | 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: 890-1618 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 #: 890-5452-1 |
| Address: 1211 W Florida Ave | Due Date Requested: 10/18/2023 | | | |
| City: Midland | TAT Requested (days): | | | |
| State, Zip: TX 79701 | | | | |
| Phone: 432-704-5440(Tel) | PO #: | | | |
| Email | WO #: | | | |
| Project Name: jru di 11 Ekalaka 823H | Project #: 89000093 | | | |
| Site: | SSOW#: | | | |

**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:

**Analysis Requested**

| 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: | | | | | | | | | | |
| FS33B (890-5452-1) | 10/12/23 | 09 30 Mountain | | Solid | | | X | X | X | X | X | | |
| FS34B (890-5452-2) | 10/12/23 | 09 35 Mountain | | Solid | | | X | X | X | X | X | | |

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 |
|---|---|---|---|---|---|
| cl | | | Kramer | 10/13/23 | |
| Relinquished by: | Date/Time | Company | Received by: | Date/Time 1040 | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time | Company |

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

Ver: 06/08/2021

# Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5452-1
SDG Number: 03C1558118

**Login Number: 5452**
**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: 890-5452-1
SDG Number: 03C1558118

**Login Number: 5452**
**List Number: 2**
**Creator: Kramer, Jessica**

**List Source: Eurofins Midland**
**List Creation: 10/13/23 10:44 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 C

## NMOCD/NMSLO Correspondence

**From:** Knight, Tami C.
**To:** Collins, Melanie
**Cc:** Green, Garrett J; Ben Belill; Tacoma Morrissey; Lambert, Tommee L
**Subject:** RE: XTO - Sampling Notification - JRU DI 11 Ekalaka 823H / NAPP2224527297 (SLO)
**Date:** Wednesday, October 11, 2023 2:36:08 PM
**Attachments:** image006.png

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[ **EXTERNAL EMAIL**]

Hi Melanie

I am showing that a revised remediation plan was submitted to NMOCD and ECO on 9/14 and 9/15. Has NMOCD approved the revised plan? ECO has not had a chance to review the revised plan, but this notice is for confirmation sampling at the subject site…so that is why I'm questioning if NMOCD has already approved the plan.

- JRU DI 11 Ekalaka 823H / NAPP2224527297 (SLO)

Thank you,

**PLEASE SUBMIT WORKPLANS AND REPORTS TO ECO@SLO.STATE.NM.US**

**Tami Knight, CHMM**
*Environmental Specialist*
*SRD-Environmental*
*Compliance Office (ECO)*
505.670.1638
New Mexico State Land Office
1300 W. Broadway Avenue, Suite A
Bloomfield, NM 87413
tknight@slo.state.nm.us
nmstatelands.org
……



---

**From:** Collins, Melanie <melanie.collins@exxonmobil.com>
**Sent:** Thursday, October 5, 2023 10:31 AM
**To:** ocd.enviro (ocd.enviro@emnrd.nm.gov) <ocd.enviro@emnrd.nm.gov>; SLO Spills

<spills@slo.state.nm.us>
**Cc:** Green, Garrett J <garrett.green@exxonmobil.com>; bbelill@ensolum.com; Tacoma Morrissey <tmorrissey@ensolum.com>; DelawareSpills /SM <DelawareSpills@exxonmobil.com>; Lambert, Tommee L <tommee.l.lambert@exxonmobil.com>
**Subject:** [EXTERNAL] XTO - Sampling Notification (Week of 10/9/23 - 10/13/23)

All,

XTO plans to complete final sampling activities at the sites listed below for the week of October 9, 2023.

Tuesday
- Corral Canyon Expansion / NRM2021833146
- James Ranch Unit 21 Riser / Napp2322742848

Wednesday
- James Ranch Unit 21 Riser / Napp2322742848
- Corral Canyon Expansion / NRM2021833146

Thursday
- James Ranch Unit 21 Riser / Napp2322742848
- JRU DI 11 Ekalaka 823H / NAPP2224527297 (SLO)
- PLU 23 Dog Town Draw 154H / nAPP2316446382

Friday
- JRU 108H / nAPP2217931599
- PLU 18 TWR Sat Battery / nAPP2230551957

Thank you,

*Melanie Collins*
XTO ENERGY
Environmental Technician
melanie.collins@exxonmobil.com
432-556-3756

| | |
|---|---|
| **From:** | Hamlet, Robert, EMNRD |
| **To:** | Collins, Melanie |
| **Cc:** | DelawareSpills /SM; Tacoma Morrissey; Ben Belill; Ashley Ager; Bratcher, Michael, EMNRD; Nobui, Jennifer, EMNRD; Harimon, Jocelyn, EMNRD |
| **Subject:** | Extension Approval - XTO - JRU DI 11 Ekalaka 823H - Incident Number NAPP2224527297 |
| **Date:** | Friday, November 18, 2022 3:43:57 PM |
| **Attachments:** | image003.png |

[ **EXTERNAL EMAIL**]

RE: Incident #**NAPP2224527297**

**Melanie**,

Your request for an extension to **February 16th, 2023** is approved. Please include this e-mail correspondence in the remediation and/or closure report.

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

**From:** Collins, Melanie <melanie.collins@exxonmobil.com>
**Sent:** Friday, November 18, 2022 9:25 AM
**To:** Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>
**Cc:** DelawareSpills /SM <DelawareSpills@exxonmobil.com>; Tacoma Morrissey <tmorrissey@ensolum.com>; bbelill@ensolum.com; Ashley Ager <aager@ensolum.com>
**Subject:** [EXTERNAL] XTO - Extension Request - JRU DI 11 Ekalaka 823H - Incident Number NAPP2224527297

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

All,

**JRU DI 11 Ekalaka 823H (Incident Number NAPP2224527297)**

XTO is requesting an extension for the current deadline of November 18, 2022, for submitting a remediation work plan or closure report required in 19.15.29.12.B.(1) NMAC at the JRU DI 11

Ekalaka 823H (Incident Number NAPP2224527297). The release occurred on August 20, 2022, and initial site assessment activities have been completed. Delineation activities were performed on November 2, 2022 and November 3, 2022. However, due to XTO onsite operations, further remediation activities were postponed. Additional delineation and excavation is needed to complete remediation at the Site. In order to review the laboratory analytical results, discuss remedial options, and submit a remediation work plan or closure report, XTO requests an extension until February 16, 2023.

Thank you,

*Melanie Collins*

XTO ENERGY

Environmental Technician

melanie.collins@exxonmobil.com

432-556-3756

**From:** Green, Garrett J
**To:** Tacoma Morrissey
**Subject:** FW: XTO - Sampling Notification (Week of 10/31/22 - 11/4/22)
**Date:** Friday, October 28, 2022 2:16:44 PM

[ **EXTERNAL EMAIL**]

**From:** Green, Garrett J
**Sent:** Friday, October 28, 2022 1:11 PM
**To:** ocd.enviro@emnrd.nm.gov; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Billings, Bradford, EMNRD <Bradford.Billings@emnrd.nm.gov>; Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@emnrd.nm.gov>
**Cc:** DelawareSpills /SM <DelawareSpills@exxonmobil.com>
**Subject:** XTO - Sampling Notification (Week of 10/31/22 - 11/4/22)

All,

XTO plans to complete final sampling activities at the following sites the week of Oct 31, 2022.

Monday
- Poker Lake Unit 409/ nAPP2223751933

Tuesday
- Poker Lake Unit 409/ nAPP2223751933
- JRU DI 11 Ekalaka 823H/ nAPP2224527297

Wednesday
- Poker Lake Unit 409/ nAPP2223751933
- JRU DI 11 Ekalaka 823H/ nAPP2224527297

Thursday
- Poker Lake Unit 409/ nAPP2223751933
- PLU 30 Big Sinks/ nAPP2209137379, nAPP2208351954, nAPP2206853301

Friday
- Poker Lake Unit 409/ nAPP2223751933

Thank you!

**Garrett Green**
Environmental Coordinator
Delaware Business Unit
(575) 200-0729

Garrett.Green@ExxonMobil.com

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

**From:** Collins, Melanie
**To:** ocd.enviro@state.nm.us
**Cc:** spills@slo.state.nm.us; Green, Garrett J; Ben Belill
**Subject:** XTO - Sampling Notification (Week of 8/28/23 - 9/1/23)
**Date:** Wednesday, August 23, 2023 5:06:30 PM
**Attachments:** image001.png

[ **EXTERNAL EMAIL**]

All,

XTO plans to complete final sampling activities at the sites listed below for the week of August 28, 2023.

Monday
- JRU DI 11 Ekalaka 823H / nAPP2224527297 (SLO)
- James Ranch Unit Booster / NAPP2319954265

Tuesday
- JRU DI 11 Ekalaka 823H / nAPP2224527297 (SLO)

Wednesday
- JRU DI 11 Ekalaka 823H / nAPP2224527297 (SLO)

Thursday
- JRU DI 11 Ekalaka 823H / nAPP2224527297 (SLO)
- Indian Flats Bass Fed 6 / NMAP1823048577

Thank you,

*Melanie Collins*
XTO ENERGY
Environmental Technician
melanie.collins@exxonmobil.com
432-556-3756

**From:** Green, Garrett J
**To:** ocd.enviro@emnrd.nm.gov; Hamlet, Robert, EMNRD; Bratcher, Michael, EMNRD
**Cc:** DelawareSpills /SM; Tacoma Morrissey
**Subject:** XTO - Sampling Notification (Week of 10/24/22 - 10/28/22)
**Date:** Friday, October 21, 2022 1:10:30 PM

---

[ **EXTERNAL EMAIL**]

All,

XTO plans to complete final sampling activities at the following sites the week of Oct 24, 2022.

Monday
- Elk Wallow CDP/ nAPP2223831434

Tuesday
- Elk Wallow CDP/ nAPP2223831434

Wednesday
- PLU PC 17/ nAPP2223832773

Thursday
- JRU DI 11 Ekalaka 823H/ nAPP2224527297
- Poker Lake Unit 409/ nAPP2223751933
- PLU 27 Brushy Draw 167H / nAPP2222741514

Friday
- JRU DI 11 Ekalaka 823H/ nAPP2224527297
- Poker Lake Unit 409/ nAPP2223751933
- PLU 27 Brushy Draw 167H / nAPP2222741514

Thank you!

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

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

**From:** Collins, Melanie
**To:** ocd.enviro (ocd.enviro@emnrd.nm.gov); spills@slo.state.nm.us
**Cc:** Green, Garrett J; Ben Belill; Ashley Ager
**Subject:** XTO - Sampling Notification / JRU DI 11 Ekalaka 823H (9/7/23 - 9/8/23)
**Date:** Wednesday, September 6, 2023 12:06:00 PM
**Attachments:** image001.png

[ **EXTERNAL EMAIL**]

All,

Due to laboratory analytical results received from the laboratory regarding recent excavation activities completed and the upcoming due date for the subject Site, XTO plans to complete final sampling activities at the JRU DI 11 Ekalaka 823H (Incident Number nAPP2224527297) on September 7, and September 8, 2023.

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

QUESTIONS

Action 332490

## QUESTIONS

| | |
|---|---|
| Operator:<br>XTO ENERGY, INC<br>6401 Holiday Hill Road<br>Midland, TX 79707 | OGRID:<br>5380 |
| | Action Number:<br>332490 |
| | Action Type:<br>[C-141] Remediation Closure Request C-141 (C-141-v-Closure) |

**QUESTIONS**

| **Prerequisites** | |
|---|---|
| Incident ID (n#) | **nAPP2224527297** |
| Incident Name | **NAPP2224527297 JRU DI 11 EKALAKA 121H @ 30-015-49040** |
| Incident Type | **Release Other** |
| Incident Status | **Remediation Closure Report Received** |
| Incident Well | **[30-015-49040] JAMES RANCH UNIT DI 11 EKALAKA #121H** |

| **Location of Release Source** | |
|---|---|
| *Please answer all the questions in this group.* | |
| Site Name | JRU DI 11 EKALAKA 121H |
| Date Release Discovered | 08/20/2022 |
| Surface Owner | State |

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

| **Nature and Volume of Release** | |
|---|---|
| *Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.* | |
| Crude Oil Released (bbls) Details | *Not answered.* |
| Produced Water Released (bbls) Details | *Not answered.* |
| Is the concentration of chloride in the produced water >10,000 mg/l | *Not answered.* |
| Condensate Released (bbls) Details | *Not answered.* |
| Natural Gas Vented (Mcf) Details | *Not answered.* |
| Natural Gas Flared (Mcf) Details | *Not answered.* |
| Other Released Details | Cause: Other \| Other (Specify) \| Other (Specify) \| Released: 30 BBL \| Recovered: 22 BBL \| Lost: 8 BBL. |
| Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts) | Sand erosion caused coil tubing on pump truck to split, releasing fluids both to containment and pad. A vacuum truck recovered all free fluids. A third-party contractor has been retained for remediation purposes. |

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



## QUESTIONS (continued)

| | |
|---|---|
| Operator:<br>XTO ENERGY, INC<br>6401 Holiday Hill Road<br>Midland, TX 79707 | OGRID:<br>5380 |
| | Action Number:<br>332490 |
| | Action Type:<br>[C-141] Remediation Closure Request C-141 (C-141-v-Closure) |

**QUESTIONS**

| **Nature and Volume of Release (continued)** | |
|---|---|
| Is this a gas only submission (i.e. only significant Mcf values reported) | **No, according to supplied volumes this does not appear to be a "gas only" report.** |
| Was this a major release as defined by Subsection A of 19.15.29.7 NMAC | **Yes** |
| Reasons why this would be considered a submission for a notification of a major release | **From paragraph A. "Major release" determine using:**<br>**(1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.** |
| *With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.* | |

| **Initial Response** | |
|---|---|
| *The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.* | |
| The source of the release has been stopped | True |
| The impacted area has been secured to protect human health and the environment | True |
| Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices | True |
| All free liquids and recoverable materials have been removed and managed appropriately | True |
| If all the actions described above have not been undertaken, explain why | *Not answered.* |
| *Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.* | |

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

| | |
|---|---|
| I hereby agree and sign off to the above statement | Name: Alan Romero<br>Title: Regulatory Analyst<br>Email: alan.romero1@exxonmobil.com<br>Date: 04/15/2024 |

**District I**
1625 N. French Dr., Hobbs, NM 88240
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# State of New Mexico
# Energy, Minerals and Natural Resources
# Oil Conservation Division
# 1220 S. St Francis Dr.
# Santa Fe, NM 87505



## QUESTIONS (continued)

| | |
|---|---|
| Operator:<br>XTO ENERGY, INC<br>6401 Holiday Hill Road<br>Midland, TX 79707 | OGRID:<br>5380 |
| | Action Number:<br>332490 |
| | Action Type:<br>[C-141] Remediation Closure Request C-141 (C-141-v-Closure) |

**QUESTIONS**

| **Site Characterization** | |
|---|---|
| *Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.* | |
| What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs) | Between 51 and 75 (ft.) |
| What method was used to determine the depth to ground water | U.S. Geological Survey |
| Did this release impact groundwater or surface water | No |
| **What is the minimum distance, between the closest lateral extents of the release and the following surface areas:** | |
| A continuously flowing watercourse or any other significant watercourse | Between 500 and 1000 (ft.) |
| Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark) | Between ½ and 1 (mi.) |
| An occupied permanent residence, school, hospital, institution, or church | Greater than 5 (mi.) |
| A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes | Between ½ and 1 (mi.) |
| Any other fresh water well or spring | Between ½ and 1 (mi.) |
| Incorporated municipal boundaries or a defined municipal fresh water well field | Greater than 5 (mi.) |
| A wetland | Between 1 and 5 (mi.) |
| A subsurface mine | Greater than 5 (mi.) |
| An (non-karst) unstable area | Zero feet, overlying, or within area |
| Categorize the risk of this well / site being in a karst geology | High |
| A 100-year floodplain | Between 1 and 5 (mi.) |
| Did the release impact areas not on an exploration, development, production, or storage site | No |

| **Remediation Plan** | |
|---|---|
| *Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.* | |
| Requesting a remediation plan approval with this submission | Yes |
| *Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.* | |
| Have the lateral and vertical extents of contamination been fully delineated | Yes |
| Was this release entirely contained within a lined containment area | No |
| **Soil Contamination Sampling:** (Provide the highest observable value for each, in milligrams per kilograms.) | |
| Chloride (EPA 300.0 or SM4500 Cl B) | 584 |
| TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M) | 77.9 |
| GRO+DRO (EPA SW-846 Method 8015M) | 77.9 |
| BTEX (EPA SW-846 Method 8021B or 8260B) | 0 |
| Benzene (EPA SW-846 Method 8021B or 8260B) | 0 |
| | |
| *Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.* | |
| On what estimated date will the remediation commence | 09/26/2022 |
| On what date will (or did) the final sampling or liner inspection occur | 10/12/2023 |
| On what date will (or was) the remediation complete(d) | 12/06/2023 |
| What is the estimated surface area (in square feet) that will be reclaimed | 8154 |
| What is the estimated volume (in cubic yards) that will be reclaimed | 1230 |
| What is the estimated surface area (in square feet) that will be remediated | 8154 |
| What is the estimated volume (in cubic yards) that will be remediated | 1230 |
| *These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.* | |
| *The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.* | |

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



## QUESTIONS (continued)

| | |
|---|---|
| Operator:<br>XTO ENERGY, INC<br>6401 Holiday Hill Road<br>Midland, TX 79707 | OGRID:<br>5380 |
| | Action Number:<br>332490 |
| | Action Type:<br>[C-141] Remediation Closure Request C-141 (C-141-v-Closure) |

**QUESTIONS**

| | |
|---|---|
| **Remediation Plan (continued)** | |
| *Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.* | |
| **This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:** | |
| *(Select all answers below that apply.)* | |
| (Ex Situ) Excavation and **off-site** disposal (i.e. dig and haul, hydrovac, etc.) | Yes |
| Which OCD approved facility will be used for **off-site** disposal | HALFWAY DISPOSAL AND LANDFILL [fEEM0112334510] |
| **OR** which OCD approved well (API) will be used for **off-site** disposal | *Not answered.* |
| **OR** is the **off-site** disposal site, to be used, out-of-state | *Not answered.* |
| **OR** is the **off-site** disposal site, to be used, an NMED facility | *Not answered.* |
| (Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms) | *Not answered.* |
| (In Situ) Soil Vapor Extraction | *Not answered.* |
| (In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.) | *Not answered.* |
| (In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.) | *Not answered.* |
| (In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.) | *Not answered.* |
| Ground Water Abatement pursuant to 19.15.30 NMAC | *Not answered.* |
| OTHER (Non-listed remedial process) | *Not answered.* |
| *Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.* | |
| | |
| I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. | |
| I hereby agree and sign off to the above statement | Name: Alan Romero<br>Title: Regulatory Analyst<br>Email: alan.romero1@exxonmobil.com<br>Date: 04/15/2024 |
| *The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.* | |

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## QUESTIONS (continued)

| | |
|---|---|
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**QUESTIONS**

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

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## QUESTIONS (continued)

| | |
|---|---|
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**QUESTIONS**

| **Sampling Event Information** | |
|---|---|
| Last sampling notification (C-141N) recorded | **333493** |
| Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC | **10/12/2023** |
| What was the (estimated) number of samples that were to be gathered | **30** |
| What was the sampling surface area in square feet | **8154** |

| **Remediation Closure Request** | |
|---|---|
| *Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.* | |
| Requesting a remediation closure approval with this submission | Yes |
| Have the lateral and vertical extents of contamination been fully delineated | **Yes** |
| Was this release entirely contained within a lined containment area | **No** |
| All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion | Yes |
| What was the total surface area (in square feet) remediated | 8154 |
| What was the total volume (cubic yards) remediated | 1230 |
| All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene | Yes |
| What was the total surface area (in square feet) reclaimed | 8154 |
| What was the total volume (in cubic yards) reclaimed | 1230 |
| Summarize any additional remediation activities not included by answers (above) | Excavation activities were conducted at the Site as indicated in the RWP and RWPA to address the August 2022 release of produced water with FR. Laboratory analytical results for all excavation soil samples collected indicate COC concentrations were compliant with the Closure Criteria. Based on the soil sample laboratory analytical results, no further remediation is required. The excavation has been backfilled with material purchased locally and the Site has been recontoured to match pre-existing Site conditions. |

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

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

| | |
|---|---|
| I hereby agree and sign off to the above statement | Name: Alan Romero<br>Title: Regulatory Analyst<br>Email: alan.romero1@exxonmobil.com<br>Date: 04/15/2024 |

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## QUESTIONS (continued)

| | |
|---|---|
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**QUESTIONS**

| **Reclamation Report** | |
|---|---|
| *Only answer the questions in this group if all reclamation steps have been completed.* | |
| Requesting a reclamation approval with this submission | No |

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CONDITIONS

Action 332490

## CONDITIONS

| Operator: | OGRID: |
|---|---|
| XTO ENERGY, INC<br>6401 Holiday Hill Road<br>Midland, TX 79707 | 5380 |
| | Action Number:<br>332490 |
| | Action Type:<br>[C-141] Remediation Closure Request C-141 (C-141-v-Closure) |

**CONDITIONS**

| Created By | Condition | Condition Date |
|---|---|---|
| scott.rodgers | 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 will need to be submitted and approved prior to this incident receiving the final status of "Restoration Complete". | 5/13/2024 |
| scott.rodgers | 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; At least one (1) representative 5-point composite sample will need to be collected from the backfill material that will be used for the reclamation of the top four feet of the excavation. OCD reserves the right to request additional sampling if needed; 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. | 5/13/2024 |