

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

State of New Mexico
Energy Minerals and Natural
Resources Department

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

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

Incident ID	NAPP2224527297
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

Latitude 32.39098 Longitude -103.90321
(NAD 83 in decimal degrees to 5 decimal places)

Site Name JRU DI 11 Ekalaka +83H 823H	Site Type Production Well
Date Release Discovered 08/20/2022	API# (if applicable)

Unit Letter	Section	Township	Range	County
J	17	22S	30E	Eddy

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☒ Other (describe) Produced Water w/FR	Volume/Weight Released (provide units) 30.00 BBLS	Volume/Weight Recovered (provide units) 22.00 BBLS
Cause of Release 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.		

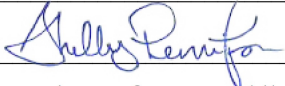
State of New Mexico
Oil Conservation Division

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Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? A release of 25 barrels or greater.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes, by Jake Foust to ocd.enviro@state.nm.us, Mike Bratcher, and Robert Hamlet on 08/22/2022 via email.	

Initial Response

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

☒ The source of the release has been stopped.	
☒ The impacted area has been secured to protect human health and the environment.	
☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.	
☒ All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: NA	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: Shelby G. Pennington	Title: Environmental Manager
Signature: 	Date: 9/1/2022
email: shelby.g.pennington@exxonmobil.com	Telephone: 281-723-9353
<u>OCD Only</u>	
Received by: Jocelyn Harimon	Date: 08/02/2022

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

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

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

CONDITIONS

Action 140329

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 140329
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	None	9/2/2022

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Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>51-100</u> (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☒ Yes ☐ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas not on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

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

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

State of New Mexico
Oil Conservation Division

Page 4

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

Printed Name: _Garrett Green_ Title: _Environmental Coordinator_

Signature:  Date: _2/13/2023_

email: _garrett.green@exxonmobil.com_ Telephone: _575-200-0729_

OCD Only

Received by: _Jocelyn Harimon_ Date: _02/15/2023_

Incident ID	NAPP2224527297
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Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: *Each of the following items must be included in the plan.*

- ☒ Detailed description of proposed remediation technique
- ☒ Scaled sitemap with GPS coordinates showing delineation points
- ☒ Estimated volume of material to be remediated
- ☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☒ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: Garrett Green Title: Environmental Coordinator
Signature:  Date: 2/13/2023
email: garrett.green@exxonmobil.com Telephone: 575-200-0729

OCD Only

Received by: Jocelyn Harimon Date: 02/15/2023

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: _____ Date: _____

Incident ID	NAPP2224527297
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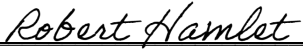
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Printed Name: Garrett Green Title: Environmental Coordinator
Signature:  Date: 2/13/2023
email: garrett.green@exxonmobil.com Telephone: 575-200-0729

OCD Only

Received by: Jocelyn Harimon Date: 02/15/2023

☐ Approved ☒ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature:  Date: 6/16/2023

Incident ID	NAPP2224527297
District RP	
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: *Each of the following items must be included in the plan.*

- ☒ Detailed description of proposed remediation technique
- ☒ Scaled sitemap with GPS coordinates showing delineation points
- ☒ Estimated volume of material to be remediated
- ☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☒ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

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Printed Name: Garrett Green Title: Environmental Coordinator
Signature:  Date: 9/13/2023
email: garrett.green@exxonmobil.com Telephone: 575-200-0729

OCD Only

Received by: _____ Date: _____

☒ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature:  Date: 02/14/2024



September 13, 2023

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

**Re: Remediation Work Plan
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 the following *Remediation Work Plan Addendum (RWPA)* to document remedial actions completed to date to address impacted soil identified at the JRU DI 11 Ekalaka 823H (Site) following the approval of the February 13, 2023 *Remediation Work Plan (Work Plan)* and propose additional remedial actions. Based on the execution of the *Work Plan*, which included excavation of impacted soil and completion of lateral delineation, this *RWPA* is being presented to describe remedial actions completed and a summary of additional remedial actions to complete for Incident Number NAPP2224527297.

SITE DESCRIPTION AND BACKGROUND

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 state 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 friction reducer 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.

Between September 26 and November 3, 2022, Site assessment and delineation activities were conducted to assess for the presence or absence of impacted soil resulting from a release of produced water with friction reducer. Based on laboratory analytical results for delineation soil samples, total petroleum hydrocarbons (TPH) and chloride impacted soil exist across an approximate 8,300 square-foot area and at depths ranging from 2 feet to 6 feet below ground surface (bgs). As such, a Work Plan was developed for the Site to excavate impacted soil identified onsite. The *Work Plan* was approved on June 16, 2023 with the following conditions of approval:

The Remediation Plan is Conditionally Approved. Due to high karst, the release needs to meet the strictest closure criteria standards. The release will need to be further horizontally delineated to the West and South. Samples must be analyzed for all constituents listed in Table I of 19.15.29.12 NMAC. Sidewall samples should be delineated/excavated to 600 mg/kg for chlorides

XTO Energy, Inc.
Closure Request
JRU DI 11 Ekalaka 823H

and 100 mg/kg for TPH to define the edge of the release. Due to the sensitive nature of the site (high karst), the variance request for 500 ft² confirmation samples is denied. Collect confirmation samples, representing no more than 200 ft². A closure report will need to be completed and uploaded within 90 days.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

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

Based on the results of the Site Characterization and approved *Work Plan*, the following NMOCD Table I Closure Criteria (Closure Criteria) were applied:

- 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 ACTIVITIES

Following the *Work Plan* approval, Ensolum personnel were onsite between August 22 and August 30, 2023 to excavate impacted soil. Excavation activities were completed with a backhoe, track hoe, and transport vehicles, which was directed by previous delineation soil sample data and field screening of soil for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The excavation extent was mapped utilizing a handheld Global Positioning System (GPS) unit and is depicted on Figure 2 and Figure 3. Photographic documentation of excavation activities is presented in Appendix A.

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 FS23 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 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,

XTO Energy, Inc.
Closure Request
JRU DI 11 Ekalaka 823H

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.

Laboratory analytical results indicated all COCs in all confirmation soil samples were compliant with the Closure Criteria with the exception of floor soil samples FS04, FS27 through FS30, FS33, and FS34 and sidewall soil sample SW04. As such, additional impacted soil was excavated and new floor soil samples FS04A, FS27A through FS30A, FS33A, and FS34 were collected at lower depths ranging from 3 feet to 4 feet bgs. The sidewall in the vicinity of sidewall soil sample SW04 was extended westward and sidewall soil sample SW06 represented a new sidewall.

Laboratory analytical results confirmed the absence of any residual impacts except in the vicinity of floor soil samples FS33A and FS34A, collected at 3 feet bgs. A summary of the laboratory analytical results is presented in Table 1 and the full laboratory analytical reports and supporting chain-of-custody documentation is presented in Appendix B.

The current excavation footprint is approximately 8,154 square feet and approximately 1,208 cubic yards of impacted soil has been transported to the R360 facility in Hobbs, New Mexico. The final excavation was fenced off pending backfilling.

ADDITIONAL DELINEATION ACTIVITIES

As required by the conditions of approval from the NMOCD, additional lateral definition of the release extent to the south and west was completed on August 30, 2023, with surface soil samples SS05 (west) and SS06 (south) collected at 0.5 feet bgs. The samples were field screened and analyzed as described above. Laboratory analytical results for the two surface samples indicated all COC concentrations were compliant with the Closure Criteria and confirmed the lateral extent of the release. The locations of the two delineation soil samples are depicted on Figure 2 and analytical results are summarized on Table 1. The full laboratory analytical reports and supporting chain-of-custody documentation is presented in Appendix B.

RECLAMATION PLAN

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

- Approximately 1,208 cubic yards of impacted soil were excavated, transported, and properly disposed of at a State Of New Mexico permitted landfill (or you can insert the landfill such as R360). Additional impacted soil to be excavated will be within the current excavation footprint and will not encroach or expand into the pasture;
- The excavation will be backfilled with locally sourced caliche to match the well pad's current grade;
- The backfilled area will not be seeded since it is within the active well pad;

XTO Energy, Inc.
Closure Request
JRU DI 11 Ekalaka 823H

- Erosion control management is not necessary since the backfilled area is within the active well pad; and
- Backfilling of the excavation is tentatively scheduled to be completed in the next few weeks.

Photographic documentation of backfilling will be provided to the New Mexico State Land Office (NMSLO) under a separate cover.

PROPOSED REMEDIAL ACTIONS

Site assessment and delineation activities were conducted to assess for the presence or absence of impacted soil resulting from a release of produced water with friction reducer. Based on laboratory analytical results for delineation soil samples, TPH and chloride impacted soil were identified and as such, a *Work Plan* was developed to address the impacted soil. Initial response actions and the excavation and proper disposal of approximately 1,208 cubic yards of impacted soil has adequately remediated the Site; however, residual TPH-impacted soil does remain in the vicinity of floor soil samples FS33A and FS34A, collected at 3 feet bgs. As such, XTO is proposing to excavate the residual impacts and collect confirmation soil samples to confirm the absence of COCs. The excavation is currently accessible and as such, additional excavation activities will be initiated and expected to be completed within the next 60 days. A *Closure Request* will be prepared documenting the final excavation activities described above. XTO believes actions completed to date and proposed in this *RWPA* have been and will be protective of human health, the environment, and groundwater. As such, XTO requests approval of this *RWPA* 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



Daniel R. Moir, PG
Senior Managing Geologist

Ashley L. Ager, MS, PG
Principal

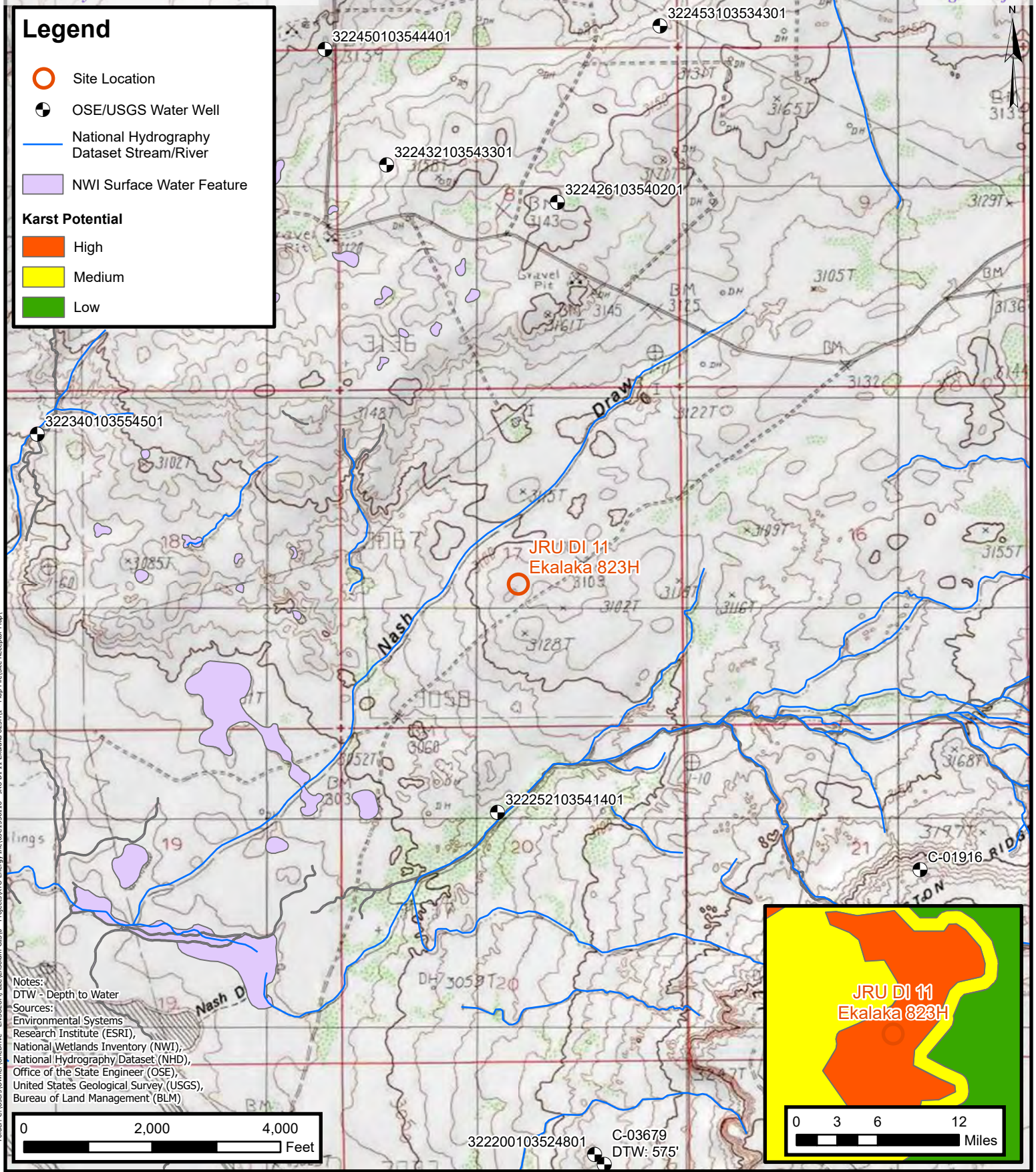
cc: Garrett Green, XTO
Tommee Lambert, XTO
NMSLO

Appendices:

Figure 1	Site Location Map
Figure 2	Delineation Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Photographic Log
Appendix B	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix C	NMOCD Notifications/Correspondence



Figures



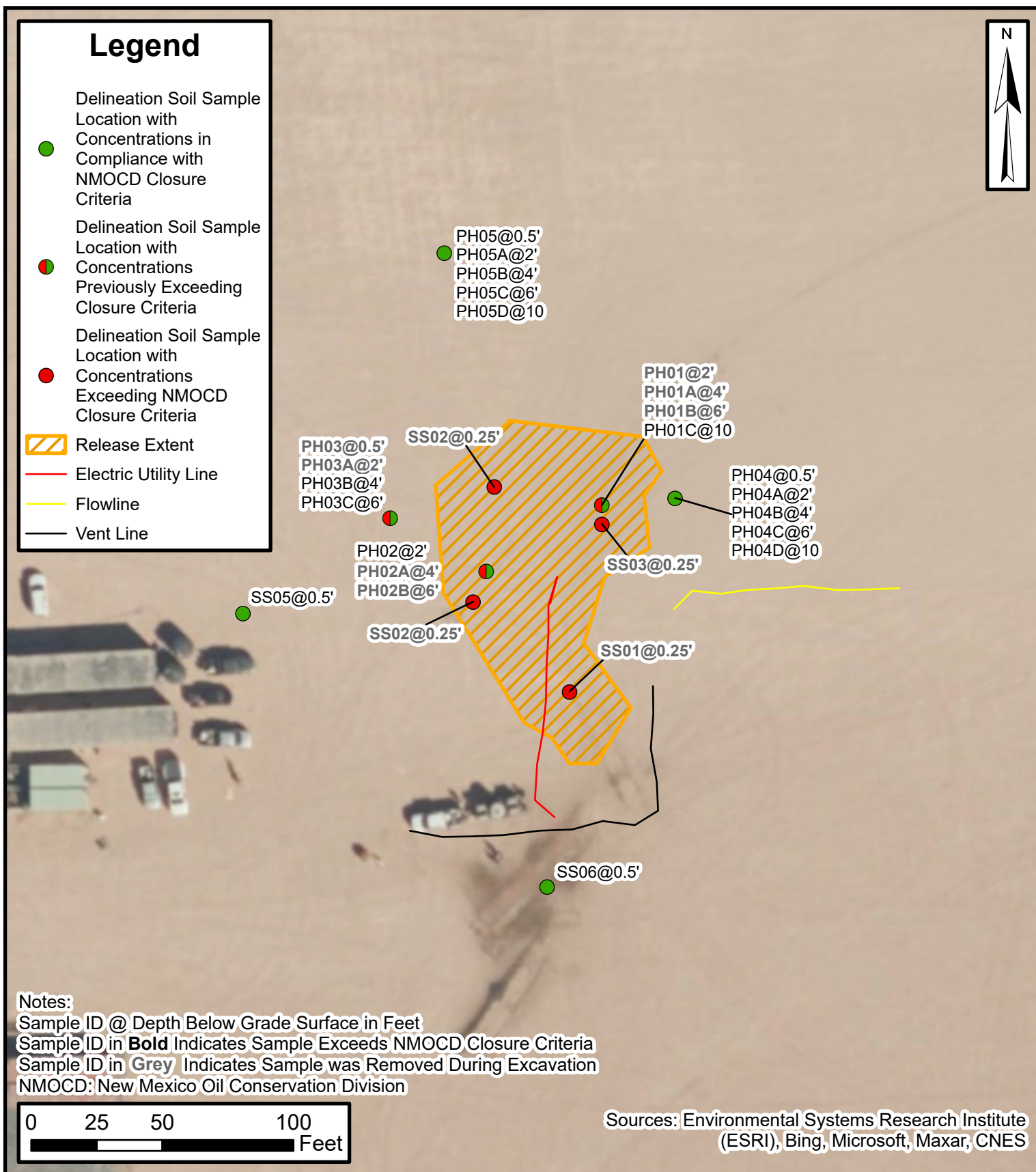


ENSOLUM
Environmental, Engineering and
Hydrogeologic Consultants

Site Receptor Map

XTO Energy INC.
JRUI DI 11 Ekalaka 823H
Incident Number: NAPP2224527297
Unit J, Sec 17, T22S, R30E
Eddy County, New Mexico

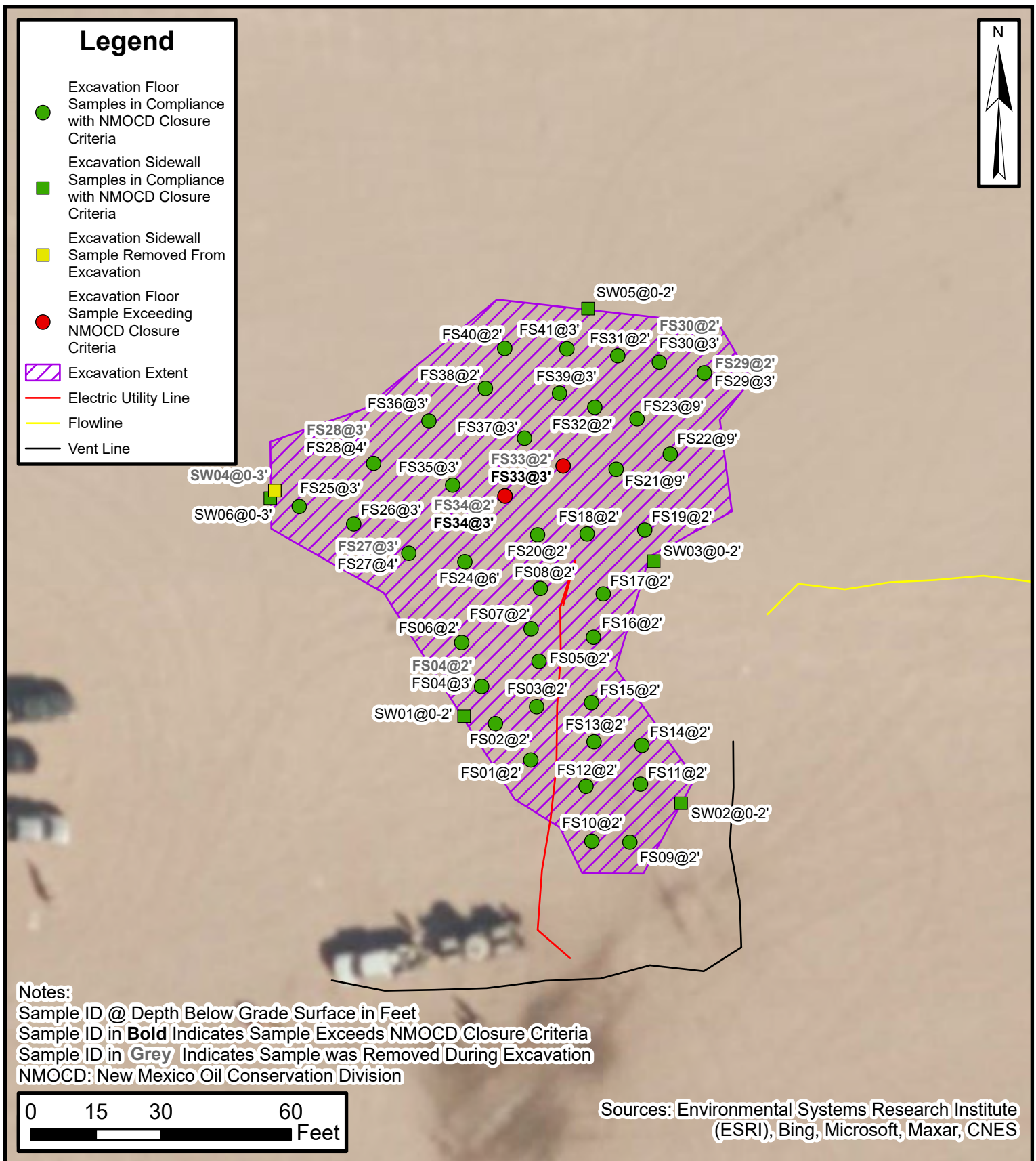
FIGURE 1



Delineation Soil Sample Locations

XTO Energy INC.
 JRU DI 11 Ekalaka 823H
 Incident Number: NAPP2224527297
 Unit J, Sec 17, T22S, R30E
 Eddy County, New Mexico

FIGURE
2



Excavation Soil Sample Locations

XTO Energy INC.
 JRU DI 11 Ekalaka 823H
 Incident Number: NAPP2224527297
 Unit J, Sec 17, T22S, R30E
 Eddy County, New Mexico

FIGURE
3



Table



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	<0.00204	<0.00402	<50.0	4,640	344	4,640	4,920	40,400
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
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	749
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
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



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
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
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
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
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



APPENDIX A

Photographic Log



Photographic Log

XTO Energy, Inc

JRU DI 11 Ekalaka 823H

Incident ID 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



APPENDIX B

Laboratory Analytical Reports & Chain-of-Custody Documentation



Environment Testing

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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

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



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

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

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

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

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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.
α	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

Eurofins Carlsbad

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.

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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: FS01

Lab Sample ID: 890-5168-1

Date Collected: 08/28/23 09:40

Matrix: Solid

Date Received: 08/28/23 15:30

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		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

Lab Sample ID: 890-5168-2

Date Collected: 08/28/23 09:45

Matrix: Solid

Date Received: 08/28/23 15:30

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		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

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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: FS02

Lab Sample ID: 890-5168-2

Date Collected: 08/28/23 09:45

Matrix: Solid

Date Received: 08/28/23 15:30

Sample Depth: 2

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

Lab Sample ID: 890-5168-3

Date Collected: 08/28/23 09:50

Matrix: Solid

Date Received: 08/28/23 15:30

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	-	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

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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: 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

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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: 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

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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: FS06

Lab Sample ID: 890-5168-6

Date Collected: 08/28/23 10:05

Matrix: Solid

Date Received: 08/28/23 15:30

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		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
Oil 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

Lab Sample ID: 890-5168-7

Date Collected: 08/28/23 10:10

Matrix: Solid

Date Received: 08/28/23 15:30

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		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

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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: 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

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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: 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	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

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			

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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

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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

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
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

Matrix: Solid

Analysis Batch: 61519

Client Sample ID: Matrix Spike

Prep Type: Total/NA

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

Matrix: Solid

Analysis Batch: 61519

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

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

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
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		08/30/23 15:11	08/31/23 08:03	1

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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						

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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

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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

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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	

Eurofins Carlsbad

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	

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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

Eurofins Carlsbad

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

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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

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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

Eurofins Carlsbad

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

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

Eurofins Carlsbad

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



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) 555-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Chain of Custody

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Ben Bell	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	Pres. Code	
Project Number:	03C1558118	Due Date:			
Project Location:	Connor Whitman	TAT starts the day received by the lab, if received by 4:30pm			
Sampler's Name:					
PO #:					
SAMPLE RECEIPT					
Samples Received Intact:	Yes ☒ No ☐	Thermometer ID:	71111111	Wet Ice:	Yes ☒ No ☐
Cooler Custody Seals:	Yes ☒ No ☐	Correction Factor:	-0.2		
Sample Custody Seals:	Yes ☒ No ☐	Temperature Reading:	3.1		
Total Containers:		Corrected Temperature:	3.3		
Parameters					
CHLORIDES (EPA: 3000.0)					
TPH (8015)					
BTEX (8021)					
					
890-5168 Chain of Custody					
ANALYSIS REQUEST					
Preservative Codes					
None: NO	DI Water: H ₂ O				
Cool: Cool	MeOH: Me				
HCL: HC	HNO ₃ : HN				
H ₂ SO ₄ : H ₂	NaOH: Na				
H ₃ PO ₄ : HP					
NaHSO ₄ : NABIS					
Na ₂ S ₂ O ₃ : NaSO ₃					
Zn Acetate+NaOH: Zn					
NaOH+Ascorbic Acid: SA.PC					
Sample Identification					
Sample ID	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp
F501	S	8/29/23	240	2'	C
F502			245		
F503			246		
F504			247		
F505			248		
F506			249		
F507			250		
F508			251		
F509			252		
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	Ti	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 Ti 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
CAH	Joe W	8-28-23 1530			
3			4		
5			6		

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	



Environment Testing

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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

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

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

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

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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.

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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: FS09

Lab Sample ID: 890-5178-1

Date Collected: 08/29/23 09:55

Matrix: Solid

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
Oil 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

Date Collected: 08/29/23 10:00

Matrix: Solid

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

Eurofins Carlsbad

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

Date Collected: 08/29/23 10:00

Matrix: Solid

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
Oil 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

Date Collected: 08/29/23 10:05

Matrix: Solid

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

Eurofins Carlsbad

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

Date Collected: 08/29/23 10:05

Matrix: Solid

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
Oil 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

Date Collected: 08/29/23 10:10

Matrix: Solid

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
Oil 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

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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: FS12

Lab Sample ID: 890-5178-4

Date Collected: 08/29/23 10:10

Matrix: Solid

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

Date Collected: 08/29/23 10:15

Matrix: Solid

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
Oil 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

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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: FS14

Lab Sample ID: 890-5178-6

Date Collected: 08/29/23 10:20

Matrix: Solid

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
Oil 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

Date Collected: 08/29/23 10:25

Matrix: Solid

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

Date Collected: 08/29/23 10:25

Matrix: Solid

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
Oil 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

Date Collected: 08/29/23 10:30

Matrix: Solid

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
Date Collected: 08/29/23 10:30
Date Received: 08/29/23 15:35
Sample Depth: 2

Lab Sample ID: 890-5178-8
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	<50.0	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	
Oil 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
Date Collected: 08/29/23 10:45
Date Received: 08/29/23 15:35
Sample Depth: 2

Lab Sample ID: 890-5178-9
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		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	
Oil 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	

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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: SW02

Lab Sample ID: 890-5178-9

Date Collected: 08/29/23 10:45

Matrix: Solid

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

Date Collected: 08/29/23 10:55

Matrix: Solid

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
Oil 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

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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: FS18

Lab Sample ID: 890-5178-11

Date Collected: 08/29/23 11:00

Matrix: Solid

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
Oil 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

Date Collected: 08/29/23 11:05

Matrix: Solid

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

Date Collected: 08/29/23 11:05

Matrix: Solid

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
Oil 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

Date Collected: 08/29/23 11:30

Matrix: Solid

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

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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: SW03

Lab Sample ID: 890-5178-13

Date Collected: 08/29/23 11:30

Matrix: Solid

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
Oil 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

Date Collected: 08/29/23 12:00

Matrix: Solid

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
Oil 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

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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: FS20

Lab Sample ID: 890-5178-14

Date Collected: 08/29/23 12:00

Matrix: Solid

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

Date Collected: 08/29/23 14:50

Matrix: Solid

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
Oil 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

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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: FS22

Lab Sample ID: 890-5178-16

Date Collected: 08/29/23 15:00

Matrix: Solid

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
Oil 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

Date Collected: 08/29/23 15:05

Matrix: Solid

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

Date Collected: 08/29/23 15:05

Matrix: Solid

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
Oil 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

Date Collected: 08/29/23 15:10

Matrix: Solid

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

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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: 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	
OII 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

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Surrogate Summary

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)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (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

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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

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		RPD	Limit
							Limits	RPD		
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		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	148	S1+	70 - 130
1,4-Difluorobenzene (Surr)	107		70 - 130

Lab Sample ID: 890-5178-1 MS

Matrix: Solid

Analysis Batch: 61708

Client Sample ID: FS09

Prep Type: Total/NA

Prep Batch: 61763

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec	
									Limits	RPD
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		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	136	S1+	70 - 130
1,4-Difluorobenzene (Surr)	105		70 - 130

Lab Sample ID: 890-5178-1 MSD

Matrix: Solid

Analysis Batch: 61708

Client Sample ID: FS09

Prep Type: Total/NA

Prep Batch: 61763

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
									Limits	RPD		
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		Limits
	%Recovery	Qualifier	
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

Matrix: Solid

Analysis Batch: 61701

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 61642

Analyte	MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
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 MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/31/23 12:13	09/01/23 07:51	1
Oil 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 MB		Limits			Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier						
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 LCS		Limits				
	%Recovery	Qualifier					
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 LCSD		Limits						
	%Recovery	Qualifier							
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 MS		Limits						
	%Recovery	Qualifier							
1-Chlorooctane	135	S1+	70 - 130						
o-Terphenyl	104		70 - 130						

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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: 880-32645-A-1-E MSD

Matrix: Solid

Analysis Batch: 61701

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

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

Matrix: Solid

Analysis Batch: 61688

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 15:52	1

Lab Sample ID: LCS 880-61635/2-A

Matrix: Solid

Analysis Batch: 61688

Client Sample ID: Lab Control Sample

Prep Type: Soluble

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

Matrix: Solid

Analysis Batch: 61688

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	247.3		mg/Kg		99	90 - 110	0	20

Lab Sample ID: 890-5177-A-11-B MS

Matrix: Solid

Analysis Batch: 61688

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	265		248	517.4		mg/Kg		102	90 - 110

Lab Sample ID: 890-5177-A-11-C MSD

Matrix: Solid

Analysis Batch: 61688

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	265		248	515.3		mg/Kg		101	90 - 110	0	20

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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

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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	

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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	

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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	

Eurofins Carlsbad

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

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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

Lab Sample ID: 890-5178-1

Date Collected: 08/29/23 09:55

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			5.03 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

Lab Sample ID: 890-5178-2

Date Collected: 08/29/23 10:00

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			4.96 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

Lab Sample ID: 890-5178-3

Date Collected: 08/29/23 10:05

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			4.97 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

Lab Sample ID: 890-5178-4

Date Collected: 08/29/23 10:10

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			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

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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

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Lab Chronicle

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

Date Collected: 08/29/23 10:25

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 13:58	CH	EET MID

Client Sample ID: FS16

Lab Sample ID: 890-5178-8

Date Collected: 08/29/23 10:30

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 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

Lab Sample ID: 890-5178-9

Date Collected: 08/29/23 10:45

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 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

Lab Sample ID: 890-5178-10

Date Collected: 08/29/23 10:55

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			5.05 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

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Lab Chronicle

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

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

Client Sample ID: FS18
Date Collected: 08/29/23 11:00
Date Received: 08/29/23 15:35

Lab Sample ID: 890-5178-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			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
Date Collected: 08/29/23 11:05
Date Received: 08/29/23 15:35

Lab Sample ID: 890-5178-12
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	09/02/23 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
Date Collected: 08/29/23 11:30
Date Received: 08/29/23 15:35

Lab Sample ID: 890-5178-13
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	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
Date Collected: 08/29/23 12:00
Date Received: 08/29/23 15:35

Lab Sample ID: 890-5178-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	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

Eurofins Carlsbad

Lab Chronicle

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

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

Client Sample ID: FS20
Date Collected: 08/29/23 12:00
Date Received: 08/29/23 15:35

Lab Sample ID: 890-5178-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			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
Date Collected: 08/29/23 14:50
Date Received: 08/29/23 15:35

Lab Sample ID: 890-5178-15
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	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
Date Collected: 08/29/23 15:00
Date Received: 08/29/23 15:35

Lab Sample ID: 890-5178-16
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 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
Date Collected: 08/29/23 15:05
Date Received: 08/29/23 15:35

Lab Sample ID: 890-5178-17
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	09/02/23 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

Eurofins Carlsbad

Lab Chronicle

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

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

Client Sample ID: FS23
Date Collected: 08/29/23 15:05
Date Received: 08/29/23 15:35

Lab Sample ID: 890-5178-17
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			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
Date Collected: 08/29/23 15:10
Date Received: 08/29/23 15:35

Lab Sample ID: 890-5178-18
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			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

- 1
- 2
- 3
- 4
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- 7
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- 9
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- 11
- 12
- 13
- 14

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



Environment Testing
Xenco

Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 508-3334
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 Beill	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

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 Ekakaka 823H	Turn Around	Pres. Code	ANALYSIS REQUEST																Preservative Codes				
Project Number:	03C1558118	☒ Routine ☐ Rush																		None: NO	DI Water: H ₂ O			
Project Location:	Connor Whitman	Due Date:																		Cool: Cool	MeOH: Me			
Sampler's Name:		TAT starts the day received by the lab, if received by 4:30pm																		HCL: HC	HNO ₃ : HN			
PO #:		Temp Blank:	☒ Yes ☐ No	Wet Ice:	☒ Yes ☐ No																	H ₂ SO ₄ : H ₂	NaOH: Na	
SAMPLE RECEIPT		Thermometer ID:	T _W Mac 01																		H ₃ PO ₄ : HP			
Samples Received Intact:	☒ Yes ☐ No	Correction Factor:	-0.2																		NaHSO ₄ : NABIS			
Cooler Custody Seals:	☒ Yes ☐ No	Temperature Reading:	4.8																		Na ₂ S ₂ O ₃ : NaSO ₃			
Sample Custody Seals:	☒ Yes ☐ No	Corrected Temperature:	4.6																		Zn Acetate+NaOH: Zn			
Total Containers:																					NaOH+Ascorbic Acid: SAPC			
Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Parameters																Sample Comments	
							CHLORIDES (EPA: 3000.0)																	Incident ID:
							TPH (8015)																	nAPP2224527297
							BTEX (8021)																	Cost Center:
																								2104541001
																								APE:
																								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 Ti Sn U V Zn	
Circle Method(s) and Metal(s) to be analyzed		TCPLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U		Hg: 1631 / 245.1 / 7470 / 7471			
Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time		
1 <i>Chatt</i>	<i>abcl</i>	8-24-22 15:35					
3							
5							

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 \$65.00 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.



Environment Testing
Xenco

Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 986-3199

Work Order No: _____

www.xenco.com Page 2 of 2

Project Manager:	Ben Beilli	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@XxonMobil.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 Etalaka 823H	Turn Around	Press. Code	ANALYSIS REQUEST																Preservative Codes																	
Project Number:	03C1558118	☒ Routine ☐ Rush																		None: NO DI Water: H ₂ O Cool: Cool MeOH: Me HCL: HC HNO ₃ : HN H ₂ SO ₄ : H ₂ H ₃ PO ₄ : HP NaHSO ₄ : NABIS Na ₂ S ₂ O ₃ : NaSO ₃ Zn Acetate+NaOH: Zn NaOH+Ascorbic Acid: SAPC																	
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	Thermometer ID:	Yes No	Well Ice:	Yes No	Parameters																											
Samples Received Inact:				Yes No		Correction Factor:				-0.2																											
Cooler Custody Seals:				Yes No N/A		Temperature Reading:				4.8																											
Sample Custody Seals:				Yes No N/A		Corrected Temperature:				4.6																											
Total Containers:																																					
Sample Identification		Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont																														
FSK		S	8/27/23	1100	2	C	1	CHLORIDES (EPA: 3000.0)																													
FS19				1105	2		1	TPH (8015)																													
SW3				1130	0-2		1	BTEX (8021)																													
FS20				1205	2		1																														
FS21				145	2		1																														
FS22				150	2		1																														
FS23				155	2		1																														
FS24				210	6		1																														

Total 2007 / 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 SiO₂ Na Sr Ti 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 Ti 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 \$65.00 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 CWD	AW	8-29-23 15:35			
3					
5					

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	



Environment Testing

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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

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



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

Laboratory Job ID: 890-5185-1
SDG: 03C1558118

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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

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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.

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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: FS25

Lab Sample ID: 890-5185-1

Date Collected: 08/30/23 09:40

Matrix: Solid

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
Oil 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

Date Collected: 08/30/23 09:45

Matrix: Solid

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

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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: FS26

Lab Sample ID: 890-5185-2

Date Collected: 08/30/23 09:45

Matrix: Solid

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
Oil 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

Date Collected: 08/30/23 09:55

Matrix: Solid

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

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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: SW04

Lab Sample ID: 890-5185-3

Date Collected: 08/30/23 09:55

Matrix: Solid

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
Oil 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

Date Collected: 08/30/23 10:05

Matrix: Solid

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
Oil 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

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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: FS27

Lab Sample ID: 890-5185-4

Date Collected: 08/30/23 10:05

Matrix: Solid

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

Date Collected: 08/30/23 10:10

Matrix: Solid

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
Oil 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

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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: FS29

Lab Sample ID: 890-5185-6

Date Collected: 08/30/23 10:15

Matrix: Solid

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
Oil 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

Date Collected: 08/30/23 10:20

Matrix: Solid

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

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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: FS30

Lab Sample ID: 890-5185-7

Date Collected: 08/30/23 10:20

Matrix: Solid

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
Oil 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

Date Collected: 08/30/23 10:50

Matrix: Solid

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

Date Collected: 08/30/23 10:50

Matrix: Solid

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
Oil 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

Date Collected: 08/30/23 10:55

Matrix: Solid

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
Oil 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

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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: FS32

Lab Sample ID: 890-5185-9

Date Collected: 08/30/23 10:55

Matrix: Solid

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

Date Collected: 08/30/23 11:00

Matrix: Solid

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

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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: FS34

Lab Sample ID: 890-5185-11

Date Collected: 08/30/23 11:05

Matrix: Solid

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
Oil 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

Date Collected: 08/30/23 11:15

Matrix: Solid

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

Date Collected: 08/30/23 11:15

Matrix: Solid

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
Oil 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

Date Collected: 08/30/23 12:20

Matrix: Solid

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

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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: FS35

Lab Sample ID: 890-5185-13

Date Collected: 08/30/23 12:20

Matrix: Solid

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

Date Collected: 08/30/23 12:25

Matrix: Solid

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

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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: FS36

Lab Sample ID: 890-5185-14

Date Collected: 08/30/23 12:25

Matrix: Solid

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

Date Collected: 08/30/23 12:30

Matrix: Solid

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
Oil 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

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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: FS38

Lab Sample ID: 890-5185-16

Date Collected: 08/30/23 12:35

Matrix: Solid

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
Oil 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

Date Collected: 08/30/23 12:50

Matrix: Solid

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

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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: FS39

Lab Sample ID: 890-5185-17

Date Collected: 08/30/23 12:50

Matrix: Solid

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
Oil 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

Date Collected: 08/30/23 12:55

Matrix: Solid

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

Date Collected: 08/30/23 12:55

Matrix: Solid

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
Oil 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

Date Collected: 08/30/23 13:00

Matrix: Solid

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
Oil 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

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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: FS41

Lab Sample ID: 890-5185-19

Date Collected: 08/30/23 13:00

Matrix: Solid

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

Date Collected: 08/30/23 13:20

Matrix: Solid

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
Oil 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

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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: SS05

Lab Sample ID: 890-5185-21

Date Collected: 08/30/23 13:30

Matrix: Solid

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	<0.00201	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
Oil 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

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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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BFB1 (70-130)	DFBZ1 (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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO1 (70-130)	OTPH1 (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

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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

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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

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		RPD	Limit
							Limits	RPD		
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		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	125		70 - 130
1,4-Difluorobenzene (Surr)	112		70 - 130

Lab Sample ID: 890-5185-1 MS

Matrix: Solid

Analysis Batch: 61708

Client Sample ID: FS25

Prep Type: Total/NA

Prep Batch: 61764

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec	
									Limits	RPD
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		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	125		70 - 130
1,4-Difluorobenzene (Surr)	113		70 - 130

Lab Sample ID: 890-5185-1 MSD

Matrix: Solid

Analysis Batch: 61708

Client Sample ID: FS25

Prep Type: Total/NA

Prep Batch: 61764

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
									Limits	RPD		
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		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	133	S1+	70 - 130
1,4-Difluorobenzene (Surr)	113		70 - 130

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		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
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

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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

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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

	MS	MS	
Surrogate	%Recovery	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

	MSD	MSD	
Surrogate	%Recovery	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
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/31/23 13:54	09/01/23 19:02	1

	MB	MB						
Surrogate	%Recovery	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	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	111		70 - 130
o-Terphenyl	113		70 - 130

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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
		LCSD %Recovery	LCSD Qualifier						
Surrogate									
1-Chlorooctane		118							
o-Terphenyl		114							

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	RPD	RPD Limit
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		
		MS %Recovery	MS Qualifier								
Surrogate											
1-Chlorooctane		138	S1+								
o-Terphenyl		107									

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
		MSD %Recovery	MSD Qualifier								
Surrogate											
1-Chlorooctane		138	S1+								
o-Terphenyl		107									

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
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		09/01/23 15:18	09/05/23 08:20	1

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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

	MB	MB								
Surrogate	%Recovery	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

			Spike	LCS	LCS				%Rec		
Analyte			Added	Result	Qualifier	Unit	D	%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		

	LCS	LCS									
Surrogate	%Recovery	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

			Spike	LCSD	LCSD				%Rec		RPD	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	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	

	LCSD	LCSD										
Surrogate	%Recovery	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

	Sample	Sample	Spike	MS	MS				%Rec			
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%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			

	MS	MS										
Surrogate	%Recovery	Qualifier	Limits									
1-Chlorooctane	152	S1+	70 - 130									
o-Terphenyl	120		70 - 130									

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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

Matrix: Solid

Analysis Batch: 61784

Client Sample ID: FS32

Prep Type: Total/NA

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

Matrix: Solid

Analysis Batch: 61766

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 16:44	1

Lab Sample ID: LCS 880-61640/2-A

Matrix: Solid

Analysis Batch: 61766

Client Sample ID: Lab Control Sample

Prep Type: Soluble

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

Matrix: Solid

Analysis Batch: 61766

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	252.9		mg/Kg		101	90 - 110	0	20

Lab Sample ID: 880-32730-A-4-B MS

Matrix: Solid

Analysis Batch: 61766

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	42.2		249	291.3		mg/Kg		100	90 - 110

Lab Sample ID: 880-32730-A-4-C MSD

Matrix: Solid

Analysis Batch: 61766

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	42.2		249	291.7		mg/Kg		100	90 - 110	0	20

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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

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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	

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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	

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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	

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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	

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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

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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

Date Collected: 08/30/23 09:40

Date Received: 08/30/23 15:15

Lab Sample ID: 890-5185-1

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			5.05 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

Date Collected: 08/30/23 09:45

Date Received: 08/30/23 15:15

Lab Sample ID: 890-5185-2

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			4.98 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

Date Collected: 08/30/23 09:55

Date Received: 08/30/23 15:15

Lab Sample ID: 890-5185-3

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	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

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	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

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Lab Chronicle

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

Date Collected: 08/30/23 10:05

Matrix: Solid

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	09/05/23 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

Lab Sample ID: 890-5185-5

Date Collected: 08/30/23 10:10

Matrix: Solid

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 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

Lab Sample ID: 890-5185-6

Date Collected: 08/30/23 10:15

Matrix: Solid

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 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

Lab Sample ID: 890-5185-7

Date Collected: 08/30/23 10:20

Matrix: Solid

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 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

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Lab Chronicle

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

Date Collected: 08/30/23 10:20

Matrix: Solid

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
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

Lab Sample ID: 890-5185-8

Date Collected: 08/30/23 10:50

Matrix: Solid

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 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

Lab Sample ID: 890-5185-9

Date Collected: 08/30/23 10:55

Matrix: Solid

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 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

Lab Sample ID: 890-5185-10

Date Collected: 08/30/23 11:00

Matrix: Solid

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 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

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Lab Chronicle

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

Job ID: 890-5185-1
SDG: 03C1558118

Client Sample ID: FS34
Date Collected: 08/30/23 11:05
Date Received: 08/30/23 15:15

Lab Sample ID: 890-5185-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			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
Date Collected: 08/30/23 11:15
Date Received: 08/30/23 15:15

Lab Sample ID: 890-5185-12
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 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
Date Collected: 08/30/23 12:20
Date Received: 08/30/23 15:15

Lab Sample ID: 890-5185-13
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	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
Date Collected: 08/30/23 12:25
Date Received: 08/30/23 15:15

Lab Sample ID: 890-5185-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	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

Eurofins Carlsbad

Lab Chronicle

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

Job ID: 890-5185-1
SDG: 03C1558118

Client Sample ID: FS36
Date Collected: 08/30/23 12:25
Date Received: 08/30/23 15:15

Lab Sample ID: 890-5185-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			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
Date Collected: 08/30/23 12:30
Date Received: 08/30/23 15:15

Lab Sample ID: 890-5185-15
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 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
Date Collected: 08/30/23 12:35
Date Received: 08/30/23 15:15

Lab Sample ID: 890-5185-16
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 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
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
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

Lab Sample ID: 890-5185-17

Date Collected: 08/30/23 12:50

Matrix: Solid

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
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

Lab Sample ID: 890-5185-18

Date Collected: 08/30/23 12:55

Matrix: Solid

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 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

Lab Sample ID: 890-5185-19

Date Collected: 08/30/23 13:00

Matrix: Solid

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 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

Lab Sample ID: 890-5185-20

Date Collected: 08/30/23 13:20

Matrix: Solid

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 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

Eurofins Carlsbad

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



Environment Testing
Xenco

Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 3

Project Manager:	Ben Beilli	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: USTR/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 Ekakaka 823H	Turn Around	☒ Routine ☐ Rush	Pres. Code	
Project Number:	03C1558118	Due Date:			
Project Location:	Connor Whitman	TAT starts the day received by the lab, if received by 4:30pm			
Sampler's Name:					
PO #:					
SAMPLE RECEIPT	Temp Blank: ☒ Yes ☒ No	Thermometer ID: TW-5003	Wet Ice: ☒ Yes ☒ No	Parameters	
Samples Received Intact:	☒ Yes ☒ No	Correction Factor:			
Cooler Custody Seals:	☒ Yes ☒ No	Temperature Reading:	4.0		
Sample Custody Seals:	☒ Yes ☒ No	Corrected Temperature:	4.0		
Total Containers:					



890-5185 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	CHLORIDES (EPA: 3000.0)	TPH (8015)	BTEX (8021)	ANALYSIS REQUEST										Preservative Codes	
FS25	S	8/30/23	940	3	C	1												Incident ID:			
FS26			945	3		1												NAPP2224527297			
FS27			955	6-3		1												Cost Center:			
FS28			1005	3		1												2104541001			
FS29			1010	3		1												AFE:			
FS30			1015	2		1												DD.2019.06665 CAP CMP			
FS31			1020	2		1															
FS32			1050	2		1															
FS33			1055	2		1															
FS33			1100	2		1															

Total 200.7 / 6010	200.8 / 6020:	8RCRA 13PPM	Texas 11	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	SiO ₂	Na	Sr	Ti	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	Ti	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
CTK	Cox	8-30-23 1515			
3					
5					



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

Chain of Custody

Work Order No: _____

www.xenco.com Page 2 of 3

Project Manager:	Ben Belli	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

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 Ekialaka 823H	Turn Around	Pres. Code	ANALYSIS REQUEST																	
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 #:		Temp Blank:	Yes No	Wet Ice:	Yes No																
SAMPLE RECEIPT		Samples Received Intact:	Yes No	Thermometer ID:																	
		Cooler Custody Seals:	Yes No	Correction Factor:																	
		Sample Custody Seals:	Yes No	Temperature Reading:																	
Total Containers:			Corrected Temperature:																		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	CHLORIDES (EPA: 3000.0)	TPH (8015)	BTEX (8021)	PRESERVATIVE CODES															
FS34	S	8/30/23	1105	2	C	1				None: NO	DI Water: H ₂ O														
SV05			1115	0-2		1				Cool: Cool	MeOH: Me														
FS35			1220	3		1				HCL: HC	HNO ₃ : HN														
FS36			1225	3		1				H ₂ SO ₄ : H ₂	NaOH: Na														
FS37			1230	3		1				H ₃ PO ₄ : HP															
FS38			1235	2		1				NaHSO ₄ : NABIS															
FS39			1250	3		1				Na ₂ S ₂ O ₃ : NaSO ₃															
FS40			1255	2		1				Zn Acetate+NaOH: Zn															
FS41			100	2		1				NaOH+Ascorbic Acid: SAPC															
SC06			120	.5	G	1																			

Total 200.7 / 6010	200.8 / 6020:	8RCRA 13PPM	Texas 11	Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO ₂ Na Sr Ti 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 Ti U Hg: 1631 / 245.1 / 7470 / 7471		

Notes: 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 \$95.00 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
		8:30:23 1515			



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

Chain of Custody

Work Order No: _____

www.xenco.com Page 3 of 3

Project Manager:	Ben Belli	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 ☐ RRP ☐ 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 Ekialaka 823H	Turn Around	Press. Code	ANALYSIS REQUEST												Preservative Codes	
Project Number:	03C1558118	☒ Routine ☐ Rush														None: NO	DI Water: H ₂ O
Project Location:		Due Date:														Cool: Cool	MeOH: Me
Sampler's Name:	Connor Whitman	TAT starts the day received by the lab, if received by 4:30pm														HCL: HC	HNO ₃ : HN
PO #:																H ₂ SO ₄ : H ₂	NaOH: Na
SAMPLE RECEIPT	Temp Blank:	Yes No	Wet/Dry:													H ₃ PO ₄ : HP	
Samples Received Intact:	Yes No	Thermomixer:														NaHSO ₄ : NABIS	
Cooler Custody Seals:	Yes No	Corrected Factor:														Na ₂ S ₂ O ₃ : NaSO ₃	
Sample Custody Seals:	Yes No	Temperature Reading:														Zn Acetate+NaOH: Zn	
Total Containers:		Corrected Temperature:														NaOH+Ascorbic Acid: SAPC	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grav/ Comp	# of Cont	CHLOR	TPH (80	BTEX (8	Sample Comments										
5505	S	5/30/23	130	.5	G	1	1	1	1	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 Ti 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 Ti 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
4/4/24	Joe Gp	8.30.23 1515			
3					
5					

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	



Environment Testing

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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

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

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

Laboratory Job ID: 890-5220-1
SDG: 03C1558118

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Definitions/Glossary

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

Job ID: 890-5220-1
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

Date Collected: 09/07/23 10:05

Matrix: Solid

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
Oil 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

Date Collected: 09/07/23 10:20

Matrix: Solid

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

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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: SW06

Lab Sample ID: 890-5220-2

Date Collected: 09/07/23 10:20

Matrix: Solid

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
Oil 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

Date Collected: 09/07/23 10:30

Matrix: Solid

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

Eurofins Carlsbad

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

Date Collected: 09/07/23 10:30

Matrix: Solid

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
Oil 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

Date Collected: 09/07/23 10:55

Matrix: Solid

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
Oil 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

Eurofins Carlsbad

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

Date Collected: 09/07/23 10:55

Matrix: Solid

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

Date Collected: 09/07/23 11:25

Matrix: Solid

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
Oil 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

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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: FS28A

Lab Sample ID: 890-5220-6

Date Collected: 09/07/23 11:30

Matrix: Solid

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
Oil 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

Date Collected: 09/07/23 12:30

Matrix: Solid

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

Date Collected: 09/07/23 12:30

Matrix: Solid

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
Oil 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

Date Collected: 09/07/23 12:35

Matrix: Solid

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

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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: 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			

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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

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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

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
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	MS Limits
4-Bromofluorobenzene (Surr)	93		70 - 130
1,4-Difluorobenzene (Surr)	88		70 - 130

Lab Sample ID: 890-5220-1 MSD

Matrix: Solid

Analysis Batch: 62126

Client Sample ID: FS04A

Prep Type: Total/NA

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	MSD 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

Matrix: Solid

Analysis Batch: 62116

Client Sample ID: Method Blank

Prep Type: Total/NA

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
Oil 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	MB 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

Matrix: Solid

Analysis Batch: 62116

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

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

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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

	LCS	LCS	
Surrogate	%Recovery	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

			Spike	LCSD	LCSD				%Rec			
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	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	

	LCSD	LCSD	
Surrogate	%Recovery	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

	Sample	Sample	Spike	MS	MS				%Rec			
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
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			

	MS	MS	
Surrogate	%Recovery	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

	Sample	Sample	Spike	MSD	MSD				%Rec			
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	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	

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	122		70 - 130
o-Terphenyl	93		70 - 130

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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

Eurofins Carlsbad

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	

Eurofins Carlsbad

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

Date Collected: 09/07/23 10:05

Matrix: Solid

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

Date Collected: 09/07/23 10:20

Matrix: Solid

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

Date Collected: 09/07/23 10:30

Matrix: Solid

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

Date Collected: 09/07/23 10:55

Matrix: Solid

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

Eurofins Carlsbad

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14



Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Ben Bell	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

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 Ekaka 823H	Turn Around	☒ Routine ☒ Rush	Pres. Code	
Project Number:	03C1558118	Due Date:	2/4/24		
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:	TMM 007		
Cooler Custody Seals:	☒ Yes ☒ No	Correction Factor:	-0.2		
Sample Custody Seals:	☒ Yes ☒ No	Temperature Reading:	C. 2		
Total Containers:		Corrected Temperature:	C. 0		
Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp
ES04A	S	9/7/23	10:05	3	C
SN06			10:20	0-3	
FS34A			10:30	3	
FS33A			10:55	3	
FS27A			11:25	4	
FS28A			11:30	4	
FS30A			12:30	3	
FS29A			12:35	3	
ANALYSIS REQUEST					
Parameters					
CHLORIDES (EPA: 3000.0)					
TPH (8015)					
BTEX (8021)					
PRESERVATIVE CODES					
None: NO DI Water: H ₂ O					
Cool: Cool MeOH: Me					
HCL: HC HNO ₃ : HN					
H ₂ SO ₄ : H ₂ NaOH: Na					
H ₃ PO ₄ : HP					
NaHSO ₄ : NABIS					
Na ₂ S ₂ O ₃ : NASO ₃					
Zn Acetate+NaOH: Zn					
NaOH+Ascorbic Acid: SACP					
Sample Comments					
Incident ID: NAPP224527297					
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 Ti Sn U V Zn	
Circle Method(s) and Metal(s) to be analyzed		TCIP / SPLP 6010, 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U Hg: 1631 / 245.1 / 7470 / 7471			
Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
4/4/24	4/4/24	4-7-23 15:15			

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	



APPENDIX C

NMOCD Correspondance

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



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



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 Belli](#); [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



Environmental Technician

melanie.collins@exxonmobil.com

432-556-3756

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

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

CONDITIONS

Action 265455

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 265455
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
scott.rodgers	Remediation Plan Addendum Approved. Please submit Remediation Closure Report by 04/15/2024.	2/14/2024