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 ~~183H~~ 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: [x] 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)
[x] 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.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2224527297
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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 not been undertaken, explain why:

NA

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

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

Printed Name: Shelby G. Pennington
Title: Environmental Manager

Signature: Shelby Pennington
Date: 9/1/2022

email: shelby.g.pennington@exxonmobil.com
Telephone: 281-723-9353

OCD Only

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

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2224527297
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2224527297
District RP	
Facility ID	
Application ID	

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

Printed Name: _Garrett Green_____ Title: _Environmental Coordinator_____

Signature:_____ Date: ____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
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)

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:

State of New Mexico
Oil Conservation Division

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.***

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☒ Scaled sitemap with GPS coordinates showing delineation points
☒ Estimated volume of material to be remediated
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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: Garrett Green 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: Robert Hamlet Date: 6/16/2023

ENSOLUM

February 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 (Work Plan)* to document site assessment and delineation activities completed to date and proposes remedial actions to address impacted soil identified at the JRU DI 11 Ekalaka 823H (Site). The purpose of the Site assessment and delineation activities was to determine the presence or absense of impacted soil resulting from a release of produced water with friction reducer at the Site. The following *Work Plan* proposes to excavate impacted soil and fully delineate the release extent.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit J, Section 17, Township 22 South, Range 30 East, in Eddy County, New Mexico (32.39098°, -103.90321°) and is associated with oil and gas exploration and production operations on state land managed by the New Mexico State Land Office (SLO).

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.

Produced water is recycled through filtering and separation, then mixed in a blender with friction reducer and used as hydraulic fracturing (frac) fluid during the well completion process. The safety data sheet (SDS) for friction reducer is provided as Appendix A. The temporary liner containment was removed prior to beginning Site assessment activities. As such, a liner inspection could not be completed.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

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

Depth to groundwater at the Site is estimated to be between 50 feet and 100 feet below ground surface (bgs) based on nearby groundwater well data. The closest permitted groundwater well with depth to groundwater data is United States Geological Survey (USGS) well 322432103543301, located approximately 1.3 miles north of the Site. The groundwater well has a reported depth to groundwater of 66 feet bgs and a total depth of 176 feet bgs. Two other USGS well locations are closer to the Site, but the most recent groundwater data for each well exceeds the NMOCD recommended guideline of depth to groundwater data collected within the last 25 years. All wells used for depth to water determination are depicted on Figure 1 and the well record is included in Appendix B.

The closest continuously flowing or significant watercourse to the Site is a seasonal dry wash, located approximately 907 feet northwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is underlain by unstable geology (high potential karst designation area).

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

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

Because the release included produced water and friction reducer, the SDS was reviewed to determine what additional chemcials of concern (COCs), if any, should be assessed. According to the SDS, the friction reducer does not cotain any chemicals regulated by the Clean Water Act (CWA) or the Comprehensive Environmental Response Compensation and Liability Act (CERCLA); however the friction reducer does include hydro treated petroleum distillates, which can be detected through analysis of TPH. As such, no additional COCs were assessed for this release.

SITE ASSESSMENT AND DELINEATION ACTIVITIES

On September 26, 2022, Ensolum personnel conducted a Site assessment to evaluate the release extent based on information provided on the Form C-141 and visual observations. Four delineation soil samples (SS01 through SS04) were collected within the release extent at a depth of approximately 0.25 feet bgs to assess for the presence or absence of impacted soil. The soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The release extent and soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of the following COCs: BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-gasoline range organice (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 Celcius required for shipment and long term storage, but are considered by the laboratory to have been received in acceptable condition.

Based on elevated TPH and chloride concentrations observed in soil samples SS01 through SS04, additional delineation activities appeared to be warranted.

On November 2 and 3, 2022, Ensolum returned to the Site to oversee additional delineation activities. Potholes PH01 through PH05 were advanced by use of heavy equipment within and around the release extent. The potholes were advanced to depths ranging from 6 feet to 10 feet bgs. Discrete soil samples were collected from each pothole at depths ranging from 0.5 feet bgs to 10 feet bgs. Delineation potholes PH01 and PH02 were collected within the release extent and delineation pothols PH03 through PH05 were collected outside the visible release extent. Additional delineation to the south and further west, beyond PH03, was not possible due to ongoing flowback operations in those areas. The delineation soil samples were field screened, handled, and submitted for analysis as described above at Eurofins. Field screening results and observations were logged on lithologic/soil sampling logs, which are included in Appendix C. The delineation soil sample locations are depicted on Figure 2. Photographic documentation was completed during the Site visits and a photographic log is included in Appendix D.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for all delineation soil samples collected indicated benzene and BTEX concentrations were below the Site Closure Criteria. Analytical results indicated TPH existed in soil samples SS01 through SS04 at concentrations ranging from 4,920 mg/kg to 7,300 mg/kg, and in PH02B at 147 mg/kg. All other soil samples collected indicated TPH concentrations were in compliance with the Site Closure Criteria. Chloride concentrations varied throughout all delineation soil samples collected within the release extent. Chloride concentrations exceeding the Closure Criteria in soil samples SS01 through SS04 and PH01 through PH03. Delineation soils samples PH04 and PH05, collected to the east and north of the release extent, indicated all COC concentrations were compliant with the Closure Criteria and successfully delineate the release in those directions. Further delineation to the west and south was not possible due to ongoing XTO operations in those areas. Laboratory Analytical Reports & Chain-of-Custody Documentation are presented in Appendix E. NMOCD notifications are presented in Appendix F.

PROPOSED REMEDIATION WORK PLAN

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 exist across an approximate 8,300 square-foot area and at depths ranging from 2 feet to 6 feet bgs. Vertical definition of the release has been established in PH01 at 10 feet bgs. Horizontal definition of the release has been established to the north (PH05) and the east (PH04) but COC concentrations in pothole PH03 indicate the western edge is not defined and delineation soil samples were not collected south of the release extent due to on-site XTO operations conducting work at the time delineation activities were being conducted.

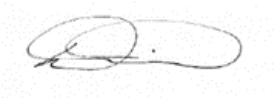
XTO proposes to remove TPH and chloride impacted soil identified at the Site. The proposed excavation extent is depicted on Figure 3. Following the removal of impacted soil, confirmation samples will be collected from the floors and sidewalls of the final excavation extent. Due to the estimated size of the excavation, XTO requests a variance for frequency of excavation confirmation samples. XTO proposes five-point composite samples to be collected at a sampling frequency of every 500 square feet along the excavation floor and sidewalls. The proposed sampling frequency would reduce the total amount of samples from approximately 55 samples (200 square foot frequency) to approximately 22 samples. The soil samples will be handled and analyzed for COCs as described above and submitted to Eurofins for laboratory analysis. An estimated 1,850 cubic yards of impacted soil will be removed. The excavated

soil will be transferred a New Mexico approved landfill facility for disposal. The excavation will be backfilled and recontoured to match pre-existing conditions.

XTO believes this *Work Plan* is protective of human health, the environment, and groundwater. As such, XTO requests approval of this *Work Plan* by NMOCD. XTO will complete the excavation and soil sampling activities within 90 days of the date of approval of this *Work Plan* by the NMOCD. If you have any questions or comments, please contact Ms. Tacoma Morrissey at (337) 257-8307 or tmorrissey@ensolum.com.

Sincerely,
Ensolum, LLC

Connor Whitman
Field Geologist



Daniel R. Moir, PG
Senior Managing Geologist

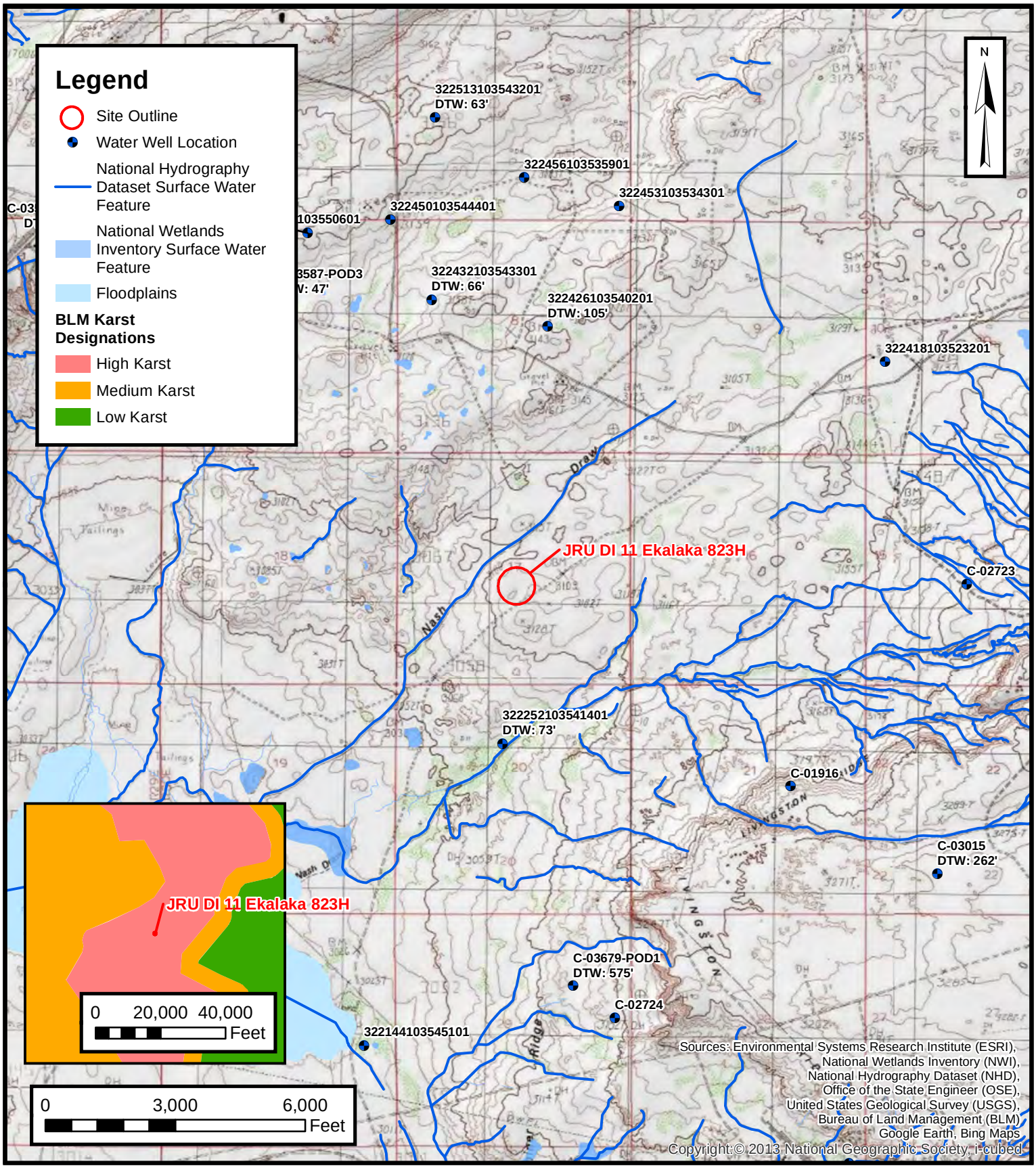
cc: Garrett Green, XTO
Shelby Pennington, XTO
SLO

Appendices:

Figure 1	Site Location Map
Figure 2	Soil Sample Locations
Figure 3	Proposed Excavation Extent
Table 1	Soil Sample Analytical Results
Appendix A	Friction Reducer SDS
Appendix B	Referenced Well Records
Appendix C	Lithologic / Soil Sampling Logs
Appendix D	Photographic Log
Appendix E	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix F	NMOCD Notifications/Correspondence

ENSOLUM

FIGURES

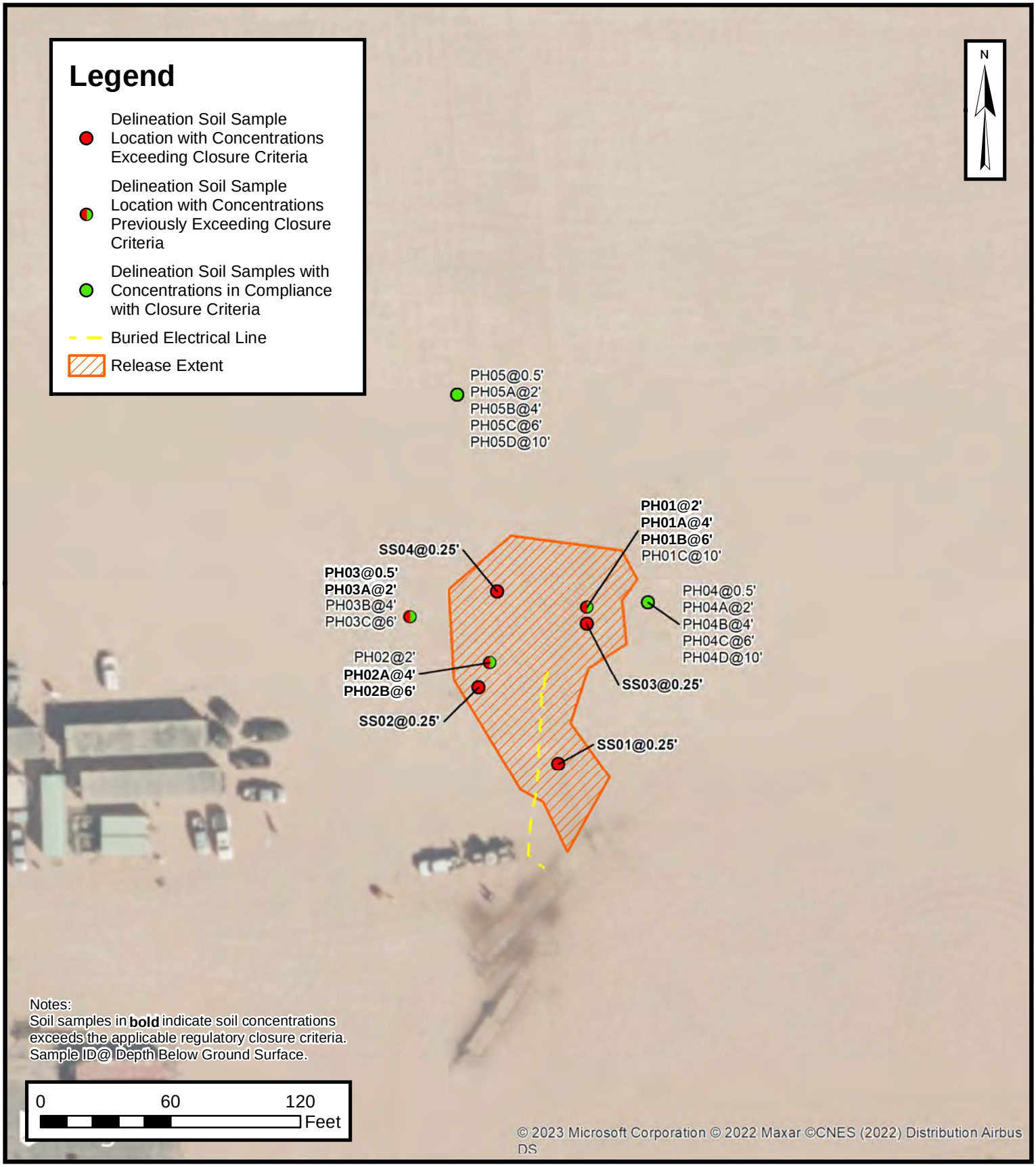


ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

XTO Energy, Inc
JRU DI 11 Ekalaka 823H
NAPP2224527297
Unit J, Sec 17, T22S, R30E
Eddy County, New Mexico

FIGURE
1

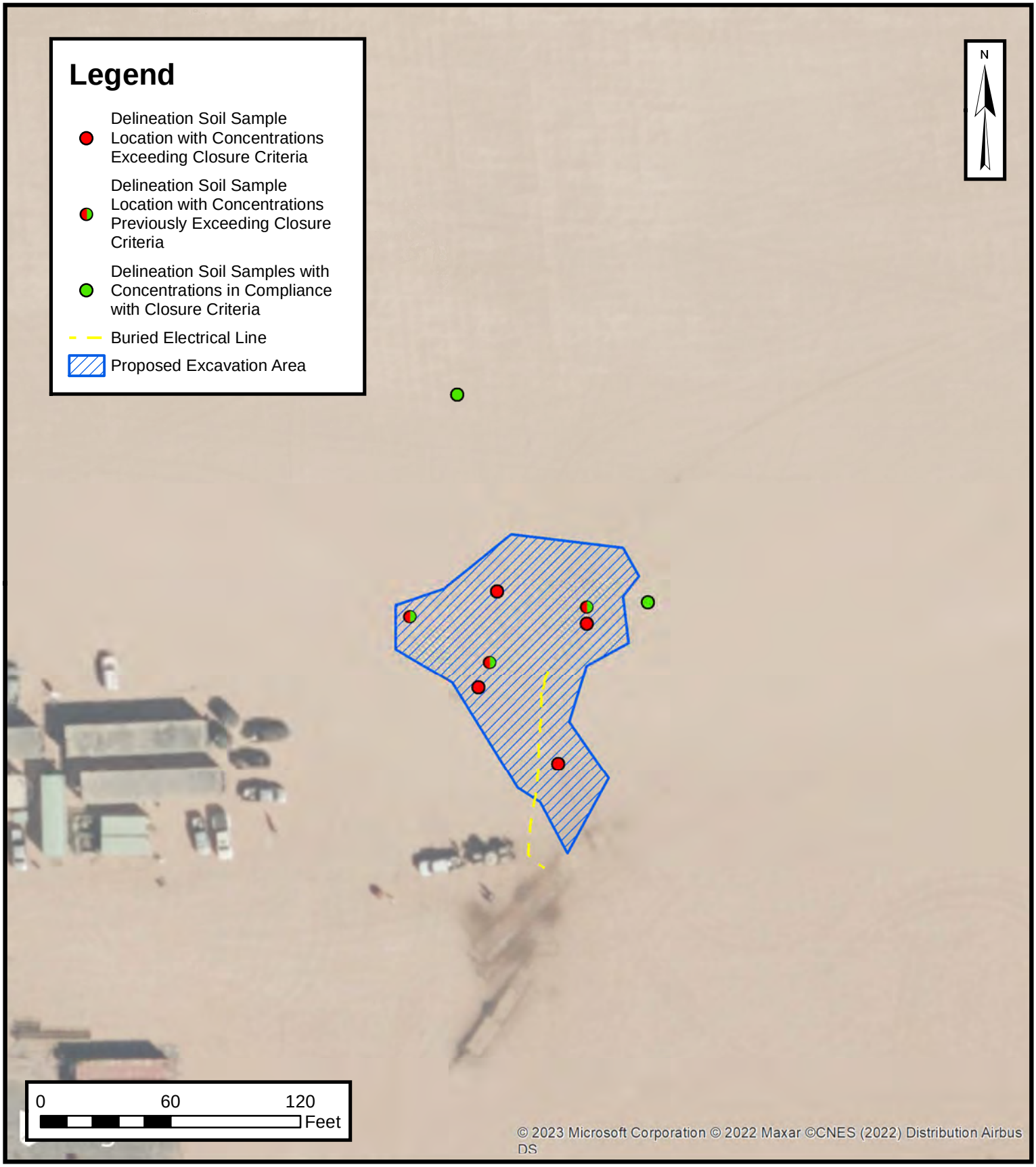


ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Delineation Soil Sample Locations

XTO Energy, Inc
JRU DI 11 Ekalaka 823H
NAPP2224527297
Unit J, Sec 17, T22S, R30E
Eddy County, New Mexico

FIGURE
2



ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Proposed Excavation Area

XTO Energy, Inc
JRU DI 11 Ekalaka 823H
NAPP2224527297
Unit J, Sec 17, T22S, R30E
Eddy County, New Mexico

FIGURE

3

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TABLES

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

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
Delineation Soil Samples										
SS01	09/26/2022	0.25	<0.00201	<0.00402	<50.0	4,610	314	4,610	**4,920**	**10,400**
SS02	09/26/2022	0.25	<0.00202	<0.00403	<50.0	3,960	1,030	3,960	**4,990**	**4,440**
SS03	09/26/2022	0.25	<0.00199	<0.00398	<250	5,730	1,390	5,730	**7,120**	**4,690**
SS04	09/26/2022	0.25	<0.00200	<0.00399	<250	6,320	984	6,320	**7,300**	**30,400**
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

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

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			**10**	**50**	**NE**	**NE**	**NE**	**NE**	**100**	**600**
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

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

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APPENDIX A

Friction Reducer SDS

PFP INDUSTRIES

SAFETY DATA SHEET

Issuing Date 01-Aug-2019 **Revision Date** 01-Aug-2019 **Revision Number** 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name POLYglide Xcel-200

Other means of identification

Product Code(s) 10497

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use No information available

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Address
PfP Industries
29738 Goynes Rd.
Katy, TX 77493

Manufacturer Address
PfP Industries
29738 Goynes Rd.
Katy, TX 77493

Emergency telephone number

Company Phone Number 281-371-2000

Emergency Telephone Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids	Category 4

Hazards not otherwise classified (HNOC)
Not applicable

Label elements

Warning

Combustible liquid

Appearance Opaque **Physical state** Liquid **Odor** Mineral Oil

Precautionary Statements - Prevention
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

In case of fire: Use CO2, dry chemical, or foam for extinction

Precautionary Statements - Storage
Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Other Information
May be harmful in contact with skin
Harmful to aquatic life

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Chemical name	CAS No	Weight-%	Trade secret
Petroleum distillates, hydrotreated light	64742-47-8	40 - 70	

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

Inhalation Remove to fresh air.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Ingestion Clean mouth with water and drink afterwards plenty of water.

Self-protection of the first aider Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Dry chemical. Carbon dioxide (CO2). Water spray. Alcohol resistant foam.

Unsuitable extinguishing media CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Take precautionary measures against static discharges. Do not touch or walk through spilled material.

Environmental precautions

Environmental precautions Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Do not touch or walk through spilled material. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use personal protection equipment. Do not breathe vapor or mist. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Use with local exhaust ventilation.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Store in accordance with the particular national regulations. Store in accordance with local regulations.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles.

Skin and body protection No special protective equipment required.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Opaque
Color	Milky white to yellow
Odor	Mineral Oil
Odor threshold	No information available

Property	Values	Remarks • Method
pH	No data available	None known
Melting point / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash point	>= 67 °C / 153 °F	
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability limit:	No data available	
Lower flammability limit:	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	0.97 - 1.03	
Water solubility	Miscible in water	
Solubility in other solvents	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	≥150 mm²/s	
Dynamic viscosity	No data available	None known
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Liquid Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	Specific test data for the substance or mixture is not available.
Ingestion	Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Numerical measures of toxicity

Acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document.

ATEmix (oral)	5,005.00 mg/kg
ATEmix (dermal)	2,002.00 mg/kg
ATEmix (inhalation-dust/mist)	5.20 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Petroleum distillates, hydrotreated light 64742-47-8	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.2 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Petroleum distillates, hydrotreated light 64742-47-8	-	2.4: 96 h Oncorhynchus mykiss mg/L LC50 static 45: 96 h Pimephales promelas mg/L LC50 flow-through 2.2: 96 h Lepomis macrochirus mg/L LC50 static	-	4720: 96 h Den-dronereides heteropoda mg/L LC50

Persistence and degradability No information available.

Bioaccumulation There is no data for this product.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

14. TRANSPORT INFORMATION

DOT Not regulated. Product does not sustain combustion (49 CFR 173.120(b)(3))

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Does not comply
IECSC	Complies
KECL	Complies

PICCS	Complies
AICS	Complies

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	Yes
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

US State Regulations This product does not contain any substances regulated by state right-to-know regulations

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	Health hazards	2	Flammability	2	Instability	0	Physical and chemical properties -
HMIS	Health hazards	2	Flammability	2	Physical hazards	0	Personal protection X

Issuing Date	01-Aug-2019
Revision Date	01-Aug-2019
Revision Note	No information available.

Disclaimer

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End of Safety Data Sheet

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APPENDIX B

Referenced Well Records

Click to hideNews Bulletins

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

Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 322432103543301

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

USGS 322432103543301 22S.30E.07.242224

Eddy County, New Mexico
Latitude 32°24'32", Longitude 103°54'33" NAD27
Land-surface elevation 3,128 feet above NAVD88
The depth of the well is 176 feet below land surface.
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

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

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source measu
1949-05-18		D	62610		3040.69	NGVD29	1	Z		
1949-05-18		D	62611		3042.28	NAVD88	1	Z		
1949-05-18		D	72019	85.72			1	Z		
1976-12-08		D	62610		3067.18	NGVD29	1	Z		
1976-12-08		D	62611		3068.77	NAVD88	1	Z		
1976-12-08		D	72019	59.23			1	Z		
1983-01-18		D	62610		3065.69	NGVD29	1	Z		
1983-01-18		D	62611		3067.28	NAVD88	1	Z		
1983-01-18		D	72019	60.72			1	Z		
1987-10-20		D	62610		3061.42	NGVD29	1	Z		
1987-10-20		D	62611		3063.01	NAVD88	1	Z		
1987-10-20		D	72019	64.99			1	Z		
1992-12-09		D	62610		3059.29	NGVD29	1	S		
1992-12-09		D	62611		3060.88	NAVD88	1	S		
1992-12-09		D	72019	67.12			1	S		
1998-01-28		D	62610		3060.09	NGVD29	1	S		

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source measu
1998-01-28		D	62611		3061.68	NAVD88	1	S		
1998-01-28		D	72019	66.32			1	S		

Explanation

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

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APPENDIX C

Lithologic Soil Sampling Logs

ENSOLUM

	Sample Name: PH01	Date: 11/02/2022
	Site Name: JRU DI 11 Ekalaka 823H	
	Incident Number: NAPP222452797	
	Job Number: 03E1558118	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Connor Whitman	Method: Excavation
Coordinates: 32.39098, -103.90321	Hole Diameter: 3.5	Total Depth: 10'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
M	7,496	2.7	Y			1	CCHE	CALICHE with gravel and silt, moist with H/C stain but no odor.
M	7,341	1.6	Y	PH01	2	2		
M	8,596	0.7	Y			3		
M	11,748	0.6	N	PH01A	4	4	ANHY	ANHYDRITE with sand, moist, no stain or odor.
M	10,858	0.0	N			5		
M	7,946	1.3	N	PH01B	6	6		
M	2,329	0.0	N			8		
						9		
N	<168	0.0	N	PH01C	10	10		

Total Depth at 10 feet bgs.

ENSOLUM

	Sample Name: PH02	Date: 11/03/2022
	Site Name: JRU DI 11 Ekalaka 823H	
	Incident Number: NAPP222452797	
	Job Number: 03E1558118	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Connor Whitman	Method: Excavation
Coordinates: 32.39098, -103.90321	Hole Diameter: 3.5	Total Depth: 6'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
M	7,560	71.2	Y			1	CCHE	CALICHE with gravel and silt, moist brown stain but no H/C odor.
M	174	7.1	N	PH02	2	2	ANHY	ANHYDRITE, moist with no stain or H/C odor.
M	370	6.7	N			3		
M	1,646	0.0	N	PH02A	4	4		
						5		
M	470	0.0	N	PH02B	6	6		

Total Depth at 6 feet bgs.

ENSOLUM

	Sample Name: PH03	Date: 11/03/2022
	Site Name: JRU DI 11 Ekalaka 823H	
	Incident Number: NAPP222452797	
	Job Number: 03E1558118	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Connor Whitman	Method: Excavation
Coordinates: 32.39098, -103.90321	Hole Diameter: 3.5	Total Depth: 6'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	10,556	0.2	Y	PH03	0.5	0	CCHE	CALICHE with gravel and silt, moist brown stain and H/C odor.
						1		
M	2,738	1.2	Y	PH03A	2	2		
						3		
M	437	0.0	N	PH03B	4	4	ANHY	ANHYDRITE, moist with no stain or H/C odor.
						5		
N	<168	0.0	N	PH03C	6	6		

Total Depth at 6 feet bgs.

ENSOLUM

	Sample Name: PH04	Date: 11/03/2022
	Site Name: JRU DI 11 Ekalaka 823H	
	Incident Number: NAPP222452797	
	Job Number: 03E1558118	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Connor Whitman	Method: Excavation
Coordinates: 32.39098, -103.90321	Hole Diameter: 3.5	Total Depth: 10'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	734	3.8	Y	PH04	0.5	0 1	CCHE	CALICHE with gravel and silt, moist with H/C stain and odor.
M	224	2.1	Y	PH04A	2	2 3		
M	<168	0.0	N	PH04B	4	4 5	ANHY	ANHYDRITE, moist with no stain or H/C odor.
M	<168	6.0	N	PH04C	6	6		
M	<168	0.7	N		8	8 9		
N	257.6	0.1	N	PH04D	10	10		

Total Depth at 10 feet bgs.

ENSOLUM

	Sample Name: PH05	Date: 11/03/2022
	Site Name: JRU DI 11 Ekalaka 823H	
	Incident Number: NAPP222452797	
	Job Number: 03E1558118	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Connor Whitman	Method: Excavation
Coordinates: 32.39098, -103.90321	Hole Diameter: 3.5	Total Depth: 10'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	4,799	0.0	Y	PH05	0.5	0	CCHE	CALICHE with gravel and silt, moist with H/C stain and odor.
M	<168	0.0	N	PH05A	2	1	ANHY	ANHYDRITE, moist with no stain or H/C odor.
M	<168	0.0	N	PH05B	4	2		
M	<168	0.1	N	PH05C	6	3		
M	<168	0.0	N		8	4		
N	<168	0.0	N	PH05D	10	5		
						6		
						7		
						8		
						9		
						10		

Total Depth at 10 feet bgs.

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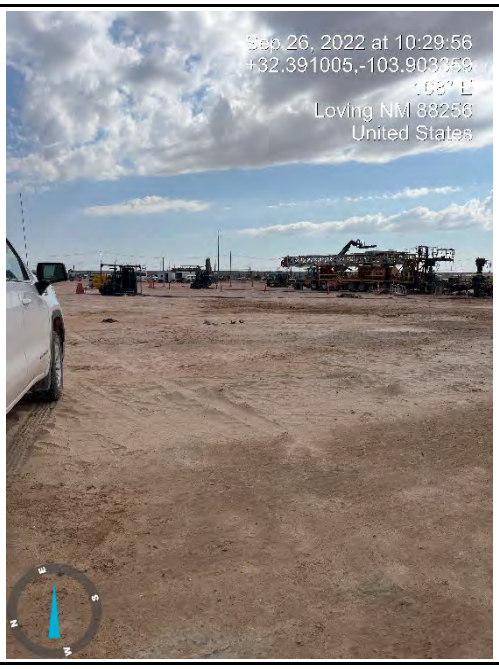
APPENDIX D

Photographic Log

ENSOLUM

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: 9/26/2022
Description: Site assessment activities, release area.
View: East

Photograph 3 Date: 11/2/2022
Description: Delineation activities, area of PH01.
View: Southeast.

Photograph 4 Date: 11/3/2022
Description: Delineation activities, area of PH04.
View: East.

ENSOLUM

APPENDIX E

Laboratory Analytical Reports & Chain of Custody Documentation

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ANALYTICAL REPORT

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-3063-1
Laboratory Sample Delivery Group: 03E1558118
Client Project/Site: JDU DI 11 Ekalaka 183H
Revision: 1

For:
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Kalei Jennings

Jkramer

Authorized for release by:
10/10/2022 4:43:19 PM

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Ensolum
Project/Site: JDU DI 11 Ekalaka 183H

Laboratory Job ID: 890-3063-1
SDG: 03E1558118

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: JDU DI 11 Ekalaka 183H

Job ID: 890-3063-1
SDG: 03E1558118

Qualifiers

GC VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
F2	MS/MSD RPD exceeds control limits
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: JDU DI 11 Ekalaka 183H

Job ID: 890-3063-1
SDG: 03E1558118

Job ID: 890-3063-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3063-1

REVISION

The report being provided is a revision of the original report sent on 10/7/2022. The report (revision 1) is being revised due to Per client email, requesting sample depths to be corrected with revised COC.

Report revision history

Receipt
The samples were received on 9/26/2022 12:02 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 3.6°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-36328 and analytical batch 880-36341 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-36328 and analytical batch 880-36341 recovered outside control limits for the following analytes: Benzene.

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

GC Semi VOA
Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 880-35610 and analytical batch 880-35641 was outside control limits. Sample non-homogeneity is suspected.

Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-35610 and analytical batch 880-35641 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10.

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: JDU DI 11 Ekalaka 183H

Job ID: 890-3063-1
SDG: 03E1558118

Client Sample ID: SS01

Date Collected: 09/26/22 09:35
Date Received: 09/26/22 12:02
Sample Depth: 0.25'

Lab Sample ID: 890-3063-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U *1 F1	0.00201		mg/Kg		10/07/22 08:23	10/07/22 13:19	1
Toluene	<0.00201	U F1 F2	0.00201		mg/Kg		10/07/22 08:23	10/07/22 13:19	1
Ethylbenzene	<0.00201	U F1 F2	0.00201		mg/Kg		10/07/22 08:23	10/07/22 13:19	1
m-Xylene & p-Xylene	<0.00402	U F1 F2	0.00402		mg/Kg		10/07/22 08:23	10/07/22 13:19	1
o-Xylene	<0.00201	U F1 F2	0.00201		mg/Kg		10/07/22 08:23	10/07/22 13:19	1
Xylenes, Total	<0.00402	U F1 F2	0.00402		mg/Kg		10/07/22 08:23	10/07/22 13:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*10/07/22 08:23*	*10/07/22 13:19*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*10/07/22 08:23*	*10/07/22 13:19*	*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			10/07/22 17:23	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**4920**		50.0		mg/Kg			09/30/22 09:27	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 *1	50.0		mg/Kg		09/28/22 13:29	09/29/22 22:13	1
Diesel Range Organics (Over C10-C28)	**4610**		50.0		mg/Kg		09/28/22 13:29	09/29/22 22:13	1
Oil Range Organics (Over C28-C36)	**314**		50.0		mg/Kg		09/28/22 13:29	09/29/22 22:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*86*		*70 - 130*	*09/28/22 13:29*	*09/29/22 22:13*	*1*
o-Terphenyl	*125*		*70 - 130*	*09/28/22 13:29*	*09/29/22 22:13*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10400**		100		mg/Kg			09/28/22 15:41	20

Client Sample ID: SS02

Date Collected: 09/26/22 09:40
Date Received: 09/26/22 12:02
Sample Depth: 0.25'

Lab Sample ID: 890-3063-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U *1	0.00202		mg/Kg		10/07/22 08:23	10/07/22 13:39	1
Toluene	<0.00202	U	0.00202		mg/Kg		10/07/22 08:23	10/07/22 13:39	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		10/07/22 08:23	10/07/22 13:39	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		10/07/22 08:23	10/07/22 13:39	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		10/07/22 08:23	10/07/22 13:39	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		10/07/22 08:23	10/07/22 13:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*10/07/22 08:23*	*10/07/22 13:39*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: JDU DI 11 Ekalaka 183H

Job ID: 890-3063-1
SDG: 03E1558118

Client Sample ID: SS02

Date Collected: 09/26/22 09:40
Date Received: 09/26/22 12:02
Sample Depth: 0.25'

Lab Sample ID: 890-3063-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*10/07/22 08:23*	*10/07/22 13:39*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			10/07/22 17:23	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**4990**		50.0		mg/Kg			09/30/22 09:27	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 *1	50.0		mg/Kg		09/28/22 13:29	09/29/22 22:34	1
Diesel Range Organics (Over C10-C28)	**3960**		50.0		mg/Kg		09/28/22 13:29	09/29/22 22:34	1
Oil Range Organics (Over C28-C36)	**1030**		50.0		mg/Kg		09/28/22 13:29	09/29/22 22:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*09/28/22 13:29*	*09/29/22 22:34*	*1*
o-Terphenyl	*92*		*70 - 130*	*09/28/22 13:29*	*09/29/22 22:34*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4440**		100		mg/Kg			09/28/22 15:46	20

Client Sample ID: SS03

Date Collected: 09/26/22 09:45
Date Received: 09/26/22 12:02
Sample Depth: 0.25'

Lab Sample ID: 890-3063-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *1	0.00199		mg/Kg		10/07/22 08:23	10/07/22 14:00	1
Toluene	<0.00199	U	0.00199		mg/Kg		10/07/22 08:23	10/07/22 14:00	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/07/22 08:23	10/07/22 14:00	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/07/22 08:23	10/07/22 14:00	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/07/22 08:23	10/07/22 14:00	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/07/22 08:23	10/07/22 14:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*10/07/22 08:23*	*10/07/22 14:00*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*10/07/22 08:23*	*10/07/22 14:00*	*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			10/07/22 17:23	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**7120**		250		mg/Kg			09/30/22 09:27	1

Client Sample Results

Client: Ensolum
Project/Site: JDU DI 11 Ekalaka 183H

Job ID: 890-3063-1
SDG: 03E1558118

Client Sample ID: SS03

Date Collected: 09/26/22 09:45
Date Received: 09/26/22 12:02
Sample Depth: 0.25'

Lab Sample ID: 890-3063-3
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	<250	U *1	250		mg/Kg		09/28/22 13:29	09/29/22 22:56	5
Diesel Range Organics (Over C10-C28)	**5730**		250		mg/Kg		09/28/22 13:29	09/29/22 22:56	5
Oil Range Organics (Over C28-C36)	**1390**		250		mg/Kg		09/28/22 13:29	09/29/22 22:56	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*09/28/22 13:29*	*09/29/22 22:56*	*5*
o-Terphenyl	*95*		*70 - 130*	*09/28/22 13:29*	*09/29/22 22:56*	*5*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4690**		99.6		mg/Kg			09/28/22 15:51	20

Client Sample ID: SS04

Date Collected: 09/26/22 09:50
Date Received: 09/26/22 12:02
Sample Depth: 0.25'

Lab Sample ID: 890-3063-4
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *1	0.00200		mg/Kg		10/07/22 08:23	10/07/22 14:20	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/07/22 08:23	10/07/22 14:20	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/07/22 08:23	10/07/22 14:20	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		10/07/22 08:23	10/07/22 14:20	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/07/22 08:23	10/07/22 14:20	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		10/07/22 08:23	10/07/22 14:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*10/07/22 08:23*	*10/07/22 14:20*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*10/07/22 08:23*	*10/07/22 14:20*	*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			10/07/22 17:23	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**7300**		250		mg/Kg			09/30/22 09:27	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	<250	U *1	250		mg/Kg		09/28/22 13:29	09/29/22 23:17	5
Diesel Range Organics (Over C10-C28)	**6320**		250		mg/Kg		09/28/22 13:29	09/29/22 23:17	5
Oil Range Organics (Over C28-C36)	**984**		250		mg/Kg		09/28/22 13:29	09/29/22 23:17	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*09/28/22 13:29*	*09/29/22 23:17*	*5*
o-Terphenyl	*130*		*70 - 130*	*09/28/22 13:29*	*09/29/22 23:17*	*5*

Client Sample Results

Client: Ensolum
Project/Site: JDU DI 11 Ekalaka 183H

Job ID: 890-3063-1
SDG: 03E1558118

Client Sample ID: SS04

Date Collected: 09/26/22 09:50
Date Received: 09/26/22 12:02
Sample Depth: 0.25'

Lab Sample ID: 890-3063-4

Matrix: Solid

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**30400**		248		mg/Kg			09/28/22 15:56	50

Surrogate Summary

Client: Ensolum
Project/Site: JDU DI 11 Ekalaka 183H

Job ID: 890-3063-1
SDG: 03E1558118

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)
890-3063-1	SS01	111	101
890-3063-1 MS	SS01	108	100
890-3063-1 MSD	SS01	100	108
890-3063-2	SS02	98	102
890-3063-3	SS03	94	100
890-3063-4	SS04	105	103
LCS 880-36328/1-A	Lab Control Sample	114	102
LCSD 880-36328/2-A	Lab Control Sample Dup	115	105
MB 880-36328/5-A	Method Blank	105	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)
880-19720-A-1-C MS	Matrix Spike	85	79
880-19720-A-1-D MSD	Matrix Spike Duplicate	105	93
890-3063-1	SS01	86	125
890-3063-2	SS02	96	92
890-3063-3	SS03	88	95
890-3063-4	SS04	113	130
LCS 880-35610/2-A	Lab Control Sample	121	119
LCSD 880-35610/3-A	Lab Control Sample Dup	107	109
MB 880-35610/1-A	Method Blank	123	124

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: JDU DI 11 Ekalaka 183H

Job ID: 890-3063-1
SDG: 03E1558118

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-36328/5-A
Matrix: Solid
Analysis Batch: 36341

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 36328

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/07/22 08:23	10/07/22 12:50	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/07/22 08:23	10/07/22 12:50	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/07/22 08:23	10/07/22 12:50	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		10/07/22 08:23	10/07/22 12:50	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/07/22 08:23	10/07/22 12:50	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/07/22 08:23	10/07/22 12:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*10/07/22 08:23*	*10/07/22 12:50*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*10/07/22 08:23*	*10/07/22 12:50*	*1*

Lab Sample ID: LCS 880-36328/1-A
Matrix: Solid
Analysis Batch: 36341

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 36328

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.07461		mg/Kg		75	70 - 130		
Toluene			0.100	0.08217		mg/Kg		82	70 - 130		
Ethylbenzene			0.100	0.08494		mg/Kg		85	70 - 130		
m-Xylene & p-Xylene			0.200	0.1722		mg/Kg		86	70 - 130		
o-Xylene			0.100	0.08846		mg/Kg		88	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: LCSD 880-36328/2-A
Matrix: Solid
Analysis Batch: 36341

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 36328

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1124	*1	mg/Kg		112	70 - 130	40	35
Toluene			0.100	0.1167		mg/Kg		117	70 - 130	35	35
Ethylbenzene			0.100	0.1188		mg/Kg		119	70 - 130	33	35
m-Xylene & p-Xylene			0.200	0.2420		mg/Kg		121	70 - 130	34	35
o-Xylene			0.100	0.1192		mg/Kg		119	70 - 130	30	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: 890-3063-1 MS
Matrix: Solid
Analysis Batch: 36341

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 36328

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U *1 F1	0.100	0.06254	F1	mg/Kg		62	70 - 130		
Toluene	<0.00201	U F1 F2	0.100	0.04666	F1	mg/Kg		46	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: JDU DI 11 Ekalaka 183H

Job ID: 890-3063-1
SDG: 03E1558118

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

Lab Sample ID: 890-3063-1 MS
Matrix: Solid
Analysis Batch: 36341

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 36328

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U F1 F2	0.100	0.02857	F1	mg/Kg		28	70 - 130
m-Xylene & p-Xylene	<0.00402	U F1 F2	0.201	0.05403	F1	mg/Kg		27	70 - 130
o-Xylene	<0.00201	U F1 F2	0.100	0.02669	F1	mg/Kg		27	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 890-3063-1 MSD
Matrix: Solid
Analysis Batch: 36341

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 36328

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U *1 F1	0.0998	0.08491		mg/Kg		85	70 - 130	30	35
Toluene	<0.00201	U F1 F2	0.0998	0.06815	F1 F2	mg/Kg		68	70 - 130	37	35
Ethylbenzene	<0.00201	U F1 F2	0.0998	0.04339	F1 F2	mg/Kg		43	70 - 130	41	35
m-Xylene & p-Xylene	<0.00402	U F1 F2	0.200	0.07834	F1 F2	mg/Kg		39	70 - 130	37	35
o-Xylene	<0.00201	U F1 F2	0.0998	0.03992	F1 F2	mg/Kg		40	70 - 130	40	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

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

Lab Sample ID: MB 880-35610/1-A
Matrix: Solid
Analysis Batch: 35641

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 35610

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		09/28/22 13:29	09/29/22 20:05	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/28/22 13:29	09/29/22 20:05	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/28/22 13:29	09/29/22 20:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*123*		*70 - 130*	*09/28/22 13:29*	*09/29/22 20:05*	*1*
o-Terphenyl	*124*		*70 - 130*	*09/28/22 13:29*	*09/29/22 20:05*	*1*

Lab Sample ID: LCS 880-35610/2-A
Matrix: Solid
Analysis Batch: 35641

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 35610

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	881.1		mg/Kg		88	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1075		mg/Kg		107	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: JDU DI 11 Ekalaka 183H

Job ID: 890-3063-1
SDG: 03E1558118

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

Lab Sample ID: LCS 880-35610/2-A
Matrix: Solid
Analysis Batch: 35641

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 35610

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	121		70 - 130
o-Terphenyl	119		70 - 130

Lab Sample ID: LCSD 880-35610/3-A
Matrix: Solid
Analysis Batch: 35641

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 35610

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1164	*1	mg/Kg		116	70 - 130	28	20
Diesel Range Organics (Over C10-C28)			1000	1017		mg/Kg		102	70 - 130	6	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	107		70 - 130
o-Terphenyl	109		70 - 130

Lab Sample ID: 880-19720-A-1-C MS
Matrix: Solid
Analysis Batch: 35641

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 35610

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F2 *1	998	805.7		mg/Kg		78	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	998	863.2		mg/Kg		85	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	85		70 - 130
o-Terphenyl	79		70 - 130

Lab Sample ID: 880-19720-A-1-D MSD
Matrix: Solid
Analysis Batch: 35641

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 35610

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F2 *1	999	1043	F2	mg/Kg		102	70 - 130	26	20
Diesel Range Organics (Over C10-C28)	<50.0	U	999	1046		mg/Kg		103	70 - 130	19	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	105		70 - 130
o-Terphenyl	93		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: JDU DI 11 Ekalaka 183H

Job ID: 890-3063-1
SDG: 03E1558118

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-35477/1-A
Matrix: Solid
Analysis Batch: 35585

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			09/28/22 13:20	1

Lab Sample ID: LCS 880-35477/2-A
Matrix: Solid
Analysis Batch: 35585

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	241.9		mg/Kg		97	90 - 110		

Lab Sample ID: LCSD 880-35477/3-A
Matrix: Solid
Analysis Batch: 35585

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	242.2		mg/Kg		97	90 - 110	0	20

Lab Sample ID: 890-3061-A-1-B MS
Matrix: Solid
Analysis Batch: 35585

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	15.8		248	254.9		mg/Kg		96	90 - 110		

Lab Sample ID: 890-3061-A-1-C MSD
Matrix: Solid
Analysis Batch: 35585

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	15.8		248	255.9		mg/Kg		97	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: JDU DI 11 Ekalaka 183H

Job ID: 890-3063-1
SDG: 03E1558118

GC VOA

Prep Batch: 36328

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3063-1	SS01	Total/NA	Solid	5035	
890-3063-2	SS02	Total/NA	Solid	5035	
890-3063-3	SS03	Total/NA	Solid	5035	
890-3063-4	SS04	Total/NA	Solid	5035	
MB 880-36328/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-36328/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-36328/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3063-1 MS	SS01	Total/NA	Solid	5035	
890-3063-1 MSD	SS01	Total/NA	Solid	5035	

Analysis Batch: 36341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3063-1	SS01	Total/NA	Solid	8021B	36328
890-3063-2	SS02	Total/NA	Solid	8021B	36328
890-3063-3	SS03	Total/NA	Solid	8021B	36328
890-3063-4	SS04	Total/NA	Solid	8021B	36328
MB 880-36328/5-A	Method Blank	Total/NA	Solid	8021B	36328
LCS 880-36328/1-A	Lab Control Sample	Total/NA	Solid	8021B	36328
LCSD 880-36328/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	36328
890-3063-1 MS	SS01	Total/NA	Solid	8021B	36328
890-3063-1 MSD	SS01	Total/NA	Solid	8021B	36328

Analysis Batch: 36414

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3063-1	SS01	Total/NA	Solid	Total BTEX	
890-3063-2	SS02	Total/NA	Solid	Total BTEX	
890-3063-3	SS03	Total/NA	Solid	Total BTEX	
890-3063-4	SS04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 35610

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3063-1	SS01	Total/NA	Solid	8015NM Prep	
890-3063-2	SS02	Total/NA	Solid	8015NM Prep	
890-3063-3	SS03	Total/NA	Solid	8015NM Prep	
890-3063-4	SS04	Total/NA	Solid	8015NM Prep	
MB 880-35610/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-35610/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-35610/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-19720-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-19720-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 35641

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3063-1	SS01	Total/NA	Solid	8015B NM	35610
890-3063-2	SS02	Total/NA	Solid	8015B NM	35610
890-3063-3	SS03	Total/NA	Solid	8015B NM	35610
890-3063-4	SS04	Total/NA	Solid	8015B NM	35610
MB 880-35610/1-A	Method Blank	Total/NA	Solid	8015B NM	35610
LCS 880-35610/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	35610

QC Association Summary

Client: Ensolum
Project/Site: JDU DI 11 Ekalaka 183H

Job ID: 890-3063-1
SDG: 03E1558118

GC Semi VOA (Continued)

Analysis Batch: 35641 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-35610/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	35610
880-19720-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	35610
880-19720-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	35610

Analysis Batch: 35773

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3063-1	SS01	Total/NA	Solid	8015 NM	
890-3063-2	SS02	Total/NA	Solid	8015 NM	
890-3063-3	SS03	Total/NA	Solid	8015 NM	
890-3063-4	SS04	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 35477

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3063-1	SS01	Soluble	Solid	DI Leach	
890-3063-2	SS02	Soluble	Solid	DI Leach	
890-3063-3	SS03	Soluble	Solid	DI Leach	
890-3063-4	SS04	Soluble	Solid	DI Leach	
MB 880-35477/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-35477/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-35477/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3061-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3061-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 35585

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3063-1	SS01	Soluble	Solid	300.0	35477
890-3063-2	SS02	Soluble	Solid	300.0	35477
890-3063-3	SS03	Soluble	Solid	300.0	35477
890-3063-4	SS04	Soluble	Solid	300.0	35477
MB 880-35477/1-A	Method Blank	Soluble	Solid	300.0	35477
LCS 880-35477/2-A	Lab Control Sample	Soluble	Solid	300.0	35477
LCSD 880-35477/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	35477
890-3061-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	35477
890-3061-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	35477

Lab Chronicle

Client: Ensolum
Project/Site: JDU DI 11 Ekalaka 183H

Job ID: 890-3063-1
SDG: 03E1558118

Client Sample ID: SS01
Date Collected: 09/26/22 09:35
Date Received: 09/26/22 12:02

Lab Sample ID: 890-3063-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	36328	10/07/22 08:23	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36341	10/07/22 13:19	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			36414	10/07/22 17:23	SM	EET MID
Total/NA	Analysis	8015 NM		1			35773	09/30/22 09:27	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	35610	09/28/22 13:29	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35641	09/29/22 22:13	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	35477	09/27/22 09:11	KS	EET MID
Soluble	Analysis	300.0		20			35585	09/28/22 15:41	CH	EET MID

Client Sample ID: SS02
Date Collected: 09/26/22 09:40
Date Received: 09/26/22 12:02

Lab Sample ID: 890-3063-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	36328	10/07/22 08:23	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36341	10/07/22 13:39	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			36414	10/07/22 17:23	SM	EET MID
Total/NA	Analysis	8015 NM		1			35773	09/30/22 09:27	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	35610	09/28/22 13:29	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35641	09/29/22 22:34	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	35477	09/27/22 09:11	KS	EET MID
Soluble	Analysis	300.0		20			35585	09/28/22 15:46	CH	EET MID

Client Sample ID: SS03
Date Collected: 09/26/22 09:45
Date Received: 09/26/22 12:02

Lab Sample ID: 890-3063-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	36328	10/07/22 08:23	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36341	10/07/22 14:00	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			36414	10/07/22 17:23	SM	EET MID
Total/NA	Analysis	8015 NM		1			35773	09/30/22 09:27	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	35610	09/28/22 13:29	DM	EET MID
Total/NA	Analysis	8015B NM		5	1 uL	1 uL	35641	09/29/22 22:56	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	35477	09/27/22 09:11	KS	EET MID
Soluble	Analysis	300.0		20			35585	09/28/22 15:51	CH	EET MID

Client Sample ID: SS04
Date Collected: 09/26/22 09:50
Date Received: 09/26/22 12:02

Lab Sample ID: 890-3063-4
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	36328	10/07/22 08:23	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36341	10/07/22 14:20	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			36414	10/07/22 17:23	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: JDU DI 11 Ekalaka 183H

Job ID: 890-3063-1
SDG: 03E1558118

Client Sample ID: SS04
Date Collected: 09/26/22 09:50
Date Received: 09/26/22 12:02

Lab Sample ID: 890-3063-4
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			35773	09/30/22 09:27	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	35610	09/28/22 13:29	DM	EET MID
Total/NA	Analysis	8015B NM		5	1 uL	1 uL	35641	09/29/22 23:17	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	35477	09/27/22 09:11	KS	EET MID
Soluble	Analysis	300.0		50			35585	09/28/22 15:56	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: JDU DI 11 Ekalaka 183H

Job ID: 890-3063-1
SDG: 03E1558118

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: JDU DI 11 Ekalaka 183H

Job ID: 890-3063-1
SDG: 03E1558118

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	MCAWW	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

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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: JDU DI 11 Ekalaka 183H

Job ID: 890-3063-1
SDG: 03E1558118

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3063-1	SS01	Solid	09/26/22 09:35	09/26/22 12:02	0.25'
890-3063-2	SS02	Solid	09/26/22 09:40	09/26/22 12:02	0.25'
890-3063-3	SS03	Solid	09/26/22 09:45	09/26/22 12:02	0.25'
890-3063-4	SS04	Solid	09/26/22 09:50	09/26/22 12:02	0.25'

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Kalei Jennings	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	817-683-2503	Email:	Kjennings@ensolum.com

Work Order Comments

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

Project Name:	JRU D 11 Elevated 183H	Turn Around	ANALYSIS REQUEST
Project Number:	03E1558118	☑ Routine ☐ Rush	Pres. Code
Project Location:	32.39098, -103.9032	Due Date:	
Sampler's Name:	Meredith Roberts	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	THM-007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	3.8
Total Containers:		Corrected Temperature:	3.6

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	TPH	BTEX	Chlorides
SS01	S	9/26/22	0935	0.25'	G	1	X	X	X
SS02	S	9/26/22	0940	0.25'	G	1	↓	↓	↓
SS03	S	9/26/22	0945	0.25'	G	1	↓	↓	↓
SS04	S	9/26/22	0950	0.25'	G	1	↓	↓	↓

→ we.

890-3063 Chain of Custody

Preservative Codes

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

Sample Comments

Incident #: NAPP2224527297

Cost Center: 2104541001

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			2		
3			4		
5			6		

Revised Date: 08.25.2020 Rev: 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3063-1
SDG Number: 03E1558118

Login Number: 3063
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3063-1
SDG Number: 03E1558118

Login Number: 3063
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 09/27/22 10:56 AM

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

eurofins | Environment Testing

ANALYTICAL REPORT

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-3378-1
Laboratory Sample Delivery Group: 03E1558118
Client Project/Site: JRU DI 11 Ekalaka 823H

For:
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Ben Belill

JKramer

Authorized for release by:
11/11/2022 3:48:16 PM

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

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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.

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

Laboratory Job ID: 890-3378-1
SDG: 03E1558118

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-3378-1
Project/Site: JRU DI 11 Ekalaka 823H SDG: 03E1558118

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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

Glossary

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

Case Narrative

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

Job ID: 890-3378-1
SDG: 03E1558118

Job ID: 890-3378-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3378-1

Receipt
The samples were received on 11/4/2022 8:38 AM. 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 3.8°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: PH01 (890-3378-1), PH01A (890-3378-2), PH01B (890-3378-3) and PH01C (890-3378-4).

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-39125 and analytical batch 880-39166 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: The method blank for preparation batch 880-38890 and analytical batch 880-38805 contained Gasoline Range Organics (GRO)-C6-C10 above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-38890 and analytical batch 880-38805 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10.

Method 8015MOD_NM: The matrix spike (MS) recoveries for preparation batch 880-38890 and analytical batch 880-38805 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-38841 and analytical batch 880-39040 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

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

Job ID: 890-3378-1
SDG: 03E1558118

Client Sample ID: PH01

Date Collected: 11/02/22 14:20
Date Received: 11/04/22 08:38
Sample Depth: 2'

Lab Sample ID: 890-3378-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		11/09/22 15:02	11/10/22 16:35	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/09/22 15:02	11/10/22 16:35	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/09/22 15:02	11/10/22 16:35	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/09/22 15:02	11/10/22 16:35	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/09/22 15:02	11/10/22 16:35	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/09/22 15:02	11/10/22 16:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*11/09/22 15:02*	*11/10/22 16:35*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*11/09/22 15:02*	*11/10/22 16:35*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			11/11/22 08:40	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			11/08/22 09:57	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 *1	50.0		mg/Kg		11/07/22 14:24	11/07/22 22:32	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/07/22 14:24	11/07/22 22:32	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/07/22 14:24	11/07/22 22:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*11/07/22 14:24*	*11/07/22 22:32*	*1*
o-Terphenyl	*111*		*70 - 130*	*11/07/22 14:24*	*11/07/22 22:32*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5690**		99.6		mg/Kg			11/11/22 13:39	20

Client Sample ID: PH01A

Date Collected: 11/02/22 14:35
Date Received: 11/04/22 08:38
Sample Depth: 4'

Lab Sample ID: 890-3378-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/09/22 15:02	11/10/22 16:55	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/09/22 15:02	11/10/22 16:55	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/09/22 15:02	11/10/22 16:55	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		11/09/22 15:02	11/10/22 16:55	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/09/22 15:02	11/10/22 16:55	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		11/09/22 15:02	11/10/22 16:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*11/09/22 15:02*	*11/10/22 16:55*	*1*

Eurofins Carlsbad

Client Sample Results

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

Job ID: 890-3378-1
SDG: 03E1558118

Client Sample ID: PH01A

Date Collected: 11/02/22 14:35
Date Received: 11/04/22 08:38
Sample Depth: 4'

Lab Sample ID: 890-3378-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*11/09/22 15:02*	*11/10/22 16:55*	*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			11/11/22 08:40	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			11/08/22 09:57	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 *1	49.9	mg/Kg		11/07/22 14:24	11/07/22 22:53	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		11/07/22 14:24	11/07/22 22:53	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		11/07/22 14:24	11/07/22 22:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*11/07/22 14:24*	*11/07/22 22:53*	*1*
o-Terphenyl	*105*		*70 - 130*	*11/07/22 14:24*	*11/07/22 22:53*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**11700**		250	mg/Kg			11/11/22 13:44	50

Client Sample ID: PH01B

Date Collected: 11/02/22 15:00
Date Received: 11/04/22 08:38
Sample Depth: 6'

Lab Sample ID: 890-3378-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		11/09/22 15:02	11/10/22 17:16	1
Toluene	<0.00201	U	0.00201	mg/Kg		11/09/22 15:02	11/10/22 17:16	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		11/09/22 15:02	11/10/22 17:16	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		11/09/22 15:02	11/10/22 17:16	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		11/09/22 15:02	11/10/22 17:16	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		11/09/22 15:02	11/10/22 17:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*11/09/22 15:02*	*11/10/22 17:16*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*11/09/22 15:02*	*11/10/22 17:16*	*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			11/11/22 08:40	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			11/08/22 09:57	1

Client Sample Results

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

Job ID: 890-3378-1
SDG: 03E1558118

Client Sample ID: PH01B

Date Collected: 11/02/22 15:00
Date Received: 11/04/22 08:38
Sample Depth: 6'

Lab Sample ID: 890-3378-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9		mg/Kg		11/07/22 14:24	11/07/22 23:15	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/07/22 14:24	11/07/22 23:15	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/07/22 14:24	11/07/22 23:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*11/07/22 14:24*	*11/07/22 23:15*	*1*
o-Terphenyl	*106*		*70 - 130*	*11/07/22 14:24*	*11/07/22 23:15*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8960**		99.0		mg/Kg			11/11/22 13:49	20

Client Sample ID: PH01C

Date Collected: 11/02/22 09:25
Date Received: 11/04/22 08:38
Sample Depth: 10'

Lab Sample ID: 890-3378-4
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		11/09/22 15:02	11/10/22 17:37	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/09/22 15:02	11/10/22 17:37	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/09/22 15:02	11/10/22 17:37	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/09/22 15:02	11/10/22 17:37	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/09/22 15:02	11/10/22 17:37	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/09/22 15:02	11/10/22 17:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*11/09/22 15:02*	*11/10/22 17:37*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*11/09/22 15:02*	*11/10/22 17:37*	*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			11/11/22 08:40	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			11/08/22 09:57	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 *1	49.9		mg/Kg		11/07/22 14:24	11/07/22 23:36	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/07/22 14:24	11/07/22 23:36	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/07/22 14:24	11/07/22 23:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*11/07/22 14:24*	*11/07/22 23:36*	*1*
o-Terphenyl	*102*		*70 - 130*	*11/07/22 14:24*	*11/07/22 23:36*	*1*

Client Sample Results

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

Job ID: 890-3378-1
SDG: 03E1558118

Client Sample ID: PH01C
Date Collected: 11/02/22 09:25
Date Received: 11/04/22 08:38
Sample Depth: 10'

Lab Sample ID: 890-3378-4
Matrix: Solid

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	56.0		4.97		mg/Kg			11/11/22 13:54	1

Surrogate Summary

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

Job ID: 890-3378-1
SDG: 03E1558118

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-3375-A-1-G MS	Matrix Spike	103	124
890-3375-A-1-H MSD	Matrix Spike Duplicate	98	123
890-3378-1	PH01	95	104
890-3378-2	PH01A	96	107
890-3378-3	PH01B	100	106
890-3378-4	PH01C	93	102
LCS 880-39125/1-A	Lab Control Sample	93	117
LCSD 880-39125/2-A	Lab Control Sample Dup	96	118
MB 880-39125/5-A	Method Blank	78	102

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-3372-A-1-C MS	Matrix Spike	96	92
890-3372-A-1-D MSD	Matrix Spike Duplicate	89	85
890-3378-1	PH01	102	111
890-3378-2	PH01A	96	105
890-3378-3	PH01B	100	106
890-3378-4	PH01C	95	102
LCS 880-38890/2-A	Lab Control Sample	97	103
LCSD 880-38890/3-A	Lab Control Sample Dup	95	98
MB 880-38890/1-A	Method Blank	99	109

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

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

Job ID: 890-3378-1
SDG: 03E1558118

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-39125/5-A
Matrix: Solid
Analysis Batch: 39166

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 39125

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/09/22 15:02	11/10/22 10:45	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/09/22 15:02	11/10/22 10:45	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/09/22 15:02	11/10/22 10:45	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/09/22 15:02	11/10/22 10:45	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/09/22 15:02	11/10/22 10:45	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/09/22 15:02	11/10/22 10:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*78*		*70 - 130*	*11/09/22 15:02*	*11/10/22 10:45*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*11/09/22 15:02*	*11/10/22 10:45*	*1*

Lab Sample ID: LCS 880-39125/1-A
Matrix: Solid
Analysis Batch: 39166

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 39125

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09971		mg/Kg		100	70 - 130		
Toluene			0.100	0.08537		mg/Kg		85	70 - 130		
Ethylbenzene			0.100	0.08335		mg/Kg		83	70 - 130		
m-Xylene & p-Xylene			0.200	0.1712		mg/Kg		86	70 - 130		
o-Xylene			0.100	0.08418		mg/Kg		84	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
1,4-Difluorobenzene (Surr)	*117*		*70 - 130*

Lab Sample ID: LCSD 880-39125/2-A
Matrix: Solid
Analysis Batch: 39166

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 39125

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1062		mg/Kg		106	70 - 130	6	35
Toluene			0.100	0.08905		mg/Kg		89	70 - 130	4	35
Ethylbenzene			0.100	0.08676		mg/Kg		87	70 - 130	4	35
m-Xylene & p-Xylene			0.200	0.1790		mg/Kg		90	70 - 130	4	35
o-Xylene			0.100	0.08832		mg/Kg		88	70 - 130	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
1,4-Difluorobenzene (Surr)	*118*		*70 - 130*

Lab Sample ID: 890-3375-A-1-G MS
Matrix: Solid
Analysis Batch: 39166

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 39125

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U	0.0998	0.08311		mg/Kg		83	70 - 130		
Toluene	<0.00201	U F1	0.0998	0.05842	F1	mg/Kg		58	70 - 130		

QC Sample Results

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

Job ID: 890-3378-1
SDG: 03E1558118

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

Lab Sample ID: 890-3375-A-1-G MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 39166 — **Prep Batch: 39125**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U F1	0.0998	0.04412	F1	mg/Kg		44	70 - 130
m-Xylene & p-Xylene	<0.00402	U F1	0.200	0.08864	F1	mg/Kg		44	70 - 130
o-Xylene	<0.00201	U F1	0.0998	0.04425	F1	mg/Kg		43	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*124*		*70 - 130*

Lab Sample ID: 890-3375-A-1-H MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 39166 — **Prep Batch: 39125**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0990	0.08896		mg/Kg		90	70 - 130	7	35
Toluene	<0.00201	U F1	0.0990	0.06914	F1	mg/Kg		69	70 - 130	17	35
Ethylbenzene	<0.00201	U F1	0.0990	0.05231	F1	mg/Kg		52	70 - 130	17	35
m-Xylene & p-Xylene	<0.00402	U F1	0.198	0.1046	F1	mg/Kg		52	70 - 130	17	35
o-Xylene	<0.00201	U F1	0.0990	0.05454	F1	mg/Kg		54	70 - 130	21	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*123*		*70 - 130*

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

Lab Sample ID: MB 880-38890/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 38805 — **Prep Batch: 38890**

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		11/07/22 14:24	11/07/22 19:18	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		11/07/22 14:24	11/07/22 19:18	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/07/22 14:24	11/07/22 19:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*99*		*70 - 130*	*11/07/22 14:24*	*11/07/22 19:18*	*1*
o-Terphenyl	*109*		*70 - 130*	*11/07/22 14:24*	*11/07/22 19:18*	*1*

Lab Sample ID: LCS 880-38890/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 38805 — **Prep Batch: 38890**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	822.4		mg/Kg		82	70 - 130
Diesel Range Organics (Over C10-C28)	1000	911.7		mg/Kg		91	70 - 130

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QC Sample Results

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

Job ID: 890-3378-1
SDG: 03E1558118

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

Lab Sample ID: LCS 880-38890/2-A
Matrix: Solid
Analysis Batch: 38805

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 38890

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	97		70 - 130
o-Terphenyl	103		70 - 130

Lab Sample ID: LCSD 880-38890/3-A
Matrix: Solid
Analysis Batch: 38805

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 38890

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1052	*1	mg/Kg		105	70 - 130	24	20
Diesel Range Organics (Over C10-C28)			1000	810.0		mg/Kg		81	70 - 130	12	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	95		70 - 130
o-Terphenyl	98		70 - 130

Lab Sample ID: 890-3372-A-1-C MS
Matrix: Solid
Analysis Batch: 38805

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 38890

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1 F1	997	1396	F1	mg/Kg		137	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	997	895.2		mg/Kg		90	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	96		70 - 130
o-Terphenyl	92		70 - 130

Lab Sample ID: 890-3372-A-1-D MSD
Matrix: Solid
Analysis Batch: 38805

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 38890

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1 F1	999	1246		mg/Kg		122	70 - 130	11	20
Diesel Range Organics (Over C10-C28)	<50.0	U	999	820.4		mg/Kg		82	70 - 130	9	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	89		70 - 130
o-Terphenyl	85		70 - 130

QC Sample Results

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

Job ID: 890-3378-1
SDG: 03E1558118

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-38841/1-A
Matrix: Solid
Analysis Batch: 39040

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			11/11/22 11:35	1

Lab Sample ID: LCS 880-38841/2-A
Matrix: Solid
Analysis Batch: 39040

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	259.7		mg/Kg		104	90 - 110		

Lab Sample ID: LCSD 880-38841/3-A
Matrix: Solid
Analysis Batch: 39040

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	251.3		mg/Kg		101	90 - 110	3	20

Lab Sample ID: 890-3377-A-19-B MS
Matrix: Solid
Analysis Batch: 39040

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	31.3	F1	249	306.6	F1	mg/Kg		111	90 - 110		

Lab Sample ID: 890-3377-A-19-C MSD
Matrix: Solid
Analysis Batch: 39040

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	31.3	F1	249	301.6		mg/Kg		109	90 - 110	2	20

QC Association Summary

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

Job ID: 890-3378-1
SDG: 03E1558118

GC VOA

Prep Batch: 39125

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3378-1	PH01	Total/NA	Solid	5035	
890-3378-2	PH01A	Total/NA	Solid	5035	
890-3378-3	PH01B	Total/NA	Solid	5035	
890-3378-4	PH01C	Total/NA	Solid	5035	
MB 880-39125/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-39125/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-39125/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3375-A-1-G MS	Matrix Spike	Total/NA	Solid	5035	
890-3375-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 39166

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3378-1	PH01	Total/NA	Solid	8021B	39125
890-3378-2	PH01A	Total/NA	Solid	8021B	39125
890-3378-3	PH01B	Total/NA	Solid	8021B	39125
890-3378-4	PH01C	Total/NA	Solid	8021B	39125
MB 880-39125/5-A	Method Blank	Total/NA	Solid	8021B	39125
LCS 880-39125/1-A	Lab Control Sample	Total/NA	Solid	8021B	39125
LCSD 880-39125/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	39125
890-3375-A-1-G MS	Matrix Spike	Total/NA	Solid	8021B	39125
890-3375-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	39125

Analysis Batch: 39283

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3378-1	PH01	Total/NA	Solid	Total BTEX	
890-3378-2	PH01A	Total/NA	Solid	Total BTEX	
890-3378-3	PH01B	Total/NA	Solid	Total BTEX	
890-3378-4	PH01C	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 38805

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3378-1	PH01	Total/NA	Solid	8015B NM	38890
890-3378-2	PH01A	Total/NA	Solid	8015B NM	38890
890-3378-3	PH01B	Total/NA	Solid	8015B NM	38890
890-3378-4	PH01C	Total/NA	Solid	8015B NM	38890
MB 880-38890/1-A	Method Blank	Total/NA	Solid	8015B NM	38890
LCS 880-38890/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	38890
LCSD 880-38890/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	38890
890-3372-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	38890
890-3372-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	38890

Prep Batch: 38890

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3378-1	PH01	Total/NA	Solid	8015NM Prep	
890-3378-2	PH01A	Total/NA	Solid	8015NM Prep	
890-3378-3	PH01B	Total/NA	Solid	8015NM Prep	
890-3378-4	PH01C	Total/NA	Solid	8015NM Prep	
MB 880-38890/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-38890/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	

QC Association Summary

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

Job ID: 890-3378-1
SDG: 03E1558118

GC Semi VOA (Continued)

Prep Batch: 38890 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-38890/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3372-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3372-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 38964

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3378-1	PH01	Total/NA	Solid	8015 NM	
890-3378-2	PH01A	Total/NA	Solid	8015 NM	
890-3378-3	PH01B	Total/NA	Solid	8015 NM	
890-3378-4	PH01C	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 38841

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3378-1	PH01	Soluble	Solid	DI Leach	
890-3378-2	PH01A	Soluble	Solid	DI Leach	
890-3378-3	PH01B	Soluble	Solid	DI Leach	
890-3378-4	PH01C	Soluble	Solid	DI Leach	
MB 880-38841/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-38841/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-38841/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3377-A-19-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3377-A-19-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 39040

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3378-1	PH01	Soluble	Solid	300.0	38841
890-3378-2	PH01A	Soluble	Solid	300.0	38841
890-3378-3	PH01B	Soluble	Solid	300.0	38841
890-3378-4	PH01C	Soluble	Solid	300.0	38841
MB 880-38841/1-A	Method Blank	Soluble	Solid	300.0	38841
LCS 880-38841/2-A	Lab Control Sample	Soluble	Solid	300.0	38841
LCSD 880-38841/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	38841
890-3377-A-19-B MS	Matrix Spike	Soluble	Solid	300.0	38841
890-3377-A-19-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	38841

Lab Chronicle

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

Job ID: 890-3378-1
SDG: 03E1558118

Client Sample ID: PH01

Date Collected: 11/02/22 14:20
Date Received: 11/04/22 08:38

Lab Sample ID: 890-3378-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	39125	11/09/22 15:02	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	39166	11/10/22 16:35	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			39283	11/11/22 08:40	SM	EET MID
Total/NA	Analysis	8015 NM		1			38964	11/08/22 09:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	38890	11/07/22 14:24	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	38805	11/07/22 22:32	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	38841	11/07/22 10:27	KS	EET MID
Soluble	Analysis	300.0		20			39040	11/11/22 13:39	CH	EET MID

Client Sample ID: PH01A

Date Collected: 11/02/22 14:35
Date Received: 11/04/22 08:38

Lab Sample ID: 890-3378-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	39125	11/09/22 15:02	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	39166	11/10/22 16:55	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			39283	11/11/22 08:40	SM	EET MID
Total/NA	Analysis	8015 NM		1			38964	11/08/22 09:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	38890	11/07/22 14:24	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	38805	11/07/22 22:53	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	38841	11/07/22 10:27	KS	EET MID
Soluble	Analysis	300.0		50			39040	11/11/22 13:44	CH	EET MID

Client Sample ID: PH01B

Date Collected: 11/02/22 15:00
Date Received: 11/04/22 08:38

Lab Sample ID: 890-3378-3
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	39125	11/09/22 15:02	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	39166	11/10/22 17:16	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			39283	11/11/22 08:40	SM	EET MID
Total/NA	Analysis	8015 NM		1			38964	11/08/22 09:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	38890	11/07/22 14:24	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	38805	11/07/22 23:15	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	38841	11/07/22 10:27	KS	EET MID
Soluble	Analysis	300.0		20			39040	11/11/22 13:49	CH	EET MID

Client Sample ID: PH01C

Date Collected: 11/02/22 09:25
Date Received: 11/04/22 08:38

Lab Sample ID: 890-3378-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	39125	11/09/22 15:02	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	39166	11/10/22 17:37	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			39283	11/11/22 08:40	SM	EET MID

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Lab Chronicle

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

Job ID: 890-3378-1
SDG: 03E1558118

Client Sample ID: PH01C

Date Collected: 11/02/22 09:25
Date Received: 11/04/22 08:38

Lab Sample ID: 890-3378-4

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			38964	11/08/22 09:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	38890	11/07/22 14:24	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	38805	11/07/22 23:36	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	38841	11/07/22 10:27	KS	EET MID
Soluble	Analysis	300.0		1			39040	11/11/22 13:54	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: 890-3378-1
SDG: 03E1558118

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

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

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

Method Summary

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

Job ID: 890-3378-1
SDG: 03E1558118

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	MCAWW	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

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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: 890-3378-1
SDG: 03E1558118

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3378-1	PH01	Solid	11/02/22 14:20	11/04/22 08:38	2'
890-3378-2	PH01A	Solid	11/02/22 14:35	11/04/22 08:38	4'
890-3378-3	PH01B	Solid	11/02/22 15:00	11/04/22 08:38	6'
890-3378-4	PH01C	Solid	11/02/22 09:25	11/04/22 08:38	10'

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Chain of Custody

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

Work Order No: _____

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

Work Order Comments

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

Project Name:	JRU DI 11 Ekalaka 823H	Turn Around	
Project Number:	03E1558118	☑ Routine ☐ Rush	
Project Location:		Due Date:	
Sampler's Name:	Connor Whitman	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Samples Received Intact:	(Yes) No	Thermometer ID:	Thm-007	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	4.0	
Total Containers:		Corrected Temperature:	3.8	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
PH01	S	11/2/2022	2:20	2'	Grab	1		x	x	x
PH01A	S	11/2/2022	2:35	4'	Grab	1		x	x	x
PH01B	S	11/2/2022	3:00	6'	Grab	1		x	x	x
PH01C	S	11/3/2022	9:25	10'	Grab	1		x	x	x

Parameters

890-3378 Chain of Custody

CRW

Preservative Codes

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

Sample Comments

Incident ID:
NAPP2224527297
Cost Center:
2104541001
AFE:
DD.2019.06665.CAP.CMP

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

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Connor	Amanda Short	11/4/22 838	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

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

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s)	COC No: 890-1010 1
Client Contact: Shipping/Receiving	Phone	E-Mail: Jessica Kramer@et.eurofinsus com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-3378-1
Address: 1211 W Florida Ave	Due Date Requested: 11/10/2022			
City: Midland	TAT Requested (days):			
State Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: JRU DI 11 Ekalaka 823H	Project #: 89000093			
Site	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	8015MOD_Calc	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc (MOD) BTEX	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note
			Preservation Code:										
PH01 (890-3378-1)	11/2/22	14 20 Mountain		Solid			X	X	X	X	X	1	
PH01A (890-3378-2)	11/2/22	14 35 Mountain		Solid			X	X	X	X	X	1	
PH01B (890-3378-3)	11/2/22	15 00 Mountain		Solid			X	X	X	X	X	1	
PH01C (890-3378-4)	11/2/22	09 25 Mountain		Solid			X	X	X	X	X	1	

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

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

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

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3378-1
SDG Number: 03E1558118

Login Number: 3378
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3378-1
SDG Number: 03E1558118

Login Number: 3378
List Number: 2
Creator: Teel, Brianna

List Source: Eurofins Midland
List Creation: 11/07/22 09:10 AM

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

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ANALYTICAL REPORT

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-3379-1
Laboratory Sample Delivery Group: 03E1558118
Client Project/Site: JRU DI 11 Ekalaka 823H

For:
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Ben Belill

JKramer

Authorized for release by:
11/11/2022 3:48:15 PM

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

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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.

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

Laboratory Job ID: 890-3379-1
SDG: 03E1558118

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-3379-1
Project/Site: JRU DI 11 Ekalaka 823H SDG: 03E1558118

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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

Glossary

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

Case Narrative

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

Job ID: 890-3379-1
SDG: 03E1558118

Job ID: 890-3379-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3379-1

Receipt
The samples were received on 11/4/2022 8:38 AM. 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 3.8°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: PH02 (890-3379-1), PH02A (890-3379-2) and PH02B (890-3379-3).

GC VOA
Method 8021B: The matrix spike duplicate (MSD) recoveries for preparation batch 880-39017 and analytical batch 880-39062 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-38974 and analytical batch 880-39056 recovered outside control limits for the following analytes: Diesel Range Organics (Over C10-C28).

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-38841 and 880-38841 and analytical batch 880-39040 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

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

Job ID: 890-3379-1
SDG: 03E1558118

Client Sample ID: PH02

Date Collected: 11/03/22 10:00
Date Received: 11/04/22 08:38
Sample Depth: 2'

Lab Sample ID: 890-3379-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U F1	0.00202		mg/Kg		11/08/22 14:12	11/09/22 22:44	1
Toluene	<0.00202	U F1	0.00202		mg/Kg		11/08/22 14:12	11/09/22 22:44	1
Ethylbenzene	<0.00202	U F1	0.00202		mg/Kg		11/08/22 14:12	11/09/22 22:44	1
m-Xylene & p-Xylene	<0.00403	U F1	0.00403		mg/Kg		11/08/22 14:12	11/09/22 22:44	1
o-Xylene	<0.00202	U F1	0.00202		mg/Kg		11/08/22 14:12	11/09/22 22:44	1
Xylenes, Total	<0.00403	U F1	0.00403		mg/Kg		11/08/22 14:12	11/09/22 22:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*11/08/22 14:12*	*11/09/22 22:44*	*1*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*11/08/22 14:12*	*11/09/22 22:44*	*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			11/10/22 11:59	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			11/09/22 14:04	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	<50.0	U	50.0		mg/Kg		11/08/22 10:44	11/09/22 11:24	1
Diesel Range Organics (Over C10-C28)	<50.0	U *1	50.0		mg/Kg		11/08/22 10:44	11/09/22 11:24	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/08/22 10:44	11/09/22 11:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*11/08/22 10:44*	*11/09/22 11:24*	*1*
o-Terphenyl	*96*		*70 - 130*	*11/08/22 10:44*	*11/09/22 11:24*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**123**		5.00		mg/Kg			11/11/22 13:58	1

Client Sample ID: PH02A

Date Collected: 11/03/22 10:10
Date Received: 11/04/22 08:38
Sample Depth: 4'

Lab Sample ID: 890-3379-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/08/22 14:12	11/09/22 23:04	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/08/22 14:12	11/09/22 23:04	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/08/22 14:12	11/09/22 23:04	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		11/08/22 14:12	11/09/22 23:04	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/08/22 14:12	11/09/22 23:04	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		11/08/22 14:12	11/09/22 23:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*11/08/22 14:12*	*11/09/22 23:04*	*1*

Client Sample Results

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

Job ID: 890-3379-1
SDG: 03E1558118

Client Sample ID: PH02A

Date Collected: 11/03/22 10:10
Date Received: 11/04/22 08:38
Sample Depth: 4'

Lab Sample ID: 890-3379-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*11/08/22 14:12*	*11/09/22 23:04*	*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			11/10/22 11:59	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			11/10/22 09:40	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		11/08/22 10:44	11/09/22 13:59	1
Diesel Range Organics (Over C10-C28)	<50.0	U *1	50.0	mg/Kg		11/08/22 10:44	11/09/22 13:59	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/08/22 10:44	11/09/22 13:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*11/08/22 10:44*	*11/09/22 13:59*	*1*
o-Terphenyl	*95*		*70 - 130*	*11/08/22 10:44*	*11/09/22 13:59*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1190**		49.5	mg/Kg			11/11/22 14:03	10

Client Sample ID: PH02B

Date Collected: 11/03/22 10:15
Date Received: 11/04/22 08:38
Sample Depth: 6'

Lab Sample ID: 890-3379-3
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		11/08/22 14:12	11/09/22 23:25	1
Toluene	<0.00198	U	0.00198	mg/Kg		11/08/22 14:12	11/09/22 23:25	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		11/08/22 14:12	11/09/22 23:25	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		11/08/22 14:12	11/09/22 23:25	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		11/08/22 14:12	11/09/22 23:25	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		11/08/22 14:12	11/09/22 23:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*11/08/22 14:12*	*11/09/22 23:25*	*1*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*11/08/22 14:12*	*11/09/22 23:25*	*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			11/10/22 11:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**147**		50.0	mg/Kg			11/10/22 09:40	1

Client Sample Results

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

Job ID: 890-3379-1
SDG: 03E1558118

Client Sample ID: PH02B

Date Collected: 11/03/22 10:15
Date Received: 11/04/22 08:38
Sample Depth: 6'

Lab Sample ID: 890-3379-3

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/08/22 10:44	11/09/22 14:21	1
Diesel Range Organics (Over C10-C28)	**147**	***1**	50.0		mg/Kg		11/08/22 10:44	11/09/22 14:21	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/08/22 10:44	11/09/22 14:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*11/08/22 10:44*	*11/09/22 14:21*	*1*
o-Terphenyl	*89*		*70 - 130*	*11/08/22 10:44*	*11/09/22 14:21*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1150**		50.0		mg/Kg			11/10/22 21:39	10

Surrogate Summary

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

Job ID: 890-3379-1
SDG: 03E1558118

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-3379-1	PH02	101	111
890-3379-1 MS	PH02	98	117
890-3379-1 MSD	PH02	111	108
890-3379-2	PH02A	95	102
890-3379-3	PH02B	103	113
LCS 880-39017/1-A	Lab Control Sample	94	112
LCSD 880-39017/2-A	Lab Control Sample Dup	105	114
MB 880-39017/5-A	Method Blank	81	99
MB 880-39063/5-A	Method Blank	78	100

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-3379-1	PH02	95	96
890-3379-1 MS	PH02	87	83
890-3379-1 MSD	PH02	89	85
890-3379-2	PH02A	94	95
890-3379-3	PH02B	88	89
LCS 880-38974/2-A	Lab Control Sample	89	92
LCSD 880-38974/3-A	Lab Control Sample Dup	113	118
MB 880-38974/1-A	Method Blank	100	102

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

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

Job ID: 890-3379-1
SDG: 03E1558118

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-39017/5-A
Matrix: Solid
Analysis Batch: 39062

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 39017

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/08/22 14:12	11/09/22 22:22	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/08/22 14:12	11/09/22 22:22	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/08/22 14:12	11/09/22 22:22	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/08/22 14:12	11/09/22 22:22	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/08/22 14:12	11/09/22 22:22	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/08/22 14:12	11/09/22 22:22	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*81*		*70 - 130*	*11/08/22 14:12*	*11/09/22 22:22*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*11/08/22 14:12*	*11/09/22 22:22*	*1*

Lab Sample ID: LCS 880-39017/1-A
Matrix: Solid
Analysis Batch: 39062

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 39017

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09303		mg/Kg		93	70 - 130		
Toluene			0.100	0.08208		mg/Kg		82	70 - 130		
Ethylbenzene			0.100	0.07968		mg/Kg		80	70 - 130		
m-Xylene & p-Xylene			0.200	0.1618		mg/Kg		81	70 - 130		
o-Xylene			0.100	0.08103		mg/Kg		81	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

Lab Sample ID: LCSD 880-39017/2-A
Matrix: Solid
Analysis Batch: 39062

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 39017

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09770		mg/Kg		98	70 - 130	5	35
Toluene			0.100	0.08811		mg/Kg		88	70 - 130	7	35
Ethylbenzene			0.100	0.08842		mg/Kg		88	70 - 130	10	35
m-Xylene & p-Xylene			0.200	0.1791		mg/Kg		90	70 - 130	10	35
o-Xylene			0.100	0.08946		mg/Kg		89	70 - 130	10	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*

Lab Sample ID: 890-3379-1 MS
Matrix: Solid
Analysis Batch: 39062

Client Sample ID: PH02
Prep Type: Total/NA
Prep Batch: 39017

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U F1	0.0996	0.06995		mg/Kg		70	70 - 130		
Toluene	<0.00202	U F1	0.0996	0.06018	F1	mg/Kg		60	70 - 130		

QC Sample Results

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

Job ID: 890-3379-1
SDG: 03E1558118

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

Lab Sample ID: 890-3379-1 MS — **Client Sample ID: PH02**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 39062 — **Prep Batch: 39017**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U F1	0.0996	0.05819	F1	mg/Kg		58	70 - 130
m-Xylene & p-Xylene	<0.00403	U F1	0.199	0.1203	F1	mg/Kg		60	70 - 130
o-Xylene	<0.00202	U F1	0.0996	0.06114	F1	mg/Kg		61	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*117*		*70 - 130*

Lab Sample ID: 890-3379-1 MSD — **Client Sample ID: PH02**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 39062 — **Prep Batch: 39017**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U F1	0.0990	0.06590	F1	mg/Kg		67	70 - 130	6	35
Toluene	<0.00202	U F1	0.0990	0.06727	F1	mg/Kg		68	70 - 130	11	35
Ethylbenzene	<0.00202	U F1	0.0990	0.07379		mg/Kg		75	70 - 130	24	35
m-Xylene & p-Xylene	<0.00403	U F1	0.198	0.1525		mg/Kg		77	70 - 130	24	35
o-Xylene	<0.00202	U F1	0.0990	0.08253		mg/Kg		83	70 - 130	30	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: MB 880-39063/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 39062 — **Prep Batch: 39063**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		11/09/22 08:53	11/09/22 11:32	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/09/22 08:53	11/09/22 11:32	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/09/22 08:53	11/09/22 11:32	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		11/09/22 08:53	11/09/22 11:32	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/09/22 08:53	11/09/22 11:32	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		11/09/22 08:53	11/09/22 11:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*78*		*70 - 130*	*11/09/22 08:53*	*11/09/22 11:32*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*11/09/22 08:53*	*11/09/22 11:32*	*1*

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

Lab Sample ID: MB 880-38974/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 39056 — **Prep Batch: 38974**

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		11/08/22 10:44	11/09/22 08:44	1

QC Sample Results

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

Job ID: 890-3379-1
SDG: 03E1558118

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

Lab Sample ID: MB 880-38974/1-A
Matrix: Solid
Analysis Batch: 39056

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 38974

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		11/08/22 10:44	11/09/22 08:44	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/08/22 10:44	11/09/22 08:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*11/08/22 10:44*	*11/09/22 08:44*	*1*
o-Terphenyl	*102*		*70 - 130*	*11/08/22 10:44*	*11/09/22 08:44*	*1*

Lab Sample ID: LCS 880-38974/2-A
Matrix: Solid
Analysis Batch: 39056

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 38974

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1081		mg/Kg		108	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	820.0		mg/Kg		82	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*89*		*70 - 130*
o-Terphenyl	*92*		*70 - 130*

Lab Sample ID: LCSD 880-38974/3-A
Matrix: Solid
Analysis Batch: 39056

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 38974

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	933.7		mg/Kg		93	70 - 130	15	20
Diesel Range Organics (Over C10-C28)			1000	1075	*1	mg/Kg		108	70 - 130	27	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*113*		*70 - 130*
o-Terphenyl	*118*		*70 - 130*

Lab Sample ID: 890-3379-1 MS
Matrix: Solid
Analysis Batch: 39056

Client Sample ID: PH02
Prep Type: Total/NA
Prep Batch: 38974

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	997	767.1		mg/Kg		77	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U *1	997	942.4		mg/Kg		95	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*87*		*70 - 130*
o-Terphenyl	*83*		*70 - 130*

QC Sample Results

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

Job ID: 890-3379-1
SDG: 03E1558118

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

Lab Sample ID: 890-3379-1 MSD
Matrix: Solid
Analysis Batch: 39056

Client Sample ID: PH02
Prep Type: Total/NA
Prep Batch: 38974

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	759.2		mg/Kg		76	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<50.0	U *1	999	978.9		mg/Kg		98	70 - 130	4	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*89*		*70 - 130*
o-Terphenyl	*85*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-38841/1-A
Matrix: Solid
Analysis Batch: 39040

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			11/11/22 11:35	1

Lab Sample ID: LCS 880-38841/2-A
Matrix: Solid
Analysis Batch: 39040

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	259.7		mg/Kg		104	90 - 110		

Lab Sample ID: LCSD 880-38841/3-A
Matrix: Solid
Analysis Batch: 39040

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	251.3		mg/Kg		101	90 - 110	3	20

Lab Sample ID: 890-3377-A-9-B MS
Matrix: Solid
Analysis Batch: 39040

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	6830	F1	2500	9619	F1	mg/Kg		112	90 - 110		

Lab Sample ID: 890-3377-A-9-C MSD
Matrix: Solid
Analysis Batch: 39040

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	6830	F1	2500	9469		mg/Kg		106	90 - 110	2	20

QC Sample Results

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

Job ID: 890-3379-1
SDG: 03E1558118

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-3377-A-19-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 39040

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	31.3	F1	249	306.6	F1	mg/Kg		111	90 - 110

Lab Sample ID: 890-3377-A-19-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 39040

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	31.3	F1	249	301.6		mg/Kg		109	90 - 110	2	20

Lab Sample ID: MB 880-38844/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 39042

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			11/10/22 21:18	1

Lab Sample ID: LCS 880-38844/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 39042

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	256.5		mg/Kg		103	90 - 110

Lab Sample ID: LCSD 880-38844/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 39042

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	261.8		mg/Kg		105	90 - 110	2	20

Lab Sample ID: 890-3379-3 MS — **Client Sample ID: PH02B**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 39042

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	1150		2500	3759		mg/Kg		104	90 - 110

Lab Sample ID: 890-3379-3 MSD — **Client Sample ID: PH02B**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 39042

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	1150		2500	3644		mg/Kg		100	90 - 110	3	20

QC Association Summary

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

Job ID: 890-3379-1
SDG: 03E1558118

GC VOA

Prep Batch: 39017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3379-1	PH02	Total/NA	Solid	5035	
890-3379-2	PH02A	Total/NA	Solid	5035	
890-3379-3	PH02B	Total/NA	Solid	5035	
MB 880-39017/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-39017/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-39017/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3379-1 MS	PH02	Total/NA	Solid	5035	
890-3379-1 MSD	PH02	Total/NA	Solid	5035	

Analysis Batch: 39062

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3379-1	PH02	Total/NA	Solid	8021B	39017
890-3379-2	PH02A	Total/NA	Solid	8021B	39017
890-3379-3	PH02B	Total/NA	Solid	8021B	39017
MB 880-39017/5-A	Method Blank	Total/NA	Solid	8021B	39017
MB 880-39063/5-A	Method Blank	Total/NA	Solid	8021B	39063
LCS 880-39017/1-A	Lab Control Sample	Total/NA	Solid	8021B	39017
LCSD 880-39017/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	39017
890-3379-1 MS	PH02	Total/NA	Solid	8021B	39017
890-3379-1 MSD	PH02	Total/NA	Solid	8021B	39017

Prep Batch: 39063

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-39063/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 39234

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3379-1	PH02	Total/NA	Solid	Total BTEX	
890-3379-2	PH02A	Total/NA	Solid	Total BTEX	
890-3379-3	PH02B	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 38974

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3379-1	PH02	Total/NA	Solid	8015NM Prep	
890-3379-2	PH02A	Total/NA	Solid	8015NM Prep	
890-3379-3	PH02B	Total/NA	Solid	8015NM Prep	
MB 880-38974/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-38974/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-38974/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3379-1 MS	PH02	Total/NA	Solid	8015NM Prep	
890-3379-1 MSD	PH02	Total/NA	Solid	8015NM Prep	

Analysis Batch: 39056

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3379-1	PH02	Total/NA	Solid	8015B NM	38974
890-3379-2	PH02A	Total/NA	Solid	8015B NM	38974
890-3379-3	PH02B	Total/NA	Solid	8015B NM	38974
MB 880-38974/1-A	Method Blank	Total/NA	Solid	8015B NM	38974
LCS 880-38974/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	38974

QC Association Summary

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

Job ID: 890-3379-1
SDG: 03E1558118

GC Semi VOA (Continued)

Analysis Batch: 39056 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-38974/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	38974
890-3379-1 MS	PH02	Total/NA	Solid	8015B NM	38974
890-3379-1 MSD	PH02	Total/NA	Solid	8015B NM	38974

Analysis Batch: 39117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3379-1	PH02	Total/NA	Solid	8015 NM	
890-3379-2	PH02A	Total/NA	Solid	8015 NM	
890-3379-3	PH02B	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 38841

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3379-1	PH02	Soluble	Solid	DI Leach	
890-3379-2	PH02A	Soluble	Solid	DI Leach	
MB 880-38841/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-38841/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-38841/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3377-A-9-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3377-A-9-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
890-3377-A-19-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3377-A-19-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Leach Batch: 38844

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3379-3	PH02B	Soluble	Solid	DI Leach	
MB 880-38844/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-38844/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-38844/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3379-3 MS	PH02B	Soluble	Solid	DI Leach	
890-3379-3 MSD	PH02B	Soluble	Solid	DI Leach	

Analysis Batch: 39040

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3379-1	PH02	Soluble	Solid	300.0	38841
890-3379-2	PH02A	Soluble	Solid	300.0	38841
MB 880-38841/1-A	Method Blank	Soluble	Solid	300.0	38841
LCS 880-38841/2-A	Lab Control Sample	Soluble	Solid	300.0	38841
LCSD 880-38841/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	38841
890-3377-A-9-B MS	Matrix Spike	Soluble	Solid	300.0	38841
890-3377-A-9-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	38841
890-3377-A-19-B MS	Matrix Spike	Soluble	Solid	300.0	38841
890-3377-A-19-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	38841

Analysis Batch: 39042

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3379-3	PH02B	Soluble	Solid	300.0	38844
MB 880-38844/1-A	Method Blank	Soluble	Solid	300.0	38844
LCS 880-38844/2-A	Lab Control Sample	Soluble	Solid	300.0	38844
LCSD 880-38844/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	38844

QC Association Summary

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

Job ID: 890-3379-1
SDG: 03E1558118

HPLC/IC (Continued)

Analysis Batch: 39042 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3379-3 MS	PH02B	Soluble	Solid	300.0	38844
890-3379-3 MSD	PH02B	Soluble	Solid	300.0	38844

Lab Chronicle

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

Job ID: 890-3379-1
SDG: 03E1558118

Client Sample ID: PH02

Date Collected: 11/03/22 10:00
Date Received: 11/04/22 08:38

Lab Sample ID: 890-3379-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	39017	11/08/22 14:12	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	39062	11/09/22 22:44	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			39234	11/10/22 11:59	SM	EET MID
Total/NA	Analysis	8015 NM		1			39117	11/09/22 14:04	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	38974	11/08/22 10:44	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39056	11/09/22 11:24	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	38841	11/07/22 10:27	KS	EET MID
Soluble	Analysis	300.0		1			39040	11/11/22 13:58	CH	EET MID

Client Sample ID: PH02A

Date Collected: 11/03/22 10:10
Date Received: 11/04/22 08:38

Lab Sample ID: 890-3379-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	39017	11/08/22 14:12	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	39062	11/09/22 23:04	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			39234	11/10/22 11:59	SM	EET MID
Total/NA	Analysis	8015 NM		1			39117	11/10/22 09:40	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	38974	11/08/22 10:44	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39056	11/09/22 13:59	AJ	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	38841	11/07/22 10:27	KS	EET MID
Soluble	Analysis	300.0		10			39040	11/11/22 14:03	CH	EET MID

Client Sample ID: PH02B

Date Collected: 11/03/22 10:15
Date Received: 11/04/22 08:38

Lab Sample ID: 890-3379-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	39017	11/08/22 14:12	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	39062	11/09/22 23:25	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			39234	11/10/22 11:59	SM	EET MID
Total/NA	Analysis	8015 NM		1			39117	11/10/22 09:40	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	38974	11/08/22 10:44	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39056	11/09/22 14:21	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	38844	11/07/22 10:37	KS	EET MID
Soluble	Analysis	300.0		10			39042	11/10/22 21:39	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: 890-3379-1
SDG: 03E1558118

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

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

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

Method Summary

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

Job ID: 890-3379-1
SDG: 03E1558118

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	MCAWW	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

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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: 890-3379-1
SDG: 03E1558118

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3379-1	PH02	Solid	11/03/22 10:00	11/04/22 08:38	2'
890-3379-2	PH02A	Solid	11/03/22 10:10	11/04/22 08:38	4'
890-3379-3	PH02B	Solid	11/03/22 10:15	11/04/22 08:38	6'

eurofins

Environment Testing
Xenco

Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

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

Work Order Comments

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

Project Name:	JRU DI 11 Ekalaka 823H	Turn Around	☑ Routine ☐ Rush
Project Number:	03E1558118	Due Date:	
Project Location:		TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Connor Whitman		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	IR-007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	4.0
Total Containers:		Corrected Temperature:	3.8

ANALYSIS REQUEST

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: CHLORIDES (EPA: 300.0)	Parameters: TPH (8015)	Parameters: BTEX (8021)
PH02	S	11/3/2022	10:00	2'	Grab	1		x	x	x
PH02A	S	11/3/2022	10:10	4'	Grab	1		x	x	x
PH02B	S	11/3/2022	10:15	6'	Grab	1		x	x	x

890-3379 Chain of Custody

CW

Sample Comments

Incident ID:
NAPP2224527297
Cost Center:
2104541001
AFE:
DD.2019.06665.CAP.CMP

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

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	[signature]	Amanda Estep	11/4/22 838			
3				4		
5				6		

Revised Date: 08/25/2020 Rev 2020.2

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

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s)	COC No: 890-1010 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Jessica Kramer@et.eurofinsus com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-3379-1
Address: 1211 W Florida Ave	Due Date Requested: 11/10/2022			
City: Midland	TAT Requested (days):			
State, Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: JRU DI 11 Ekalaka 823H	Project #: 89000093			
Site	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	8015MOD_Calc	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc (MOD) BTEX	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
PH02 (890-3379-1)	11/3/22	10 00 Mountain		Solid			X	X	X	X	X	1	
PH02A (890-3379-2)	11/3/22	10 10 Mountain		Solid			X	X	X	X	X	1	
PH02B (890-3379-3)	11/3/22	10 15 Mountain		Solid			X	X	X	X	X	1	

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

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

Empty Kit Relinquished by:	Date	Time	Method of Shipment:

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

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

Ver: 06/08/2021

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

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s)	COC No: 890-1010 4
Client Contact: Shipping/Receiving	Phone	E-Mail: Jessica Kramer@et.eurofinsus com	State of Origin: New Mexico	Page: Page 4 of 6
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-3380-1
Address: 1211 W Florida Ave	Due Date Requested: 11/10/2022			
City: Midland	TAT Requested (days):			
State, Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: JR Oil - MLMU Battery	Project #: 88000039			
Site	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	8021B/5035FP_Calc BTEX	300_ORGFM_28D/DI_LEACH Chloride	Total_BTEX_GCV	8015MOD_Calc	Total Number of containers	Special Instructions/Note.
			Preservation Code:										
AH-3 (4-4 5') (890-3380-28)	11/3/22	Mountain		Solid			X	X	X	X	X	1	
AH-4 (5-1') (890-3380-29)	11/3/22	Mountain		Solid			X	X	X	X	X	1	
AH-4 (1-1 5') (890-3380-30)	11/3/22	Mountain		Solid			X	X	X	X	X	1	
AH-4 (2-2 5') (890-3380-31)	11/3/22	Mountain		Solid			X	X	X	X	X	1	
AH-4 (3-3 5') (890-3380-32)	11/3/22	Mountain		Solid			X	X	X	X	X	1	
AH-4 (4-4 5') (890-3380-33)	11/3/22	Mountain		Solid			X	X	X	X	X	1	
AH-5 (5-1') (890-3380-34)	11/3/22	Mountain		Solid			X	X	X	X	X	1	
AH-5 (1-1 5') (890-3380-35)	11/3/22	Mountain		Solid			X	X	X	X	X	1	
AH-5 (2-2 5') (890-3380-36)	11/3/22	Mountain		Solid			X	X	X	X	X	1	

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

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

Empty Kit Relinquished by	Date	Time	Method of Shipment:

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

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

Ver: 06/08/2021

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

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s)	COC No: 890-1010 3
Client Contact: Shipping/Receiving	Phone	E-Mail: Jessica Kramer@et.eurofinsus com	State of Origin: New Mexico	Page: Page 3 of 6
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-3380-1
Address: 1211 W Florida Ave	Due Date Requested: 11/10/2022			
City: Midland	TAT Requested (days):			
State Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: JR Oil - MLMU Battery	Project #: 88000039			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	8021B/5035FP_Calc BTEX	300_ORGFM_28D/DI_LEACH Chloride	Total_BTEX_GCV	8015MOD_Calc	Total Number of containers	Special Instructions/Note.
			Preservation Code:										
AH-2 (5-1) (890-3380-19)	11/3/22	Mountain		Solid			X	X	X	X	X	1	
AH-2 (1-1 5') (890-3380-20)	11/3/22	Mountain		Solid			X	X	X	X	X	1	
AH-2 (2-2 5') (890-3380-21)	11/3/22	Mountain		Solid			X	X	X	X	X	1	
AH-2 (3-3 5') (890-3380-22)	11/3/22	Mountain		Solid			X	X	X	X	X	1	
AH-2 (4-4 5') (890-3380-23)	11/3/22	Mountain		Solid			X	X	X	X	X	1	
AH-3 (5-1') (890-3380-24)	11/3/22	Mountain		Solid			X	X	X	X	X	1	
AH-3 (1-1 5') (890-3380-25)	11/3/22	Mountain		Solid			X	X	X	X	X	1	
AH-3 (2-2 5) (890-3380-26)	11/3/22	Mountain		Solid			X	X	X	X	X	1	
AH-3 (3-3 5') (890-3380-27)	11/3/22	Mountain		Solid			X	X	X	X	X	1	

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

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

Empty Kit Relinquished by	Date	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company
Relinquished by:	Date/Time.	Company	Received by:	Date/Time	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company

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

Ver: 06/08/2021

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

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 890-1010 2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Jessica Kramer@et.eurofinsus com	State of Origin: New Mexico	Page: Page 2 of 6
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Louisiana, NELAP - Texas		Job #: 890-3380-1
Address: 1211 W Florida Ave	Due Date Requested: 11/10/2022			
City: Midland	TAT Requested (days):			
State Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: JR Oil - MLMU Battery	Project #: 88000039			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	8021B/5035FP_Calc BTEX	300_ORGFM_28D/DI_LEACH Chloride	Total_BTEX_GCV	8015MOD_Calc	Total Number of containers	Special Instructions/Note
			Preservation Code:										
H-10 (890-3380-10)	11/3/22	Mountain		Solid			X	X	X	X	X	1	
H-11 (890-3380-11)	11/3/22	Mountain		Solid			X	X	X	X	X	1	
H-12 (890-3380-12)	11/3/22	Mountain		Solid			X	X	X	X	X	1	
H-13 (890-3380-13)	11/3/22	Mountain		Solid			X	X	X	X	X	1	
AH-1 (5-1') (890-3380-14)	11/3/22	Mountain		Solid			X	X	X	X	X	1	
AH-1 (1-1 5') (890-3380-15)	11/3/22	Mountain		Solid			X	X	X	X	X	1	
AH-1 (2-2 5') (890-3380-16)	11/3/22	Mountain		Solid			X	X	X	X	X	1	
AH-1 (3-3 5') (890-3380-17)	11/3/22	Mountain		Solid			X	X	X	X	X	1	
AH-1 (4-4 5') (890-3380-18)	11/3/22	Mountain		Solid			X	X	X	X	X	1	

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

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested I II III IV Other (specify) Primary Deliverable Rank 2	Special Instructions/QC Requirements
Empty Kit Relinquished by	Date: Time: Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company
Relinquished by:	Date/Time.	Company	Received by:	Date/Time	Company
Relinquished by:	Date/Time	Company	Received by:	Date/Time:	Company

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

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3379-1
SDG Number: 03E1558118

Login Number: 3379
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3379-1
SDG Number: 03E1558118

Login Number: 3379
List Number: 2
Creator: Teel, Brianna

List Source: Eurofins Midland
List Creation: 11/07/22 09:10 AM

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

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ANALYTICAL REPORT

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-3381-1
Laboratory Sample Delivery Group: 03E1558118
Client Project/Site: JRU DI 11 Ekalaka 832H

For:
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Ben Belill

JKramer

Authorized for release by:
11/11/2022 3:48:49 PM

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

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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.

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 832H

Laboratory Job ID: 890-3381-1
SDG: 03E1558118

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-3381-1
Project/Site: JRU DI 11 Ekalaka 832H SDG: 03E1558118

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
F1	MS and/or MSD recovery exceeds control limits.
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 832H

Job ID: 890-3381-1
SDG: 03E1558118

Job ID: 890-3381-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3381-1

Receipt
The samples were received on 11/4/2022 8:38 AM. 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 3.8°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: PH03 (890-3381-1), PH03A (890-3381-2), PH03B (890-3381-3) and PH03C (890-3381-4).

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-39080 and analytical batch 880-39060 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: The method blank for preparation batch 880-38890 and analytical batch 880-38805 contained Gasoline Range Organics (GRO)-C6-C10 above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-38890 and analytical batch 880-38805 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10.

Method 8015MOD_NM: The matrix spike (MS) recoveries for preparation batch 880-38890 and analytical batch 880-38805 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

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

Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 832H

Job ID: 890-3381-1
SDG: 03E1558118

Client Sample ID: PH03

Date Collected: 11/03/22 12:25
Date Received: 11/04/22 08:38
Sample Depth: 0.5'

Lab Sample ID: 890-3381-1

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		11/09/22 09:58	11/10/22 05:48	1
Toluene	<0.00201	U	0.00201		mg/Kg		11/09/22 09:58	11/10/22 05:48	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		11/09/22 09:58	11/10/22 05:48	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		11/09/22 09:58	11/10/22 05:48	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		11/09/22 09:58	11/10/22 05:48	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		11/09/22 09:58	11/10/22 05:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*11/09/22 09:58*	*11/10/22 05:48*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*11/09/22 09:58*	*11/10/22 05:48*	*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			11/10/22 11:26	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			11/08/22 09:57	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 *1	50.0		mg/Kg		11/07/22 14:24	11/08/22 01:17	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/07/22 14:24	11/08/22 01:17	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/07/22 14:24	11/08/22 01:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*86*		*70 - 130*	*11/07/22 14:24*	*11/08/22 01:17*	*1*
o-Terphenyl	*90*		*70 - 130*	*11/07/22 14:24*	*11/08/22 01:17*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3170**		249		mg/Kg			11/10/22 14:37	50

Client Sample ID: PH03A

Date Collected: 11/03/22 12:30
Date Received: 11/04/22 08:38
Sample Depth: 2'

Lab Sample ID: 890-3381-2

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		11/09/22 09:58	11/10/22 06:09	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/09/22 09:58	11/10/22 06:09	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/09/22 09:58	11/10/22 06:09	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/09/22 09:58	11/10/22 06:09	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/09/22 09:58	11/10/22 06:09	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/09/22 09:58	11/10/22 06:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*11/09/22 09:58*	*11/10/22 06:09*	*1*

Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 832H

Job ID: 890-3381-1
SDG: 03E1558118

Client Sample ID: PH03A

Date Collected: 11/03/22 12:30
Date Received: 11/04/22 08:38
Sample Depth: 2'

Lab Sample ID: 890-3381-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*11/09/22 09:58*	*11/10/22 06:09*	*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			11/10/22 11:26	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			11/08/22 09:57	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 *1	50.0	mg/Kg		11/07/22 14:24	11/08/22 01:38	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		11/07/22 14:24	11/08/22 01:38	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/07/22 14:24	11/08/22 01:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*11/07/22 14:24*	*11/08/22 01:38*	*1*
o-Terphenyl	*101*		*70 - 130*	*11/07/22 14:24*	*11/08/22 01:38*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2950**		50.4	mg/Kg			11/11/22 11:00	10

Client Sample ID: PH03B

Date Collected: 11/03/22 12:35
Date Received: 11/04/22 08:38
Sample Depth: 4'

Lab Sample ID: 890-3381-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		11/09/22 09:58	11/10/22 06:30	1
Toluene	<0.00199	U	0.00199	mg/Kg		11/09/22 09:58	11/10/22 06:30	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		11/09/22 09:58	11/10/22 06:30	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		11/09/22 09:58	11/10/22 06:30	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		11/09/22 09:58	11/10/22 06:30	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		11/09/22 09:58	11/10/22 06:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*11/09/22 09:58*	*11/10/22 06:30*	*1*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*11/09/22 09:58*	*11/10/22 06:30*	*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			11/10/22 11:26	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			11/08/22 09:57	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 832H

Job ID: 890-3381-1
SDG: 03E1558118

Client Sample ID: PH03B

Date Collected: 11/03/22 12:35
Date Received: 11/04/22 08:38
Sample Depth: 4'

Lab Sample ID: 890-3381-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9		mg/Kg		11/07/22 14:24	11/08/22 01:58	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/07/22 14:24	11/08/22 01:58	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/07/22 14:24	11/08/22 01:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*11/07/22 14:24*	*11/08/22 01:58*	*1*
o-Terphenyl	*105*		*70 - 130*	*11/07/22 14:24*	*11/08/22 01:58*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**23.6**		5.00		mg/Kg			11/10/22 14:57	1

Client Sample ID: PH03C

Date Collected: 11/03/22 12:40
Date Received: 11/04/22 08:38
Sample Depth: 6'

Lab Sample ID: 890-3381-4
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		11/09/22 09:58	11/10/22 06:50	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/09/22 09:58	11/10/22 06:50	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/09/22 09:58	11/10/22 06:50	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		11/09/22 09:58	11/10/22 06:50	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/09/22 09:58	11/10/22 06:50	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		11/09/22 09:58	11/10/22 06:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*11/09/22 09:58*	*11/10/22 06:50*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*11/09/22 09:58*	*11/10/22 06:50*	*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			11/10/22 11:26	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			11/08/22 09:57	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 *1	50.0		mg/Kg		11/07/22 14:24	11/08/22 02:18	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/07/22 14:24	11/08/22 02:18	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/07/22 14:24	11/08/22 02:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*91*		*70 - 130*	*11/07/22 14:24*	*11/08/22 02:18*	*1*
o-Terphenyl	*93*		*70 - 130*	*11/07/22 14:24*	*11/08/22 02:18*	*1*

Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 832H

Job ID: 890-3381-1
SDG: 03E1558118

Client Sample ID: PH03C

Date Collected: 11/03/22 12:40
Date Received: 11/04/22 08:38
Sample Depth: 6'

Lab Sample ID: 890-3381-4

Matrix: Solid

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	18.5		4.99		mg/Kg			11/10/22 15:02	1

Surrogate Summary

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 832H

Job ID: 890-3381-1
SDG: 03E1558118

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-21336-A-21-D MS	Matrix Spike	88	106
880-21336-A-21-E MSD	Matrix Spike Duplicate	83	99
890-3381-1	PH03	107	105
890-3381-2	PH03A	115	112
890-3381-3	PH03B	114	111
890-3381-4	PH03C	102	110
LCS 880-39080/1-A	Lab Control Sample	89	107
LCSD 880-39080/2-A	Lab Control Sample Dup	86	106
MB 880-38969/5-A	Method Blank	91	100
MB 880-39080/5-A	Method Blank	102	94

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-3372-A-1-C MS	Matrix Spike	96	92
890-3372-A-1-D MSD	Matrix Spike Duplicate	89	85
890-3381-1	PH03	86	90
890-3381-2	PH03A	92	101
890-3381-3	PH03B	96	105
890-3381-4	PH03C	91	93
LCS 880-38890/2-A	Lab Control Sample	97	103
LCSD 880-38890/3-A	Lab Control Sample Dup	95	98
MB 880-38890/1-A	Method Blank	99	109

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 832H

Job ID: 890-3381-1
SDG: 03E1558118

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-38969/5-A
Matrix: Solid
Analysis Batch: 39060

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 38969

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/08/22 10:15	11/09/22 11:50	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/08/22 10:15	11/09/22 11:50	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/08/22 10:15	11/09/22 11:50	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/08/22 10:15	11/09/22 11:50	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/08/22 10:15	11/09/22 11:50	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/08/22 10:15	11/09/22 11:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*	*11/08/22 10:15*	*11/09/22 11:50*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*11/08/22 10:15*	*11/09/22 11:50*	*1*

Lab Sample ID: MB 880-39080/5-A
Matrix: Solid
Analysis Batch: 39060

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 39080

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/09/22 09:58	11/09/22 23:55	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/09/22 09:58	11/09/22 23:55	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/09/22 09:58	11/09/22 23:55	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/09/22 09:58	11/09/22 23:55	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/09/22 09:58	11/09/22 23:55	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/09/22 09:58	11/09/22 23:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*11/09/22 09:58*	*11/09/22 23:55*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*11/09/22 09:58*	*11/09/22 23:55*	*1*

Lab Sample ID: LCS 880-39080/1-A
Matrix: Solid
Analysis Batch: 39060

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 39080

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09609		mg/Kg		96	70 - 130		
Toluene			0.100	0.09518		mg/Kg		95	70 - 130		
Ethylbenzene			0.100	0.08916		mg/Kg		89	70 - 130		
m-Xylene & p-Xylene			0.200	0.1625		mg/Kg		81	70 - 130		
o-Xylene			0.100	0.09411		mg/Kg		94	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: LCSD 880-39080/2-A
Matrix: Solid
Analysis Batch: 39060

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 39080

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09081		mg/Kg		91	70 - 130	6	35

QC Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 832H

Job ID: 890-3381-1
SDG: 03E1558118

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

Lab Sample ID: LCSD 880-39080/2-A
Matrix: Solid
Analysis Batch: 39060

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 39080

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.08729		mg/Kg		87	70 - 130	9	35
Ethylbenzene			0.100	0.08505		mg/Kg		85	70 - 130	5	35
m-Xylene & p-Xylene			0.200	0.1591		mg/Kg		80	70 - 130	2	35
o-Xylene			0.100	0.09225		mg/Kg		92	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: 880-21336-A-21-D MS
Matrix: Solid
Analysis Batch: 39060

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 39080

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U	0.0998	0.07815		mg/Kg		78	70 - 130
Toluene	<0.00200	U	0.0998	0.07756		mg/Kg		78	70 - 130
Ethylbenzene	<0.00200	U F1	0.0998	0.07007		mg/Kg		70	70 - 130
m-Xylene & p-Xylene	<0.00401	U F1	0.200	0.1367	F1	mg/Kg		67	70 - 130
o-Xylene	<0.00200	U	0.0998	0.07823		mg/Kg		78	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: 880-21336-A-21-E MSD
Matrix: Solid
Analysis Batch: 39060

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 39080

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0990	0.07526		mg/Kg		76	70 - 130	4	35
Toluene	<0.00200	U	0.0990	0.07614		mg/Kg		77	70 - 130	2	35
Ethylbenzene	<0.00200	U F1	0.0990	0.06683	F1	mg/Kg		68	70 - 130	5	35
m-Xylene & p-Xylene	<0.00401	U F1	0.198	0.1275	F1	mg/Kg		63	70 - 130	7	35
o-Xylene	<0.00200	U	0.0990	0.07278		mg/Kg		74	70 - 130	7	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

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

Lab Sample ID: MB 880-38890/1-A
Matrix: Solid
Analysis Batch: 38805

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 38890

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		11/07/22 14:24	11/07/22 19:18	1

QC Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 832H

Job ID: 890-3381-1
SDG: 03E1558118

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

Lab Sample ID: MB 880-38890/1-A
Matrix: Solid
Analysis Batch: 38805

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 38890

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		11/07/22 14:24	11/07/22 19:18	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/07/22 14:24	11/07/22 19:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*99*		*70 - 130*	*11/07/22 14:24*	*11/07/22 19:18*	*1*
o-Terphenyl	*109*		*70 - 130*	*11/07/22 14:24*	*11/07/22 19:18*	*1*

Lab Sample ID: LCS 880-38890/2-A
Matrix: Solid
Analysis Batch: 38805

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 38890

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	822.4		mg/Kg		82	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	911.7		mg/Kg		91	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*97*		*70 - 130*
o-Terphenyl	*103*		*70 - 130*

Lab Sample ID: LCSD 880-38890/3-A
Matrix: Solid
Analysis Batch: 38805

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 38890

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1052	*1	mg/Kg		105	70 - 130	24	20
Diesel Range Organics (Over C10-C28)			1000	810.0		mg/Kg		81	70 - 130	12	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*95*		*70 - 130*
o-Terphenyl	*98*		*70 - 130*

Lab Sample ID: 890-3372-A-1-C MS
Matrix: Solid
Analysis Batch: 38805

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 38890

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1 F1	997	1396	F1	mg/Kg		137	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	997	895.2		mg/Kg		90	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*96*		*70 - 130*
o-Terphenyl	*92*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 832H

Job ID: 890-3381-1
SDG: 03E1558118

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

Lab Sample ID: 890-3372-A-1-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 38805 — **Prep Batch: 38890**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1 F1	999	1246		mg/Kg		122	70 - 130	11	20
Diesel Range Organics (Over C10-C28)	<50.0	U	999	820.4		mg/Kg		82	70 - 130	9	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*89*		*70 - 130*
o-Terphenyl	*85*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-38846/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 39043

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			11/10/22 13:18	1

Lab Sample ID: LCS 880-38846/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 39043

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	265.9		mg/Kg		106	90 - 110		

Lab Sample ID: LCSD 880-38846/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 39043

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	266.8		mg/Kg		107	90 - 110	0	20

Lab Sample ID: 890-3381-2 MS — **Client Sample ID: PH03A**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 39043

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	2950		2520	5533		mg/Kg		102	90 - 110		

Lab Sample ID: 890-3381-2 MSD — **Client Sample ID: PH03A**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 39043

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	2950		2520	5488		mg/Kg		101	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 832H

Job ID: 890-3381-1
SDG: 03E1558118

GC VOA

Prep Batch: 38969

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-38969/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 39060

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3381-1	PH03	Total/NA	Solid	8021B	39080
890-3381-2	PH03A	Total/NA	Solid	8021B	39080
890-3381-3	PH03B	Total/NA	Solid	8021B	39080
890-3381-4	PH03C	Total/NA	Solid	8021B	39080
MB 880-38969/5-A	Method Blank	Total/NA	Solid	8021B	38969
MB 880-39080/5-A	Method Blank	Total/NA	Solid	8021B	39080
LCS 880-39080/1-A	Lab Control Sample	Total/NA	Solid	8021B	39080
LCSD 880-39080/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	39080
880-21336-A-21-D MS	Matrix Spike	Total/NA	Solid	8021B	39080
880-21336-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	39080

Prep Batch: 39080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3381-1	PH03	Total/NA	Solid	5035	
890-3381-2	PH03A	Total/NA	Solid	5035	
890-3381-3	PH03B	Total/NA	Solid	5035	
890-3381-4	PH03C	Total/NA	Solid	5035	
MB 880-39080/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-39080/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-39080/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-21336-A-21-D MS	Matrix Spike	Total/NA	Solid	5035	
880-21336-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 39219

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3381-1	PH03	Total/NA	Solid	Total BTEX	
890-3381-2	PH03A	Total/NA	Solid	Total BTEX	
890-3381-3	PH03B	Total/NA	Solid	Total BTEX	
890-3381-4	PH03C	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 38805

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3381-1	PH03	Total/NA	Solid	8015B NM	38890
890-3381-2	PH03A	Total/NA	Solid	8015B NM	38890
890-3381-3	PH03B	Total/NA	Solid	8015B NM	38890
890-3381-4	PH03C	Total/NA	Solid	8015B NM	38890
MB 880-38890/1-A	Method Blank	Total/NA	Solid	8015B NM	38890
LCS 880-38890/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	38890
LCSD 880-38890/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	38890
890-3372-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	38890
890-3372-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	38890

Prep Batch: 38890

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3381-1	PH03	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 832H

Job ID: 890-3381-1
SDG: 03E1558118

GC Semi VOA (Continued)

Prep Batch: 38890 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3381-2	PH03A	Total/NA	Solid	8015NM Prep	
890-3381-3	PH03B	Total/NA	Solid	8015NM Prep	
890-3381-4	PH03C	Total/NA	Solid	8015NM Prep	
MB 880-38890/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-38890/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-38890/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3372-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3372-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 38966

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3381-1	PH03	Total/NA	Solid	8015 NM	
890-3381-2	PH03A	Total/NA	Solid	8015 NM	
890-3381-3	PH03B	Total/NA	Solid	8015 NM	
890-3381-4	PH03C	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 38846

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3381-1	PH03	Soluble	Solid	DI Leach	
890-3381-2	PH03A	Soluble	Solid	DI Leach	
890-3381-3	PH03B	Soluble	Solid	DI Leach	
890-3381-4	PH03C	Soluble	Solid	DI Leach	
MB 880-38846/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-38846/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-38846/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3381-2 MS	PH03A	Soluble	Solid	DI Leach	
890-3381-2 MSD	PH03A	Soluble	Solid	DI Leach	

Analysis Batch: 39043

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3381-1	PH03	Soluble	Solid	300.0	38846
890-3381-2	PH03A	Soluble	Solid	300.0	38846
890-3381-3	PH03B	Soluble	Solid	300.0	38846
890-3381-4	PH03C	Soluble	Solid	300.0	38846
MB 880-38846/1-A	Method Blank	Soluble	Solid	300.0	38846
LCS 880-38846/2-A	Lab Control Sample	Soluble	Solid	300.0	38846
LCSD 880-38846/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	38846
890-3381-2 MS	PH03A	Soluble	Solid	300.0	38846
890-3381-2 MSD	PH03A	Soluble	Solid	300.0	38846

Lab Chronicle

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 832H

Job ID: 890-3381-1
SDG: 03E1558118

Client Sample ID: PH03

Date Collected: 11/03/22 12:25
Date Received: 11/04/22 08:38

Lab Sample ID: 890-3381-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	39080	11/09/22 09:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	39060	11/10/22 05:48	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			39219	11/10/22 11:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			38966	11/08/22 09:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	38890	11/07/22 14:24	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	38805	11/08/22 01:17	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	38846	11/07/22 10:40	KS	EET MID
Soluble	Analysis	300.0		50			39043	11/10/22 14:37	CH	EET MID

Client Sample ID: PH03A

Date Collected: 11/03/22 12:30
Date Received: 11/04/22 08:38

Lab Sample ID: 890-3381-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	39080	11/09/22 09:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	39060	11/10/22 06:09	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			39219	11/10/22 11:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			38966	11/08/22 09:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	38890	11/07/22 14:24	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	38805	11/08/22 01:38	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	38846	11/07/22 10:40	KS	EET MID
Soluble	Analysis	300.0		10			39043	11/11/22 11:00	CH	EET MID

Client Sample ID: PH03B

Date Collected: 11/03/22 12:35
Date Received: 11/04/22 08:38

Lab Sample ID: 890-3381-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	39080	11/09/22 09:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	39060	11/10/22 06:30	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			39219	11/10/22 11:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			38966	11/08/22 09:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	38890	11/07/22 14:24	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	38805	11/08/22 01:58	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	38846	11/07/22 10:40	KS	EET MID
Soluble	Analysis	300.0		1			39043	11/10/22 14:57	CH	EET MID

Client Sample ID: PH03C

Date Collected: 11/03/22 12:40
Date Received: 11/04/22 08:38

Lab Sample ID: 890-3381-4

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	39080	11/09/22 09:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	39060	11/10/22 06:50	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			39219	11/10/22 11:26	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 832H

Job ID: 890-3381-1
SDG: 03E1558118

Client Sample ID: PH03C
Date Collected: 11/03/22 12:40
Date Received: 11/04/22 08:38

Lab Sample ID: 890-3381-4
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			38966	11/08/22 09:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	38890	11/07/22 14:24	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	38805	11/08/22 02:18	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	38846	11/07/22 10:40	KS	EET MID
Soluble	Analysis	300.0		1			39043	11/10/22 15:02	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 832H

Job ID: 890-3381-1
SDG: 03E1558118

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 832H

Job ID: 890-3381-1
SDG: 03E1558118

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	MCAWW	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

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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 832H

Job ID: 890-3381-1
SDG: 03E1558118

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3381-1	PH03	Solid	11/03/22 12:25	11/04/22 08:38	0.5'
890-3381-2	PH03A	Solid	11/03/22 12:30	11/04/22 08:38	2'
890-3381-3	PH03B	Solid	11/03/22 12:35	11/04/22 08:38	4'
890-3381-4	PH03C	Solid	11/03/22 12:40	11/04/22 08:38	6'

Chain of Custody

eurofins Environment Testing Xenco

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

Work Order No: _____

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

Work Order Comments

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

Project Name:	JRU DI 11 Ekalaka 823H	Turn Around	☑ Routine ☐ Rush
Project Number:	03E1558118	Due Date:	
Project Location:		TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Connor Whitman		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	TNM-007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	4.0
Total Containers:		Corrected Temperature:	3.8

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
PH03	S	11/3/2022	12:25	0.5'	Grab	1		x	x	x
PH03A	S	11/3/2022	12:30	2'	Grab	1		x	x	x
PH03B	S	11/3/2022	12:35	4'	Grab	1		x	x	x
PH03C	S	11/3/2022	12:40	6'	Grab	1		x	x	x

Parameters

ANALYSIS REQUEST

890-3381 Chain of Custody

Preservative Codes

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

Sample Comments

Incident ID:
NAPP2224527297
Cost Center:
2104541001
AFE:
DD.2019.06665.CAP.CMP

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

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Cuthbert	Aurora Stuff	11/4/22 838			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Eurofins Carlsbad
1089 N Canal St
Carlsbad NM 88220
Phone: 575-988-3199 Fax 575-988-3199

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler	Lab PM	Carrier Tracking No(s)	COC No
Client Contact: Shipping/Receiving	Phone	Kramer Jessica		890-1010 1
Company: Eurofins Environment Testing South Centr		E-Mail: Jessica Kramer@et eurofinsus com	State of Origin: New Mexico	Page: Page 1 of 1
Address: 1211 W Florida Ave	Due Date Requested: 11/10/2022	Accreditations Required (See note): NELAP - Texas		Job #: 890-3381-1
City: Midland	TAT Requested (days):			
State Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: JRU DI 11 Ekalaka 832H	Project #: 89000093			
Site	SSOW#:			

Preservation Codes

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

Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	8015MOD_Calc	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc (MOD) BTEX	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note
			Preservation Code:										
PH03 (890-3381-1)	11/3/22	12 25 Mountain		Solid			X	X	X	X	X	1	
PH03A (890-3381-2)	11/3/22	12 30 Mountain		Solid			X	X	X	X	X	1	
PH03B (890-3381-3)	11/3/22	12 35 Mountain		Solid			X	X	X	X	X	1	
PH03C (890-3381-4)	11/3/22	12 40 Mountain		Solid			X	X	X	X	X	1	

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

Possible Hazard Identification

Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested I II III IV Other (specify) Primary Deliverable Rank 2

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1						
2	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
3	Relinquished by	Date/Time	Company	Received by	Date/Time	Company

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

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3381-1
SDG Number: 03E1558118

Login Number: 3381
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3381-1
SDG Number: 03E1558118

Login Number: 3381
List Number: 2
Creator: Teel, Brianna

List Source: Eurofins Midland
List Creation: 11/07/22 09:10 AM

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

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ANALYTICAL REPORT

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-3382-1
Laboratory Sample Delivery Group: 03E1558118
Client Project/Site: JRU DI 11 Ekalaka 832H

For:
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Ben Belill

JKramer

Authorized for release by:
11/11/2022 9:13:09 AM

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

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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.

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 832H

Laboratory Job ID: 890-3382-1
SDG: 03E1558118

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 832H

Job ID: 890-3382-1
SDG: 03E1558118

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
F1	MS and/or MSD recovery exceeds control limits.
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 832H

Job ID: 890-3382-1
SDG: 03E1558118

Job ID: 890-3382-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3382-1

Receipt
The samples were received on 11/4/2022 8:38 AM. 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: PH04 (890-3382-1), PH04A (890-3382-2), PH04B (890-3382-3), PH04C (890-3382-4) and PH04D (890-3382-5).

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: (LCS 880-38960/1-A) and (LCSD 880-38960/2-A). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following samples were outside control limits: (880-21141-A-21-E MS) and (880-21141-A-21-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 sample was outside control limits: (MB 880-38960/5-A). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (880-21141-A-21-G). 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: PH04 (890-3382-1), PH04A (890-3382-2), PH04B (890-3382-3), PH04C (890-3382-4) and PH04D (890-3382-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA
Method 8015MOD_NM: The method blank for preparation batch 880-38890 and analytical batch 880-38805 contained Gasoline Range Organics (GRO)-C6-C10 above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-38890 and analytical batch 880-38805 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10.

Method 8015MOD_NM: The matrix spike (MS) recoveries for preparation batch 880-38890 and analytical batch 880-38805 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

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

Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 832H

Job ID: 890-3382-1
SDG: 03E1558118

Client Sample ID: PH04

Date Collected: 11/03/22 13:10
Date Received: 11/04/22 08:38
Sample Depth: 0.5'

Lab Sample ID: 890-3382-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/10/22 13:34	11/10/22 23:21	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/10/22 13:34	11/10/22 23:21	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/10/22 13:34	11/10/22 23:21	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		11/10/22 13:34	11/10/22 23:21	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/10/22 13:34	11/10/22 23:21	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		11/10/22 13:34	11/10/22 23:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*81*		*70 - 130*	*11/10/22 13:34*	*11/10/22 23:21*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*11/10/22 13:34*	*11/10/22 23:21*	*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			11/11/22 09:54	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			11/08/22 09:57	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 *1	50.0		mg/Kg		11/07/22 14:24	11/08/22 02:39	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/07/22 14:24	11/08/22 02:39	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/07/22 14:24	11/08/22 02:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*11/07/22 14:24*	*11/08/22 02:39*	*1*
o-Terphenyl	*103*		*70 - 130*	*11/07/22 14:24*	*11/08/22 02:39*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**68.1**		4.99		mg/Kg			11/10/22 15:17	1

Client Sample ID: PH04A

Date Collected: 11/03/22 13:15
Date Received: 11/04/22 08:38
Sample Depth: 2'

Lab Sample ID: 890-3382-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/10/22 13:34	11/10/22 23:48	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/10/22 13:34	11/10/22 23:48	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/10/22 13:34	11/10/22 23:48	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		11/10/22 13:34	11/10/22 23:48	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/10/22 13:34	11/10/22 23:48	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		11/10/22 13:34	11/10/22 23:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*245*	*S1+*	*70 - 130*	*11/10/22 13:34*	*11/10/22 23:48*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 832H

Job ID: 890-3382-1
SDG: 03E1558118

Client Sample ID: PH04A

Date Collected: 11/03/22 13:15
Date Received: 11/04/22 08:38
Sample Depth: 2'

Lab Sample ID: 890-3382-2
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*	*11/10/22 13:34*	*11/10/22 23:48*	*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			11/11/22 09:54	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			11/08/22 09:57	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 *1	49.9	mg/Kg		11/07/22 14:24	11/08/22 02:59	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		11/07/22 14:24	11/08/22 02:59	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		11/07/22 14:24	11/08/22 02:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*11/07/22 14:24*	*11/08/22 02:59*	*1*
o-Terphenyl	*97*		*70 - 130*	*11/07/22 14:24*	*11/08/22 02:59*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**481**		5.05	mg/Kg			11/10/22 15:22	1

Client Sample ID: PH04B

Date Collected: 11/03/22 13:20
Date Received: 11/04/22 08:38
Sample Depth: 4'

Lab Sample ID: 890-3382-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		11/10/22 13:34	11/11/22 00:14	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/10/22 13:34	11/11/22 00:14	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/10/22 13:34	11/11/22 00:14	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		11/10/22 13:34	11/11/22 00:14	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/10/22 13:34	11/11/22 00:14	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		11/10/22 13:34	11/11/22 00:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*277*	*S1+*	*70 - 130*	*11/10/22 13:34*	*11/11/22 00:14*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*11/10/22 13:34*	*11/11/22 00:14*	*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			11/11/22 09:54	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			11/08/22 09:57	1

Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 832H

Job ID: 890-3382-1
SDG: 03E1558118

Client Sample ID: PH04B

Date Collected: 11/03/22 13:20
Date Received: 11/04/22 08:38
Sample Depth: 4'

Lab Sample ID: 890-3382-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9		mg/Kg		11/07/22 14:24	11/08/22 03:19	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/07/22 14:24	11/08/22 03:19	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/07/22 14:24	11/08/22 03:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*90*		*70 - 130*	*11/07/22 14:24*	*11/08/22 03:19*	*1*
o-Terphenyl	*95*		*70 - 130*	*11/07/22 14:24*	*11/08/22 03:19*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**420**		4.95		mg/Kg			11/10/22 15:27	1

Client Sample ID: PH04C

Date Collected: 11/03/22 13:30
Date Received: 11/04/22 08:38
Sample Depth: 6'

Lab Sample ID: 890-3382-4
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		11/10/22 13:34	11/11/22 00:41	1
Toluene	<0.00198	U	0.00198		mg/Kg		11/10/22 13:34	11/11/22 00:41	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		11/10/22 13:34	11/11/22 00:41	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		11/10/22 13:34	11/11/22 00:41	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		11/10/22 13:34	11/11/22 00:41	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		11/10/22 13:34	11/11/22 00:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*288*	*S1+*	*70 - 130*	*11/10/22 13:34*	*11/11/22 00:41*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*11/10/22 13:34*	*11/11/22 00:41*	*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			11/11/22 09:54	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			11/08/22 09:57	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 *1	50.0		mg/Kg		11/07/22 14:24	11/08/22 03:40	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/07/22 14:24	11/08/22 03:40	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/07/22 14:24	11/08/22 03:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*11/07/22 14:24*	*11/08/22 03:40*	*1*
o-Terphenyl	*113*		*70 - 130*	*11/07/22 14:24*	*11/08/22 03:40*	*1*

Client Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 832H

Job ID: 890-3382-1
SDG: 03E1558118

Client Sample ID: PH04C

Lab Sample ID: 890-3382-4
Matrix: Solid
Date Collected: 11/03/22 13:30
Date Received: 11/04/22 08:38
Sample Depth: 6'

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	267		4.96		mg/Kg			11/10/22 15:32	1

Client Sample ID: PH04D

Lab Sample ID: 890-3382-5
Matrix: Solid
Date Collected: 11/03/22 14:15
Date Received: 11/04/22 08:38
Sample Depth: 10'

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		11/10/22 13:34	11/11/22 01:07	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/10/22 13:34	11/11/22 01:07	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/10/22 13:34	11/11/22 01:07	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		11/10/22 13:34	11/11/22 01:07	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/10/22 13:34	11/11/22 01:07	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		11/10/22 13:34	11/11/22 01:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*209*	*S1+*	*70 - 130*	*11/10/22 13:34*	*11/11/22 01:07*	*1*
1,4-Difluorobenzene (Surr)	*72*		*70 - 130*	*11/10/22 13:34*	*11/11/22 01:07*	*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			11/11/22 09:54	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			11/08/22 09:57	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 *1	50.0		mg/Kg		11/07/22 14:24	11/08/22 04:00	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/07/22 14:24	11/08/22 04:00	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/07/22 14:24	11/08/22 04:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*11/07/22 14:24*	*11/08/22 04:00*	*1*
o-Terphenyl	*105*		*70 - 130*	*11/07/22 14:24*	*11/08/22 04:00*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	424		5.02		mg/Kg			11/10/22 15:37	1

Surrogate Summary

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 832H

Job ID: 890-3382-1
SDG: 03E1558118

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)											
		BFB1	DFBZ1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
880-21141-A-21-E MS	Matrix Spike	227 S1+	87										
880-21141-A-21-F MSD	Matrix Spike Duplicate	216 S1+	92										
890-3382-1	PH04	81	102										
890-3382-2	PH04A	245 S1+	68 S1-										
890-3382-3	PH04B	277 S1+	84										
890-3382-4	PH04C	288 S1+	84										
890-3382-5	PH04D	209 S1+	72										
LCS 880-38960/1-A	Lab Control Sample	171 S1+	72										
LCSD 880-38960/2-A	Lab Control Sample Dup	156 S1+	70										
MB 880-38960/5-A	Method Blank	140 S1+	74										

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
890-3372-A-1-C MS	Matrix Spike	96	92										
890-3372-A-1-D MSD	Matrix Spike Duplicate	89	85										
890-3382-1	PH04	94	103										
890-3382-2	PH04A	92	97										
890-3382-3	PH04B	90	95										
890-3382-4	PH04C	104	113										
890-3382-5	PH04D	97	105										
LCS 880-38890/2-A	Lab Control Sample	97	103										
LCSD 880-38890/3-A	Lab Control Sample Dup	95	98										
MB 880-38890/1-A	Method Blank	99	109										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 832H

Job ID: 890-3382-1
SDG: 03E1558118

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-38960/5-A
Matrix: Solid
Analysis Batch: 39229

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 38960

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/08/22 09:56	11/10/22 15:54	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/08/22 09:56	11/10/22 15:54	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/08/22 09:56	11/10/22 15:54	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/08/22 09:56	11/10/22 15:54	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/08/22 09:56	11/10/22 15:54	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/08/22 09:56	11/10/22 15:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*140*	*S1+*	*70 - 130*	*11/08/22 09:56*	*11/10/22 15:54*	*1*
1,4-Difluorobenzene (Surr)	*74*		*70 - 130*	*11/08/22 09:56*	*11/10/22 15:54*	*1*

Lab Sample ID: LCS 880-38960/1-A
Matrix: Solid
Analysis Batch: 39229

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 38960

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1206		mg/Kg		121	70 - 130		
Toluene			0.100	0.1189		mg/Kg		119	70 - 130		
Ethylbenzene			0.100	0.1271		mg/Kg		127	70 - 130		
m-Xylene & p-Xylene			0.200	0.2552		mg/Kg		128	70 - 130		
o-Xylene			0.100	0.1256		mg/Kg		126	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*171*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*72*		*70 - 130*

Lab Sample ID: LCSD 880-38960/2-A
Matrix: Solid
Analysis Batch: 39229

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 38960

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1171		mg/Kg		117	70 - 130	3	35
Toluene			0.100	0.1087		mg/Kg		109	70 - 130	9	35
Ethylbenzene			0.100	0.1197		mg/Kg		120	70 - 130	6	35
m-Xylene & p-Xylene			0.200	0.2402		mg/Kg		120	70 - 130	6	35
o-Xylene			0.100	0.1216		mg/Kg		122	70 - 130	3	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*156*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*70*		*70 - 130*

Lab Sample ID: 880-21141-A-21-E MS
Matrix: Solid
Analysis Batch: 39229

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 38960

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U F1	0.100	0.1425	F1	mg/Kg		142	70 - 130		
Toluene	<0.00201	U	0.100	0.1263		mg/Kg		126	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 832H

Job ID: 890-3382-1
SDG: 03E1558118

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

Lab Sample ID: 880-21141-A-21-E MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 39229 — **Prep Batch: 38960**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U F1	0.100	0.1354	F1	mg/Kg		135	70 - 130
m-Xylene & p-Xylene	<0.00402	U F1	0.200	0.2734	F1	mg/Kg		136	70 - 130
o-Xylene	<0.00201	U F1	0.100	0.1399	F1	mg/Kg		140	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*227*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*

Lab Sample ID: 880-21141-A-21-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 39229 — **Prep Batch: 38960**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U F1	0.0990	0.1280		mg/Kg		129	70 - 130	11	35
Toluene	<0.00201	U	0.0990	0.1220		mg/Kg		123	70 - 130	3	35
Ethylbenzene	<0.00201	U F1	0.0990	0.1185		mg/Kg		120	70 - 130	13	35
m-Xylene & p-Xylene	<0.00402	U F1	0.198	0.2403		mg/Kg		121	70 - 130	13	35
o-Xylene	<0.00201	U F1	0.0990	0.1268		mg/Kg		128	70 - 130	10	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*216*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*

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

Lab Sample ID: MB 880-38890/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 38805 — **Prep Batch: 38890**

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		11/07/22 14:24	11/07/22 19:18	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		11/07/22 14:24	11/07/22 19:18	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/07/22 14:24	11/07/22 19:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*99*		*70 - 130*	*11/07/22 14:24*	*11/07/22 19:18*	*1*
o-Terphenyl	*109*		*70 - 130*	*11/07/22 14:24*	*11/07/22 19:18*	*1*

Lab Sample ID: LCS 880-38890/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 38805 — **Prep Batch: 38890**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	822.4		mg/Kg		82	70 - 130
Diesel Range Organics (Over C10-C28)	1000	911.7		mg/Kg		91	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 832H

Job ID: 890-3382-1
SDG: 03E1558118

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

Lab Sample ID: LCS 880-38890/2-A
Matrix: Solid
Analysis Batch: 38805

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 38890

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	97		70 - 130
o-Terphenyl	103		70 - 130

Lab Sample ID: LCSD 880-38890/3-A
Matrix: Solid
Analysis Batch: 38805

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 38890

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1052	*1	mg/Kg		105	70 - 130	24	20
Diesel Range Organics (Over C10-C28)			1000	810.0		mg/Kg		81	70 - 130	12	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	95		70 - 130
o-Terphenyl	98		70 - 130

Lab Sample ID: 890-3372-A-1-C MS
Matrix: Solid
Analysis Batch: 38805

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 38890

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1 F1	997	1396	F1	mg/Kg		137	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	997	895.2		mg/Kg		90	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	96		70 - 130
o-Terphenyl	92		70 - 130

Lab Sample ID: 890-3372-A-1-D MSD
Matrix: Solid
Analysis Batch: 38805

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 38890

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1 F1	999	1246		mg/Kg		122	70 - 130	11	20
Diesel Range Organics (Over C10-C28)	<50.0	U	999	820.4		mg/Kg		82	70 - 130	9	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	89		70 - 130
o-Terphenyl	85		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 832H

Job ID: 890-3382-1
SDG: 03E1558118

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-38846/1-A
Matrix: Solid
Analysis Batch: 39043

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			11/10/22 13:18	1

Lab Sample ID: LCS 880-38846/2-A
Matrix: Solid
Analysis Batch: 39043

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	265.9		mg/Kg		106	90 - 110		

Lab Sample ID: LCSD 880-38846/3-A
Matrix: Solid
Analysis Batch: 39043

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	266.8		mg/Kg		107	90 - 110	0	20

Lab Sample ID: 890-3380-A-40-B MS
Matrix: Solid
Analysis Batch: 39043

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	44.6		250	305.4		mg/Kg		104	90 - 110		

Lab Sample ID: 890-3380-A-40-C MSD
Matrix: Solid
Analysis Batch: 39043

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	44.6		250	305.8		mg/Kg		104	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 832H

Job ID: 890-3382-1
SDG: 03E1558118

GC VOA

Prep Batch: 38960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3382-1	PH04	Total/NA	Solid	5035	
890-3382-2	PH04A	Total/NA	Solid	5035	
890-3382-3	PH04B	Total/NA	Solid	5035	
890-3382-4	PH04C	Total/NA	Solid	5035	
890-3382-5	PH04D	Total/NA	Solid	5035	
MB 880-38960/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-38960/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-38960/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-21141-A-21-E MS	Matrix Spike	Total/NA	Solid	5035	
880-21141-A-21-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 39229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3382-1	PH04	Total/NA	Solid	8021B	38960
890-3382-2	PH04A	Total/NA	Solid	8021B	38960
890-3382-3	PH04B	Total/NA	Solid	8021B	38960
890-3382-4	PH04C	Total/NA	Solid	8021B	38960
890-3382-5	PH04D	Total/NA	Solid	8021B	38960
MB 880-38960/5-A	Method Blank	Total/NA	Solid	8021B	38960
LCS 880-38960/1-A	Lab Control Sample	Total/NA	Solid	8021B	38960
LCSD 880-38960/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	38960
880-21141-A-21-E MS	Matrix Spike	Total/NA	Solid	8021B	38960
880-21141-A-21-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	38960

Analysis Batch: 39311

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3382-1	PH04	Total/NA	Solid	Total BTEX	
890-3382-2	PH04A	Total/NA	Solid	Total BTEX	
890-3382-3	PH04B	Total/NA	Solid	Total BTEX	
890-3382-4	PH04C	Total/NA	Solid	Total BTEX	
890-3382-5	PH04D	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 38805

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3382-1	PH04	Total/NA	Solid	8015B NM	38890
890-3382-2	PH04A	Total/NA	Solid	8015B NM	38890
890-3382-3	PH04B	Total/NA	Solid	8015B NM	38890
890-3382-4	PH04C	Total/NA	Solid	8015B NM	38890
890-3382-5	PH04D	Total/NA	Solid	8015B NM	38890
MB 880-38890/1-A	Method Blank	Total/NA	Solid	8015B NM	38890
LCS 880-38890/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	38890
LCSD 880-38890/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	38890
890-3372-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	38890
890-3372-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	38890

Prep Batch: 38890

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3382-1	PH04	Total/NA	Solid	8015NM Prep	
890-3382-2	PH04A	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 832H

Job ID: 890-3382-1
SDG: 03E1558118

GC Semi VOA (Continued)

Prep Batch: 38890 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3382-3	PH04B	Total/NA	Solid	8015NM Prep	
890-3382-4	PH04C	Total/NA	Solid	8015NM Prep	
890-3382-5	PH04D	Total/NA	Solid	8015NM Prep	
MB 880-38890/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-38890/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-38890/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3372-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3372-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 38967

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3382-1	PH04	Total/NA	Solid	8015 NM	
890-3382-2	PH04A	Total/NA	Solid	8015 NM	
890-3382-3	PH04B	Total/NA	Solid	8015 NM	
890-3382-4	PH04C	Total/NA	Solid	8015 NM	
890-3382-5	PH04D	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 38846

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3382-1	PH04	Soluble	Solid	DI Leach	
890-3382-2	PH04A	Soluble	Solid	DI Leach	
890-3382-3	PH04B	Soluble	Solid	DI Leach	
890-3382-4	PH04C	Soluble	Solid	DI Leach	
890-3382-5	PH04D	Soluble	Solid	DI Leach	
MB 880-38846/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-38846/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-38846/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3380-A-40-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3380-A-40-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 39043

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3382-1	PH04	Soluble	Solid	300.0	38846
890-3382-2	PH04A	Soluble	Solid	300.0	38846
890-3382-3	PH04B	Soluble	Solid	300.0	38846
890-3382-4	PH04C	Soluble	Solid	300.0	38846
890-3382-5	PH04D	Soluble	Solid	300.0	38846
MB 880-38846/1-A	Method Blank	Soluble	Solid	300.0	38846
LCS 880-38846/2-A	Lab Control Sample	Soluble	Solid	300.0	38846
LCSD 880-38846/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	38846
890-3380-A-40-B MS	Matrix Spike	Soluble	Solid	300.0	38846
890-3380-A-40-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	38846

Lab Chronicle

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 832H

Job ID: 890-3382-1
SDG: 03E1558118

Client Sample ID: PH04

Date Collected: 11/03/22 13:10
Date Received: 11/04/22 08:38

Lab Sample ID: 890-3382-1

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			5.01 g	5 mL	38960	11/10/22 13:34	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	39229	11/10/22 23:21	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			39311	11/11/22 09:54	SM	EET MID
Total/NA	Analysis	8015 NM		1			38967	11/08/22 09:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	38890	11/07/22 14:24	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	38805	11/08/22 02:39	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	38846	11/07/22 10:40	KS	EET MID
Soluble	Analysis	300.0		1			39043	11/10/22 15:17	CH	EET MID

Client Sample ID: PH04A

Date Collected: 11/03/22 13:15
Date Received: 11/04/22 08:38

Lab Sample ID: 890-3382-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	38960	11/10/22 13:34	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	39229	11/10/22 23:48	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			39311	11/11/22 09:54	SM	EET MID
Total/NA	Analysis	8015 NM		1			38967	11/08/22 09:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	38890	11/07/22 14:24	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	38805	11/08/22 02:59	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	38846	11/07/22 10:40	KS	EET MID
Soluble	Analysis	300.0		1			39043	11/10/22 15:22	CH	EET MID

Client Sample ID: PH04B

Date Collected: 11/03/22 13:20
Date Received: 11/04/22 08:38

Lab Sample ID: 890-3382-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	38960	11/10/22 13:34	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	39229	11/11/22 00:14	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			39311	11/11/22 09:54	SM	EET MID
Total/NA	Analysis	8015 NM		1			38967	11/08/22 09:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	38890	11/07/22 14:24	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	38805	11/08/22 03:19	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	38846	11/07/22 10:40	KS	EET MID
Soluble	Analysis	300.0		1			39043	11/10/22 15:27	CH	EET MID

Client Sample ID: PH04C

Date Collected: 11/03/22 13:30
Date Received: 11/04/22 08:38

Lab Sample ID: 890-3382-4

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			5.05 g	5 mL	38960	11/10/22 13:34	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	39229	11/11/22 00:41	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			39311	11/11/22 09:54	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 832H

Job ID: 890-3382-1
SDG: 03E1558118

Client Sample ID: PH04C

Date Collected: 11/03/22 13:30
Date Received: 11/04/22 08:38

Lab Sample ID: 890-3382-4

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			38967	11/08/22 09:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	38890	11/07/22 14:24	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	38805	11/08/22 03:40	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	38846	11/07/22 10:40	KS	EET MID
Soluble	Analysis	300.0		1			39043	11/10/22 15:32	CH	EET MID

Client Sample ID: PH04D

Date Collected: 11/03/22 14:15
Date Received: 11/04/22 08:38

Lab Sample ID: 890-3382-5

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	38960	11/10/22 13:34	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	39229	11/11/22 01:07	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			39311	11/11/22 09:54	SM	EET MID
Total/NA	Analysis	8015 NM		1			38967	11/08/22 09:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	38890	11/07/22 14:24	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	38805	11/08/22 04:00	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	38846	11/07/22 10:40	KS	EET MID
Soluble	Analysis	300.0		1			39043	11/10/22 15:37	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 832H

Job ID: 890-3382-1
SDG: 03E1558118

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: JRU DI 11 Ekalaka 832H

Job ID: 890-3382-1
SDG: 03E1558118

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	MCAWW	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

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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 832H

Job ID: 890-3382-1
SDG: 03E1558118

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3382-1	PH04	Solid	11/03/22 13:10	11/04/22 08:38	0.5'
890-3382-2	PH04A	Solid	11/03/22 13:15	11/04/22 08:38	2'
890-3382-3	PH04B	Solid	11/03/22 13:20	11/04/22 08:38	4'
890-3382-4	PH04C	Solid	11/03/22 13:30	11/04/22 08:38	6'
890-3382-5	PH04D	Solid	11/03/22 14:15	11/04/22 08:38	10'

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Chain of Custody

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

Work Order No: _____

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

Work Order Comments

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

Project Name:	JRU DI 11 Ekalaka 823H	Turn Around	
Project Number:	03E1558118	☑ Routine ☐ Rush	
Project Location:		Due Date:	
Sampler's Name:	Connor Whitman	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Samples Received Intact:	(Yes) No	Thermometer ID:	IDM-007	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	4.0	
Total Containers:		Corrected Temperature:	3.8	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
PH04	S	11/3/2022	1:10	0.5'	Grab	1		x	x	x
PH04A	S	11/3/2022	1:15	2'	Grab	1		x	x	x
PH04B	S	11/3/2022	1:20	4'	Grab	1		x	x	x
PH04C	S	11/3/2022	1:30	6'	Grab	1		x	x	x
PH04D	S	11/3/2022	2:15	10'	Grab	1		x	x	x

Parameters

ANALYSIS REQUEST


890-3382 Chain of Custody

Preservative Codes

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

Sample Comments

Incident ID: NAPP2224527297
Cost Center: 2104541001
AFE: DD.2019.06665.CAP.CMP

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Amanda Ruiz	11/4/22 838			
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Eurofins Carlsbad
1089 N Canal St
Carlsbad NM 88220
Phone: 575-988-3199 Fax: 575-988-3199

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s)	COC No: 890-1010 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Jessica Kramer@et.eurofinsus com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-3382-1
Address: 1211 W Florida Ave	Due Date Requested: 11/10/2022			
City: Midland	TAT Requested (days):			
State Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: JRU DI 11 Ekalaka 832H	Project #: 89000093			
Site	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	8015MOD_Calc	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc (MOD) BTEX	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note
			Preservation Code:										
PH04 (890-3382-1)	11/3/22	13 10 Mountain		Solid			X	X	X	X	X	1	
PH04A (890-3382-2)	11/3/22	13 15 Mountain		Solid			X	X	X	X	X	1	
PH04B (890-3382-3)	11/3/22	13 20 Mountain		Solid			X	X	X	X	X	1	
PH04C (890-3382-4)	11/3/22	13 30 Mountain		Solid			X	X	X	X	X	1	
PH04D (890-3382-5)	11/3/22	14 15 Mountain		Solid			X	X	X	X	X	1	

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

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

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

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

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3382-1
SDG Number: 03E1558118

Login Number: 3382
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3382-1
SDG Number: 03E1558118

Login Number: 3382
List Number: 2
Creator: Teel, Brianna

List Source: Eurofins Midland
List Creation: 11/07/22 09:10 AM

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

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ANALYTICAL REPORT

PREPARED FOR

Attn: Ben Belill
Ensolum
705 W. Wadley
Suite 210
Midland Texas 79701

JOB DESCRIPTION

JRU DI 11 Ekalaka 823H
SDG NUMBER 03E1558118

JOB NUMBER

890-3383-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM88220

my EOL

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

Laboratory Job ID: 890-3383-1
SDG: 03E1558118

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-3383-1
Project/Site: JRU DI 11 Ekalaka 823H SDG: 03E1558118

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
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: 890-3383-1
SDG: 03E1558118

Job ID: 890-3383-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3383-1

Receipt
The samples were received on 11/4/2022 8:38 AM. 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 3.8°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: PH05 (890-3383-1), PH05A (890-3383-2), PH05B (890-3383-3), PH05C (890-3383-4) and PH05D (890-3383-5).

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: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-38974 and analytical batch 880-39056 recovered outside control limits for the following analytes: Diesel Range Organics (Over C10-C28).

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

HPLC/IC
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: 890-3383-1
SDG: 03E1558118

Client Sample ID: PH05

Date Collected: 11/03/22 14:20
Date Received: 11/04/22 08:38
Sample Depth: 0.5'

Lab Sample ID: 890-3383-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		11/14/22 13:45	11/15/22 11:42	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/14/22 13:45	11/15/22 11:42	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/14/22 13:45	11/15/22 11:42	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/14/22 13:45	11/15/22 11:42	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/14/22 13:45	11/15/22 11:42	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/14/22 13:45	11/15/22 11:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*11/14/22 13:45*	*11/15/22 11:42*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*11/14/22 13:45*	*11/15/22 11:42*	*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			11/15/22 15:07	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			11/10/22 09:40	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		11/08/22 10:44	11/09/22 14:43	1
Diesel Range Organics (Over C10-C28)	<49.9	U *1	49.9		mg/Kg		11/08/22 10:44	11/09/22 14:43	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/08/22 10:44	11/09/22 14:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*11/08/22 10:44*	*11/09/22 14:43*	*1*
o-Terphenyl	*93*		*70 - 130*	*11/08/22 10:44*	*11/09/22 14:43*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**208**		49.8		mg/Kg			11/10/22 15:42	10

Client Sample ID: PH05A

Date Collected: 11/03/22 14:25
Date Received: 11/04/22 08:38
Sample Depth: 2'

Lab Sample ID: 890-3383-2
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		11/14/22 13:45	11/15/22 12:02	1
Toluene	<0.00198	U	0.00198		mg/Kg		11/14/22 13:45	11/15/22 12:02	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		11/14/22 13:45	11/15/22 12:02	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		11/14/22 13:45	11/15/22 12:02	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		11/14/22 13:45	11/15/22 12:02	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		11/14/22 13:45	11/15/22 12:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*11/14/22 13:45*	*11/15/22 12:02*	*1*

Client Sample Results

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

Job ID: 890-3383-1
SDG: 03E1558118

Client Sample ID: PH05A

Date Collected: 11/03/22 14:25
Date Received: 11/04/22 08:38
Sample Depth: 2'

Lab Sample ID: 890-3383-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*11/14/22 13:45*	*11/15/22 12:02*	*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			11/15/22 15:07	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			11/10/22 09:40	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		11/08/22 10:44	11/09/22 15:05	1
Diesel Range Organics (Over C10-C28)	<49.9	U *1	49.9	mg/Kg		11/08/22 10:44	11/09/22 15:05	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		11/08/22 10:44	11/09/22 15:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*11/08/22 10:44*	*11/09/22 15:05*	*1*
o-Terphenyl	*112*		*70 - 130*	*11/08/22 10:44*	*11/09/22 15:05*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**20.0**		5.00	mg/Kg			11/10/22 15:47	1

Client Sample ID: PH05B

Date Collected: 11/03/22 14:30
Date Received: 11/04/22 08:38
Sample Depth: 4'

Lab Sample ID: 890-3383-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		11/14/22 13:45	11/15/22 12:23	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/14/22 13:45	11/15/22 12:23	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/14/22 13:45	11/15/22 12:23	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		11/14/22 13:45	11/15/22 12:23	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/14/22 13:45	11/15/22 12:23	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		11/14/22 13:45	11/15/22 12:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*11/14/22 13:45*	*11/15/22 12:23*	*1*
1,4-Difluorobenzene (Surr)	*72*		*70 - 130*	*11/14/22 13:45*	*11/15/22 12:23*	*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			11/15/22 15:07	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			11/10/22 09:40	1

Eurofins Carlsbad

Client Sample Results

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

Job ID: 890-3383-1
SDG: 03E1558118

Client Sample ID: PH05B

Lab Sample ID: 890-3383-3
Matrix: Solid
Date Collected: 11/03/22 14:30
Date Received: 11/04/22 08:38
Sample Depth: 4'

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		11/08/22 10:44	11/09/22 15:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U *1	50.0		mg/Kg		11/08/22 10:44	11/09/22 15:28	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/08/22 10:44	11/09/22 15:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*103*		*70 - 130*	*11/08/22 10:44*	*11/09/22 15:28*	*1*
o-Terphenyl	*102*		*70 - 130*	*11/08/22 10:44*	*11/09/22 15:28*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**29.2**		5.00		mg/Kg			11/11/22 05:59	1

Client Sample ID: PH05C

Lab Sample ID: 890-3383-4
Matrix: Solid
Date Collected: 11/03/22 14:35
Date Received: 11/04/22 08:38
Sample Depth: 6'

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		11/14/22 13:45	11/15/22 12:43	1
Toluene	<0.00201	U	0.00201		mg/Kg		11/14/22 13:45	11/15/22 12:43	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		11/14/22 13:45	11/15/22 12:43	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		11/14/22 13:45	11/15/22 12:43	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		11/14/22 13:45	11/15/22 12:43	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		11/14/22 13:45	11/15/22 12:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*11/14/22 13:45*	*11/15/22 12:43*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*11/14/22 13:45*	*11/15/22 12:43*	*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			11/15/22 15:07	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			11/10/22 09:40	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		11/08/22 10:44	11/09/22 16:13	1
Diesel Range Organics (Over C10-C28)	<49.8	U *1	49.8		mg/Kg		11/08/22 10:44	11/09/22 16:13	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		11/08/22 10:44	11/09/22 16:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*103*		*70 - 130*	*11/08/22 10:44*	*11/09/22 16:13*	*1*
o-Terphenyl	*100*		*70 - 130*	*11/08/22 10:44*	*11/09/22 16:13*	*1*

Client Sample Results

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

Job ID: 890-3383-1
SDG: 03E1558118

Client Sample ID: PH05C

Date Collected: 11/03/22 14:35
Date Received: 11/04/22 08:38
Sample Depth: 6'

Lab Sample ID: 890-3383-4
Matrix: Solid

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	19.4		4.99		mg/Kg			11/11/22 06:20	1

Client Sample ID: PH05D

Date Collected: 11/03/22 14:55
Date Received: 11/04/22 08:38
Sample Depth: 10'

Lab Sample ID: 890-3383-5
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		11/14/22 13:45	11/15/22 13:04	1
Toluene	<0.00202	U	0.00202		mg/Kg		11/14/22 13:45	11/15/22 13:04	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		11/14/22 13:45	11/15/22 13:04	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		11/14/22 13:45	11/15/22 13:04	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		11/14/22 13:45	11/15/22 13:04	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		11/14/22 13:45	11/15/22 13:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*11/14/22 13:45*	*11/15/22 13:04*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*11/14/22 13:45*	*11/15/22 13:04*	*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			11/15/22 15:07	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			11/10/22 09:40	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		11/08/22 10:44	11/09/22 16:35	1
Diesel Range Organics (Over C10-C28)	<49.9	U *1	49.9		mg/Kg		11/08/22 10:44	11/09/22 16:35	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/08/22 10:44	11/09/22 16:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*81*		*70 - 130*	*11/08/22 10:44*	*11/09/22 16:35*	*1*
o-Terphenyl	*83*		*70 - 130*	*11/08/22 10:44*	*11/09/22 16:35*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15.7		4.95		mg/Kg			11/11/22 06:27	1

Surrogate Summary

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

Job ID: 890-3383-1
SDG: 03E1558118

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-21421-A-41-C MS	Matrix Spike	88	123
880-21421-A-41-D MSD	Matrix Spike Duplicate	94	116
890-3383-1	PH05	96	95
890-3383-2	PH05A	96	96
890-3383-3	PH05B	98	72
890-3383-4	PH05C	97	100
890-3383-5	PH05D	95	97
LCS 880-39499/1-A	Lab Control Sample	106	113
LCSD 880-39499/2-A	Lab Control Sample Dup	104	114
MB 880-39499/5-A	Method Blank	81	98

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-3379-A-1-C MS	Matrix Spike	87	83
890-3379-A-1-D MSD	Matrix Spike Duplicate	89	85
890-3383-1	PH05	92	93
890-3383-2	PH05A	113	112
890-3383-3	PH05B	103	102
890-3383-4	PH05C	103	100
890-3383-5	PH05D	81	83
LCS 880-38974/2-A	Lab Control Sample	89	92
LCSD 880-38974/3-A	Lab Control Sample Dup	113	118
MB 880-38974/1-A	Method Blank	100	102

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

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

Job ID: 890-3383-1
SDG: 03E1558118

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-39499/5-A
Matrix: Solid
Analysis Batch: 39575

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 39499

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/14/22 13:45	11/15/22 10:39	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/14/22 13:45	11/15/22 10:39	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/14/22 13:45	11/15/22 10:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/14/22 13:45	11/15/22 10:39	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/14/22 13:45	11/15/22 10:39	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/14/22 13:45	11/15/22 10:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*81*		*70 - 130*	*11/14/22 13:45*	*11/15/22 10:39*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*11/14/22 13:45*	*11/15/22 10:39*	*1*

Lab Sample ID: LCS 880-39499/1-A
Matrix: Solid
Analysis Batch: 39575

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 39499

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1063		mg/Kg		106	70 - 130		
Toluene			0.100	0.09516		mg/Kg		95	70 - 130		
Ethylbenzene			0.100	0.09661		mg/Kg		97	70 - 130		
m-Xylene & p-Xylene			0.200	0.2040		mg/Kg		102	70 - 130		
o-Xylene			0.100	0.1010		mg/Kg		101	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*

Lab Sample ID: LCSD 880-39499/2-A
Matrix: Solid
Analysis Batch: 39575

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 39499

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1078		mg/Kg		108	70 - 130	1	35
Toluene			0.100	0.09311		mg/Kg		93	70 - 130	2	35
Ethylbenzene			0.100	0.09402		mg/Kg		94	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1961		mg/Kg		98	70 - 130	4	35
o-Xylene			0.100	0.09679		mg/Kg		97	70 - 130	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*

Lab Sample ID: 880-21421-A-41-C MS
Matrix: Solid
Analysis Batch: 39575

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 39499

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U	0.100	0.08441		mg/Kg		84	70 - 130		
Toluene	<0.00200	U	0.100	0.08589		mg/Kg		86	70 - 130		

QC Sample Results

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

Job ID: 890-3383-1
SDG: 03E1558118

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

Lab Sample ID: 880-21421-A-41-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 39575 — **Prep Batch: 39499**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.100	0.08194		mg/Kg		82	70 - 130
m-Xylene & p-Xylene	<0.00401	U	0.200	0.1657		mg/Kg		83	70 - 130
o-Xylene	<0.00200	U	0.100	0.08082		mg/Kg		81	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*
1,4-Difluorobenzene (Surr)	*123*		*70 - 130*

Lab Sample ID: 880-21421-A-41-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 39575 — **Prep Batch: 39499**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0998	0.1033		mg/Kg		103	70 - 130	20	35
Toluene	<0.00200	U	0.0998	0.08823		mg/Kg		88	70 - 130	3	35
Ethylbenzene	<0.00200	U	0.0998	0.08607		mg/Kg		86	70 - 130	5	35
m-Xylene & p-Xylene	<0.00401	U	0.200	0.1755		mg/Kg		88	70 - 130	6	35
o-Xylene	<0.00200	U	0.0998	0.08581		mg/Kg		86	70 - 130	6	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*

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

Lab Sample ID: MB 880-38974/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 39056 — **Prep Batch: 38974**

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		11/08/22 10:44	11/09/22 08:44	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		11/08/22 10:44	11/09/22 08:44	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/08/22 10:44	11/09/22 08:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*11/08/22 10:44*	*11/09/22 08:44*	*1*
o-Terphenyl	*102*		*70 - 130*	*11/08/22 10:44*	*11/09/22 08:44*	*1*

Lab Sample ID: LCS 880-38974/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 39056 — **Prep Batch: 38974**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1081		mg/Kg		108	70 - 130
Diesel Range Organics (Over C10-C28)	1000	820.0		mg/Kg		82	70 - 130

QC Sample Results

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

Job ID: 890-3383-1
SDG: 03E1558118

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

Lab Sample ID: LCS 880-38974/2-A
Matrix: Solid
Analysis Batch: 39056

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 38974

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	89		70 - 130
o-Terphenyl	92		70 - 130

Lab Sample ID: LCSD 880-38974/3-A
Matrix: Solid
Analysis Batch: 39056

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 38974

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	933.7		mg/Kg		93	70 - 130	15	20
Diesel Range Organics (Over C10-C28)			1000	1075	*1	mg/Kg		108	70 - 130	27	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	113		70 - 130
o-Terphenyl	118		70 - 130

Lab Sample ID: 890-3379-A-1-C MS
Matrix: Solid
Analysis Batch: 39056

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 38974

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	997	767.1		mg/Kg		77	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U *1	997	942.4		mg/Kg		95	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	87		70 - 130
o-Terphenyl	83		70 - 130

Lab Sample ID: 890-3379-A-1-D MSD
Matrix: Solid
Analysis Batch: 39056

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 38974

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	759.2		mg/Kg		76	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<50.0	U *1	999	978.9		mg/Kg		98	70 - 130	4	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	89		70 - 130
o-Terphenyl	85		70 - 130

QC Sample Results

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

Job ID: 890-3383-1
SDG: 03E1558118

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-38846/1-A
Matrix: Solid
Analysis Batch: 39043

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			11/10/22 13:18	1

Lab Sample ID: LCS 880-38846/2-A
Matrix: Solid
Analysis Batch: 39043

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	265.9		mg/Kg		106	90 - 110		

Lab Sample ID: LCSD 880-38846/3-A
Matrix: Solid
Analysis Batch: 39043

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	266.8		mg/Kg		107	90 - 110	0	20

Lab Sample ID: 890-3380-A-40-B MS
Matrix: Solid
Analysis Batch: 39043

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	44.6		250	305.4		mg/Kg		104	90 - 110		

Lab Sample ID: 890-3380-A-40-C MSD
Matrix: Solid
Analysis Batch: 39043

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	44.6		250	305.8		mg/Kg		104	90 - 110	0	20

Lab Sample ID: 890-3381-A-2-B MS
Matrix: Solid
Analysis Batch: 39043

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	2950		2520	5533		mg/Kg		102	90 - 110		

Lab Sample ID: 890-3381-A-2-C MSD
Matrix: Solid
Analysis Batch: 39043

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	2950		2520	5488		mg/Kg		101	90 - 110	1	20

Lab Sample ID: MB 880-38849/1-A
Matrix: Solid
Analysis Batch: 39146

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			11/11/22 05:37	1

QC Sample Results

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

Job ID: 890-3383-1
SDG: 03E1558118

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: LCS 880-38849/2-A
Matrix: Solid
Analysis Batch: 39146

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	260.5		mg/Kg		104	90 - 110		

Lab Sample ID: LCSD 880-38849/3-A
Matrix: Solid
Analysis Batch: 39146

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	273.8		mg/Kg		110	90 - 110	5	20

Lab Sample ID: 890-3383-3 MS
Matrix: Solid
Analysis Batch: 39146

Client Sample ID: PH05B
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	29.2		250	279.1		mg/Kg		100	90 - 110		

Lab Sample ID: 890-3383-3 MSD
Matrix: Solid
Analysis Batch: 39146

Client Sample ID: PH05B
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	29.2		250	286.0		mg/Kg		103	90 - 110	2	20

QC Association Summary

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

Job ID: 890-3383-1
SDG: 03E1558118

GC VOA

Prep Batch: 39499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3383-1	PH05	Total/NA	Solid	5035	
890-3383-2	PH05A	Total/NA	Solid	5035	
890-3383-3	PH05B	Total/NA	Solid	5035	
890-3383-4	PH05C	Total/NA	Solid	5035	
890-3383-5	PH05D	Total/NA	Solid	5035	
MB 880-39499/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-39499/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-39499/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-21421-A-41-C MS	Matrix Spike	Total/NA	Solid	5035	
880-21421-A-41-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 39575

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3383-1	PH05	Total/NA	Solid	8021B	39499
890-3383-2	PH05A	Total/NA	Solid	8021B	39499
890-3383-3	PH05B	Total/NA	Solid	8021B	39499
890-3383-4	PH05C	Total/NA	Solid	8021B	39499
890-3383-5	PH05D	Total/NA	Solid	8021B	39499
MB 880-39499/5-A	Method Blank	Total/NA	Solid	8021B	39499
LCS 880-39499/1-A	Lab Control Sample	Total/NA	Solid	8021B	39499
LCSD 880-39499/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	39499
880-21421-A-41-C MS	Matrix Spike	Total/NA	Solid	8021B	39499
880-21421-A-41-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	39499

Analysis Batch: 39629

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3383-1	PH05	Total/NA	Solid	Total BTEX	
890-3383-2	PH05A	Total/NA	Solid	Total BTEX	
890-3383-3	PH05B	Total/NA	Solid	Total BTEX	
890-3383-4	PH05C	Total/NA	Solid	Total BTEX	
890-3383-5	PH05D	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 38974

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3383-1	PH05	Total/NA	Solid	8015NM Prep	
890-3383-2	PH05A	Total/NA	Solid	8015NM Prep	
890-3383-3	PH05B	Total/NA	Solid	8015NM Prep	
890-3383-4	PH05C	Total/NA	Solid	8015NM Prep	
890-3383-5	PH05D	Total/NA	Solid	8015NM Prep	
MB 880-38974/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-38974/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-38974/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3379-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3379-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 39056

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3383-1	PH05	Total/NA	Solid	8015B NM	38974
890-3383-2	PH05A	Total/NA	Solid	8015B NM	38974

QC Association Summary

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

Job ID: 890-3383-1
SDG: 03E1558118

GC Semi VOA (Continued)

Analysis Batch: 39056 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3383-3	PH05B	Total/NA	Solid	8015B NM	38974
890-3383-4	PH05C	Total/NA	Solid	8015B NM	38974
890-3383-5	PH05D	Total/NA	Solid	8015B NM	38974
MB 880-38974/1-A	Method Blank	Total/NA	Solid	8015B NM	38974
LCS 880-38974/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	38974
LCSD 880-38974/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	38974
890-3379-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	38974
890-3379-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	38974

Analysis Batch: 39196

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3383-1	PH05	Total/NA	Solid	8015 NM	
890-3383-2	PH05A	Total/NA	Solid	8015 NM	
890-3383-3	PH05B	Total/NA	Solid	8015 NM	
890-3383-4	PH05C	Total/NA	Solid	8015 NM	
890-3383-5	PH05D	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 38846

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3383-1	PH05	Soluble	Solid	DI Leach	
890-3383-2	PH05A	Soluble	Solid	DI Leach	
MB 880-38846/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-38846/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-38846/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3380-A-40-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3380-A-40-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
890-3381-A-2-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3381-A-2-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Leach Batch: 38849

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3383-3	PH05B	Soluble	Solid	DI Leach	
890-3383-4	PH05C	Soluble	Solid	DI Leach	
890-3383-5	PH05D	Soluble	Solid	DI Leach	
MB 880-38849/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-38849/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-38849/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3383-3 MS	PH05B	Soluble	Solid	DI Leach	
890-3383-3 MSD	PH05B	Soluble	Solid	DI Leach	

Analysis Batch: 39043

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3383-1	PH05	Soluble	Solid	300.0	38846
890-3383-2	PH05A	Soluble	Solid	300.0	38846
MB 880-38846/1-A	Method Blank	Soluble	Solid	300.0	38846
LCS 880-38846/2-A	Lab Control Sample	Soluble	Solid	300.0	38846
LCSD 880-38846/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	38846
890-3380-A-40-B MS	Matrix Spike	Soluble	Solid	300.0	38846
890-3380-A-40-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	38846

QC Association Summary

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

Job ID: 890-3383-1
SDG: 03E1558118

HPLC/IC (Continued)

Analysis Batch: 39043 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3381-A-2-B MS	Matrix Spike	Soluble	Solid	300.0	38846
890-3381-A-2-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	38846

Analysis Batch: 39146

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3383-3	PH05B	Soluble	Solid	300.0	38849
890-3383-4	PH05C	Soluble	Solid	300.0	38849
890-3383-5	PH05D	Soluble	Solid	300.0	38849
MB 880-38849/1-A	Method Blank	Soluble	Solid	300.0	38849
LCS 880-38849/2-A	Lab Control Sample	Soluble	Solid	300.0	38849
LCSD 880-38849/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	38849
890-3383-3 MS	PH05B	Soluble	Solid	300.0	38849
890-3383-3 MSD	PH05B	Soluble	Solid	300.0	38849

Lab Chronicle

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

Job ID: 890-3383-1
SDG: 03E1558118

Client Sample ID: PH05

Date Collected: 11/03/22 14:20
Date Received: 11/04/22 08:38

Lab Sample ID: 890-3383-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	39499	11/14/22 13:45	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	39575	11/15/22 11:42	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			39629	11/15/22 15:07	SM	EET MID
Total/NA	Analysis	8015 NM		1			39196	11/10/22 09:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	38974	11/08/22 10:44	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39056	11/09/22 14:43	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	38846	11/07/22 10:40	KS	EET MID
Soluble	Analysis	300.0		10			39043	11/10/22 15:42	CH	EET MID

Client Sample ID: PH05A

Date Collected: 11/03/22 14:25
Date Received: 11/04/22 08:38

Lab Sample ID: 890-3383-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	39499	11/14/22 13:45	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	39575	11/15/22 12:02	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			39629	11/15/22 15:07	SM	EET MID
Total/NA	Analysis	8015 NM		1			39196	11/10/22 09:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	38974	11/08/22 10:44	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39056	11/09/22 15:05	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	38846	11/07/22 10:40	KS	EET MID
Soluble	Analysis	300.0		1			39043	11/10/22 15:47	CH	EET MID

Client Sample ID: PH05B

Date Collected: 11/03/22 14:30
Date Received: 11/04/22 08:38

Lab Sample ID: 890-3383-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	39499	11/14/22 13:45	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	39575	11/15/22 12:23	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			39629	11/15/22 15:07	SM	EET MID
Total/NA	Analysis	8015 NM		1			39196	11/10/22 09:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	38974	11/08/22 10:44	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39056	11/09/22 15:28	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	38849	11/07/22 10:42	KS	EET MID
Soluble	Analysis	300.0		1			39146	11/11/22 05:59	CH	EET MID

Client Sample ID: PH05C

Date Collected: 11/03/22 14:35
Date Received: 11/04/22 08:38

Lab Sample ID: 890-3383-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	39499	11/14/22 13:45	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	39575	11/15/22 12:43	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			39629	11/15/22 15:07	SM	EET MID

Lab Chronicle

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

Job ID: 890-3383-1
SDG: 03E1558118

Client Sample ID: PH05C

Lab Sample ID: 890-3383-4
Matrix: Solid
Date Collected: 11/03/22 14:35
Date Received: 11/04/22 08:38

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			39196	11/10/22 09:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	38974	11/08/22 10:44	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39056	11/09/22 16:13	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	38849	11/07/22 10:42	KS	EET MID
Soluble	Analysis	300.0		1			39146	11/11/22 06:20	CH	EET MID

Client Sample ID: PH05D

Lab Sample ID: 890-3383-5
Matrix: Solid
Date Collected: 11/03/22 14:55
Date Received: 11/04/22 08:38

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	39499	11/14/22 13:45	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	39575	11/15/22 13:04	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			39629	11/15/22 15:07	SM	EET MID
Total/NA	Analysis	8015 NM		1			39196	11/10/22 09:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	38974	11/08/22 10:44	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39056	11/09/22 16:35	AJ	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	38849	11/07/22 10:42	KS	EET MID
Soluble	Analysis	300.0		1			39146	11/11/22 06:27	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: 890-3383-1
SDG: 03E1558118

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

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

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

Method Summary

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

Job ID: 890-3383-1
SDG: 03E1558118

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	MCAWW	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

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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: 890-3383-1
SDG: 03E1558118

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3383-1	PH05	Solid	11/03/22 14:20	11/04/22 08:38	0.5'
890-3383-2	PH05A	Solid	11/03/22 14:25	11/04/22 08:38	2'
890-3383-3	PH05B	Solid	11/03/22 14:30	11/04/22 08:38	4'
890-3383-4	PH05C	Solid	11/03/22 14:35	11/04/22 08:38	6'
890-3383-5	PH05D	Solid	11/03/22 14:55	11/04/22 08:38	10'

eurofins

Environment Testing
Xenco

Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

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

Work Order Comments

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

Project Name:	JRU DI 11 Ekalaka 823H	Turn Around	
Project Number:	03E1558118	☑ Routine ☐ Rush	
Project Location:		Due Date:	
Sampler's Name:	Connor Whitman	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	Thm 007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	4.0
Total Containers:		Corrected Temperature:	3.8

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
PH05	S	11/3/2022	2:20	0.5'	Grab	1		x	x	x
PH05A	S	11/3/2022	2:25	2'	Grab	1		x	x	x
PH05B	S	11/3/2022	2:30	4'	Grab	1		x	x	x
PH05C	S	11/3/2022	2:35	6'	Grab	1		x	x	x
PH05D	S	11/3/2022	2:55	10'	Grab	1		x	x	x

ANALYSIS REQUEST

890-3383 Chain of Custody

Preservative Codes

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

Sample Comments

Incident ID:
NAPP2224527297
Cost Center:
2104541001
AFE:
DD.2019.06665.CAP.CMP

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

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Amanda Stutz	11/4/22 8:38	4		
3			6		
5					

Revised Date: 08/25/2020 Rev. 2020.2

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

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer, Jessica	Carrier Tracking No(s):	COC No.: 890-1010 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Jessica Kramer@et.eurofinsus com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-3383-1
Address: 1211 W Florida Ave	Due Date Requested: 11/10/2022			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: JRU DI 11 Ekalaka 823H	Project #: 89000093			
Site	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	8015MOD_Calc	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc (MOD) BTEX	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
PH05 (890-3383-1)	11/3/22	14 20 Mountain		Solid			X	X	X	X	X	1	
PH05A (890-3383-2)	11/3/22	14 25 Mountain		Solid			X	X	X	X	X	1	
PH05B (890-3383-3)	11/3/22	14 30 Mountain		Solid			X	X	X	X	X	1	
PH05C (890-3383-4)	11/3/22	14 35 Mountain		Solid			X	X	X	X	X	1	
PH05D (890-3383-5)	11/3/22	14 55 Mountain		Solid			X	X	X	X	X	1	

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

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

Empty Kit Relinquished by	Date	Time	Method of Shipment:

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

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

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3383-1
SDG Number: 03E1558118

Login Number: 3383
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3383-1
SDG Number: 03E1558118

Login Number: 3383
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 11/08/22 09:03 AM

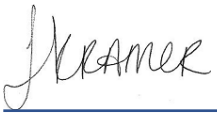
Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature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

Eurofins Carlsbad

Job Notes

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
11/15/2022 4:28:12 PM

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

ENSOLUM

APPENDIX F

NMOCD Notifications

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

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 186797

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 186797
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	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 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.	6/16/2023