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	NAPP2204943884
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Adrian Baker	Contact Telephone 432-236-3808
Contact email adrian.baker@exxonmobil.com	Incident # *(assigned by OCD)*
Contact mailing address 6401 Holiday Hill Rd Bldg 5, Midland, Texas, 79707	

Location of Release Source

Latitude 32.36851 Longitude -103.86746
(NAD 83 in decimal degrees to 5 decimal places)

Site Name JRU Legg Battery	Site Type Tank Battery
Date Release Discovered 02/04/2022	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
B	27	22S	30E	Eddy

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls) 580.0	Volume Recovered (bbls) 580.0
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: Freezing weather caused a Victaulic clamp to fail, releasing fluids into impermeable cotainment. All fluids were recovered. A 48-hour liner inspection notice was sent to NMOCD District 2. Liner was inspected and determined not to be operating as designed. A third-party contractor has been retained for remediation purposes.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2204943884
District RP	
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Application ID	

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 equal to or greater than 25 barrels.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?

Yes, by Garrett Green to Mike Bratcher' <mike.bratcher@state.nm.us>; 'Victoria Venegas' <Victoria.Venegas@state.nm.us>; 'Rob Hamlet' <robert.hamlet@state.nm.us>; 'emily.hernandez@state.nm.us' on Saturday, February 5, 2022 5:37 PM 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: Adrian Baker
Title: SSHE Coordinator

Signature:
Date: 2/18/22

email: adrian.baker@exxonmobil.com
Telephone: 432-236-3808

OCD Only

Received by: Ramona Marcus
Date: 2/21/2022

Location:	**JRU Legg Battery**	
Spill Date:	**2/4/2022**	
Area 1		
Approximate Area =	3256.46	cu.ft.
VOLUME OF LEAK		
Total Condensate =	580.00	bbls
Total Produced Water =	0.00	bbls
TOTAL VOLUME OF LEAK		
Total Condensate=	**580.00**	**bbls**
Total Produced Water =	**0.00**	**bbls**
TOTAL VOLUME RECOVERED		
Total Condensate=	**580.00**	**bbls**
Total Produced Water =	**0.00**	**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

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 82673
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rmarcus	None	2/21/2022

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2204943884
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2204943884
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: Adrian Baker Title: Environmental Coordinator

Signature: Adrian Baker Date: 06/09/2022

email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2204943884
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: Adrian Baker Title: Environmental Coordinator

Signature: Adrian Bakes Date: 06/09/2022

Email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

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

Signature: Jennifer Nobui Date: 08/26/2022

June 9, 2022

District II
New Mexico Oil Conservation Division
811 South First Street
Artesia, New Mexico 88210

Re: Deferral Request
JRU Legg Battery
Incident Number NAPP2204943884
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum) on behalf of XTO Energy, Inc. (XTO), has prepared this Deferral Request to document site assessment and soil sampling activities performed at the James Ranch Unit (JRU) Legg Battery (Site). The purpose of the site assessment and soil sampling activities was to assess for the presence or absence of impacts to soil following a release of condensate within lined containment at the Site. Based on field observations, field screening activities, and soil sample laboratory analytical results, XTO is submitting this Deferral Request, requesting deferral of final remediation for Incident Number NAPP2204943884 until the Site is reconstructed, and/or the well pad is abandoned.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit B, Section 27, Township 22 South, Range 30 East, in Eddy County, New Mexico (32.36851° N, 103.86746°W) and is associated with oil and gas exploration and production operations on Bureau of Land Management (BLM) Federal Land.

On February 4, 2022, freezing weather caused a Victaulic clamp to fail, resulting in the release of approximately 580 barrels (bbls) of condensate into the lined tank battery containment. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; all 580 bbls of released condensate were recovered from within the lined containment. A 48-hour advance notice of liner inspection was provided via email to the New Mexico Oil Conservation Division (NMOCD) District II office. A liner integrity inspection was conducted by XTO personnel following fluid recovery. Upon inspection, the liner was determined to be insufficient. XTO reported the release to the NMOCD via email on February 5, 2022 and submitted a Release Notification Form C-141 (Form C-141) on February 18, 2022. The release was assigned Incident Number NAPP2204943884.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized according to Table 1, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization. Potential site receptors are identified on Figure 1.

Depth to groundwater at the Site is greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is New Mexico of the Office State Engineer (NMOSE) Well C-03015, located approximately 2,216 feet northwest of the Site. The groundwater well has a reported depth to groundwater of 262 feet bgs and a total depth of 1,316 feet bgs. Ground surface elevation at the groundwater well location is 3,285 feet above mean sea level (amsl), which is approximately 13 feet lower in elevation than the Site. There are no regional or Site-specific hydrogeological conditions, such as shallow surface water, karst features, wetlands, or vegetation that suggest the Site is conducive to shallow groundwater. All wells used for depth to groundwater determination are presented on Figure 1. The referenced Well Record is included in Appendix A.

The closest continuously flowing or significant water source to the Site is a unnamed dry wash, located approximately 2,713 feet north 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 not underlain by unstable geology (medium potential karst designation area). Site receptors are identified on Figure 1.

Based on the results of the Site Characterization, the following NMOCD Table 1 Closure Criteria (Closure Criteria) apply:

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

SITE ASSESSMENT ACTIVITIES

On April 19, 2022, Ensolum personnel visited the Site to evaluate the release extent and conduct site assessment activities. One borehole (BH01) was advanced via hand auger to a depth of 2 feet bgs at the location of the tear in the liner to assess the vertical extent of impacted soil. Delineation soil samples BH01, BH01A, and BH01B were collected from borehole BH01 at depths ranging from 0.5 feet to 2 feet bgs. Four additional assessment points (SS01 through SS04) were advanced around the lined containment to confirm the lateral extent of a potential release. Delineation soil samples SS01/SS01A through SS04/SS04A were collected from the delineation points at depths ranging from 0.5 feet to 2 feet bgs. 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. Field screening results and observations were documented on lithologic/soil sampling logs, which are included as Appendix B. Upon completion of site assessment activities, XTO repaired the tear in the liner. The soil sample locations are depicted on Figure 2. Photographic documentation is included in Appendix C.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for delineation soil samples BH01 and BH01A, indicated that TPH and/or TPH-DRO/TPH-GRO concentrations exceeded the Closure Criteria at depths of 0.5 feet and 1-foot bgs, directly beneath the tear in the liner. Subsequent delineation sample BH01B, collected at 2 feet bgs, indicated that benzene, BTEX, TPH-DRO/TPH-GRO, TPH, and chloride concentrations were compliant with the Closure Criteria.

Laboratory analytical results for the delineation soil samples SS01/SS01A through SS04/SS04A, collected at depths ranging from 0.5 feet to 2 feet bgs around the lined containment, indicated that benzene, BTEX, TPH-DRO/TPH-GRO, TPH, and chloride concentrations were compliant with the Closure Criteria and compliant with the most stringent Table 1 Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix D.

DEFFERAL REQUEST

XTO is requesting deferral of final remediation due to the presence of active production equipment and surface pipelines within the lined containment. The impacted soil is limited to the area immediately beneath the lined containment and active production equipment, where remediation would require a major facility deconstruction.

The impacted soil remaining in place beneath the liner is delineated vertically by delineation soil sample BH01B collected at 2 feet bgs, and laterally by delineation soil samples SS01/SS01A through SS04/SS04A collected at depths ranging from 0.5 feet to 2 feet bgs. A maximum of 725 cubic yards of TPH impacted soil remains in place beneath the liner assuming a maximum 2-foot depth based on the delineation soil samples listed above, that were compliant with the Closure Criteria.

XTO does not believe deferment will result in imminent risk to human health, the environment, or groundwater. Depth to groundwater was determined to be greater than 100 feet bgs, the release was contained laterally by the lined containment, and the impacted soil remaining in place is limited to the area immediately beneath the liner. The liner has been repaired by XTO and will restrict future vertical migration of residual impacts.

Based on the presence of active production equipment within the release area and the complete lateral and vertical delineation of impacted soil remaining in place, XTO requests deferral of final remediation for Incident Number NAPP2204943884 until final reclamation of the well pad or major construction, whichever comes first.

If you have any questions or comments, please contact Ms. Aimee Cole at (720) 384-7365 or acole@ensolum.com.

Sincerely,
Ensolum, LLC

Kalei Jennings
Senior Scientist

Aimee Cole
Senior Managing Scientist

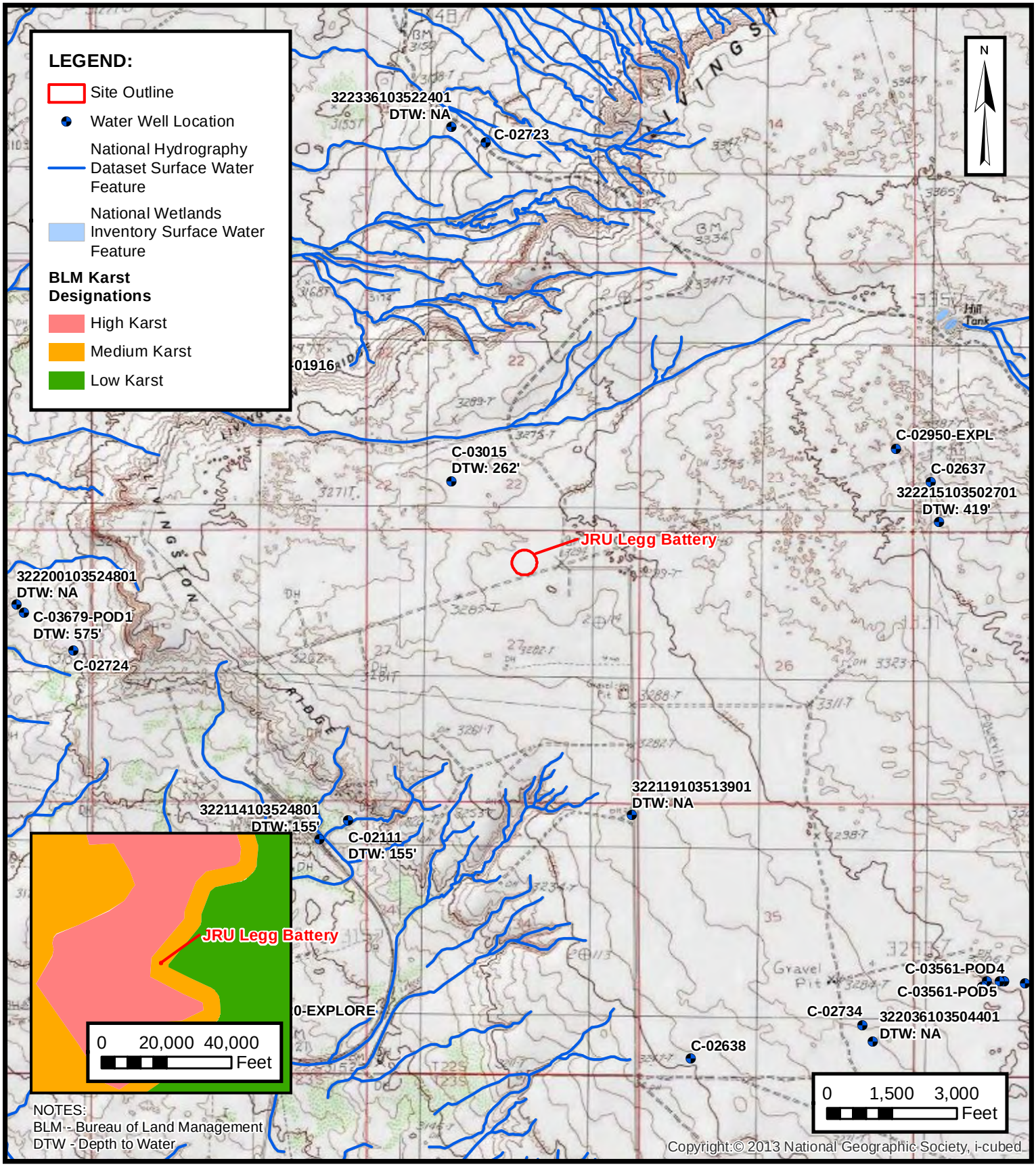
cc: Adrian Baker, XTO
Bureau of Land Management

Appendices:

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

ENSOLUM

FIGURES

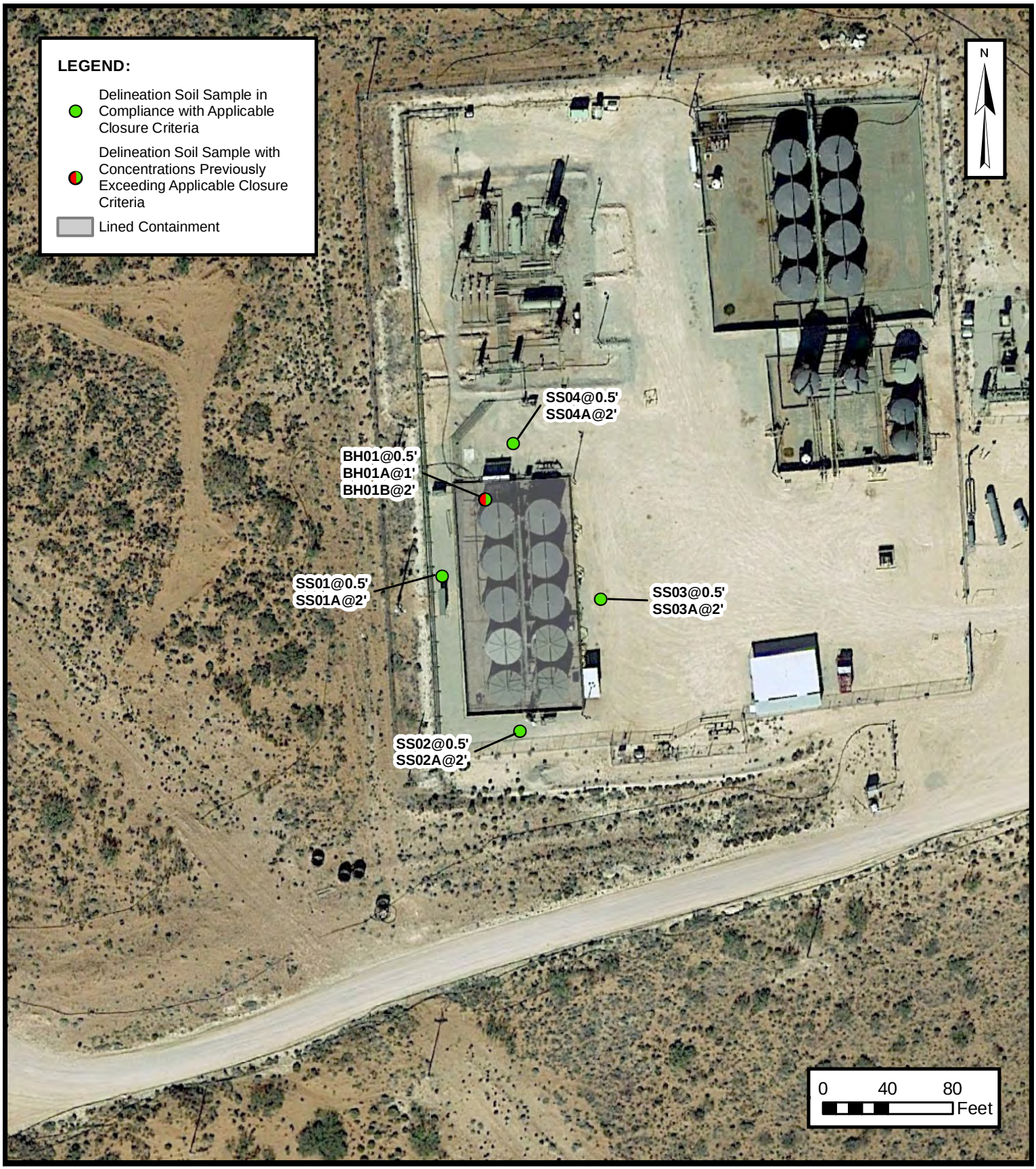


ENSOLUM
Environmental & Hydrogeologic Consultants

SITE RECEPTOR MAP

XTO ENERGY, INC
JRU LEGG BATTERY
NAPP2204943884
Unit B, Sec 27, T22S, R30E
Eddy County, New Mexico

FIGURE
1



ENSOLUM
Environmental & Hydrogeologic Consultants

DELINEATION SOIL SAMPLE LOCATIONS

XTO ENERGY, INC
JRU LEGG BATTERY
NAPP2204943884
Unit B, Sec 27, T22S, R30E
Eddy County, New Mexico

FIGURE
2

ENSOLUM

TABLES

ENSOLUM

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
JRU Legg Battery
XTO Energy, Inc.
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Preliminary Assessment Soil Samples										
BH01	04/19/2022	0.5	0.518	25.0	1,270	1,940	337	**2,277**	**3,550**	24.2
BH01A	04/19/2022	1	0.715	42.0	1,240	241	100	**1,481**	1,580	19.5
BH01B	04/19/2022	2	0.140	8.53	213	458	<50.0	671	671	22.5
SS01	04/19/2022	0.5	<0.00200	0.00974	<50.0	<50.0	<50.0	<50.0	<50.0	5.18
SS01A	05/12/2022	2	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	<5.05
SS02	04/19/2022	0.5	0.0127	0.0161	<50.0	<50.0	<50.0	<50.0	<50.0	<4.99
SS02A	05/12/2022	2	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	16.9
SS03	04/19/2022	0.5	0.0143	0.0206	<50.0	<50.0	<50.0	<50.0	<50.0	117
SS03A	05/12/2022	2	<0.00198	<0.00397	<49.9	<49.9	<49.9	<49.9	<49.9	<4.97
SS04	04/19/2022	0.5	0.0059	0.0102	<49.9	<49.9	<49.9	<49.9	<49.9	27.8
SS04A	05/12/2022	2	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	<50.0	<4.95

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 1 Closure Criteria or reclamation standard where applicable.

GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
TPH: Total Petroleum Hydrocarbon

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APPENDIX A

Referenced Well Records

New Mexico Office of the State Engineer

Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) Q64	Q16	Q4	Sec	Twn	Rng	(NAD83 UTM in meters) X	Y
	C 03015	1	4	3	22	22S	30E	606099	3582353*

Driller License:	331	**Driller Company:**	SBQ2, LLC DBA STEWART BROTHERS DRILLING CO.		
Driller Name:					
Drill Start Date:	01/21/2004	**Drill Finish Date:**	01/25/2004	**Plug Date:**	
Log File Date:	03/04/2004	**PCW Rcv Date:**		**Source:**	Artesian
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	6.00	**Depth Well:**	1316 feet	**Depth Water:**	262 feet

Water Bearing Stratifications:	Top	Bottom	Description
	362	385	Other/Unknown

Casing Perforations:	Top	Bottom
	261	386

***UTM location was derived from PLSS - see Help**

Eddy County, New Mexico
Latitude 32°21'14", Longitude 103°52'48" NAD27
Land-surface elevation 3,163 feet above NAVD88
The depth of the well is 248 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 of measurement	Water-level approval status
1956-02-25		D	62610		2977.69	NGVD29	1	Z			A
1956-02-25		D	62611		2979.30	NAVD88	1	Z			A
1956-02-25		D	72019	183.70			1	Z			A
1983-01-19		D	62610		3000.01	NGVD29	1	Z			A
1983-01-19		D	62611		3001.62	NAVD88	1	Z			A
1983-01-19		D	72019	161.38			1	Z			A
1987-10-21		D	62610		3002.13	NGVD29	1	Z			A
1987-10-21		D	62611		3003.74	NAVD88	1	Z			A
1987-10-21		D	72019	159.26			1	Z			A
1992-12-09		D	62610		3004.57	NGVD29	1	S			A
1992-12-09		D	62611		3006.18	NAVD88	1	S			A
1992-12-09		D	72019	156.82			1	S			A
1998-02-02		D	62610		3006.65	NGVD29	1	S			A
1998-02-02		D	62611		3008.26	NAVD88	1	S			A
1998-02-02		D	72019	154.74			1	S			A

ENSOLUM

APPENDIX B

Lithologic Soil Sampling Logs

ENSOLUM	Sample Name: **BH01**	Date: **04/19/2022**
	Site Name: **JRU Legg Battery**	
	Incident Number: **NAPP2204943884**	
	Job Number: 03E1558009	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: AC	Method: **Hand Auger**
Coordinates: **32.368618, -103.868003**	Hole Diameter: 4"	Total Depth: **2'**

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
D	<168	1,390	N	BH01	0.5	0.5	CCHE	CALICHE, white to light tan, well cemented, some angular clasts, no stain, HC odor.
D	<168	974.4	N	BH01A	1	1	CCHE	SAA
						1.5	CCHE	SAA
D	<168	1,488	N	BH01B	2	2	CCHE	SAA

TD @ 2 feet bgs

ENSOLUM	Sample Name: **SS01**	Date: **4/19/22,5/12/22**
	Site Name: **JRU Legg Battery**	
	Incident Number: **NAPP2204943884**	
	Job Number: 03E1558009	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: AC, RH	Method: **Auger/Hydrovac**
Coordinates: **32.368491, -103.868087**	Hole Diameter: NA	Total Depth: **2'**

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
D	168	0.1	N	SS01	0.5	0.5	CCHE	CALICHE, white to light tan, well cemented, some angular clasts, no stain, no odor.
						1	CCHE	SAA
						1.5	CCHE	SAA
D	<168	2.4	N	SS01A	2	2	CCHE	SAA

TD @ 2 feet bgs

ENSOLUM	Sample Name: **SS02**	Date: **4/19/22,5/12/22**
	Site Name: **JRU Legg Battery**	
	Incident Number: **NAPP2204943884**	
	Job Number: 03E1558009	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: AC, RH	Method: **Auger/Hydrovac**
Coordinates: **32.368234, -103.867934**	Hole Diameter: NA	Total Depth: **2'**

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
D	<168	0.0	N	SS02	0.5	0.5	CCHE	CALICHE, white to light tan, well cemented, some angular clasts, no stain, no odor.
						1	CCHE	SAA
						1.5	CCHE	SAA
D	<168	3.0	N	SS02A	2	2	CCHE	SAA

TD @ 2 feet bgs

ENSOLUM	Sample Name: **SS03**	Date: **4/19/22,5/12/22**
	Site Name: **JRU Legg Battery**	
	Incident Number: **NAPP2204943884**	
	Job Number: 03E1558009	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: AC, RH	Method: **Auger/Hydrovac**
Coordinates: **32.368453, -103.867774**	Hole Diameter: NA	Total Depth: **2'**

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
D	<168	0.2	N	SS03	0.5	0.5	CCHE	CALICHE, white to light tan, well cemented, some angular clasts, no stain, no odor.
						1	CCHE	SAA
						1.5	CCHE	SAA
D	<168	2.0	N	SS03A	2	2	CCHE	SAA

TD @ 2 feet bgs

ENSOLUM	Sample Name: **SS04**	Date: **4/19/22,5/12/22**
	Site Name: **JRU Legg Battery**	
	Incident Number: **NAPP2204943884**	
	Job Number: 03E1558009	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: AC, RH	Method: **Auger/Hydrovac**
Coordinates: **32.368711, -103.867947**	Hole Diameter: NA	Total Depth: **2'**

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
D	<168	0.3	N	SS04	0.5	0.5	CCHE	CALICHE, white to light tan, well cemented, some angular clasts, no stain, no odor.
						1	CCHE	SAA
						1.5	CCHE	SAA
D	<168	1.5	N	SS04A	2	2	CCHE	SAA

TD @ 2 feet bgs

ENSOLUM

APPENDIX C

Photographic Log

Photographic Log
XTO Energy, Inc.
JRU Legg Battery
Incident Number NAPP2204943884

Photograph 1
Date: February 14, 2022
Description: Photo of liner tear during initial site visit.

Photograph 2
Date: April 19, 2022
Description: Photo of liner during delineation activities.

Photograph 3
Date: April 19, 2022
Description: Photo of delineation outside containment.

Photograph 4
Date: April 19, 2022
Description: Photo of patched liner after delineation.

ENSOLUM

APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-2210-1
Laboratory Sample Delivery Group: 03E1558009
Client Project/Site: JRU LEGG BATTERY

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

Attn: Kalei Jennings

JKramer

Authorized for release by:
4/22/2022 4:28:24 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.

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Laboratory Job ID: 890-2210-1
SDG: 03E1558009

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2210-1
SDG: 03E1558009

Qualifiers

GC VOA

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

GC Semi VOA

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

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 LEGG BATTERY

Job ID: 890-2210-1
SDG: 03E1558009

Job ID: 890-2210-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2210-1

Receipt
The samples were received on 4/19/2022 4:26 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 880-23940 and analytical batch 880-23883 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
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 LEGG BATTERY

Job ID: 890-2210-1
SDG: 03E1558009

Client Sample ID: BH01

Date Collected: 04/19/22 13:00
Date Received: 04/19/22 16:26
Sample Depth: 0.5

Lab Sample ID: 890-2210-1
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.518		0.0998		mg/Kg		04/21/22 11:35	04/22/22 05:29	50
Toluene	4.69		0.0998		mg/Kg		04/21/22 11:35	04/22/22 05:29	50
Ethylbenzene	3.31		0.0998		mg/Kg		04/21/22 11:35	04/22/22 05:29	50
m-Xylene & p-Xylene	12.6		0.200		mg/Kg		04/21/22 11:35	04/22/22 05:29	50
o-Xylene	3.90		0.0998		mg/Kg		04/21/22 11:35	04/22/22 05:29	50
Xylenes, Total	16.5		0.200		mg/Kg		04/21/22 11:35	04/22/22 05:29	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*213*	*S1+*	*70 - 130*	*04/21/22 11:35*	*04/22/22 05:29*	*50*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*04/21/22 11:35*	*04/22/22 05:29*	*50*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	25.0		0.200		mg/Kg			04/22/22 11:18	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	3550		50.0		mg/Kg			04/22/22 17:19	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	1270	*1 *-	50.0		mg/Kg		04/21/22 15:22	04/22/22 16:00	1
Diesel Range Organics (Over C10-C28)	1940	*1 *-	50.0		mg/Kg		04/21/22 15:22	04/22/22 16:00	1
Oil Range Organics (Over C28-C36)	337		50.0		mg/Kg		04/21/22 15:22	04/22/22 16:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*120*		*70 - 130*	*04/21/22 15:22*	*04/22/22 16:00*	*1*
o-Terphenyl	*117*		*70 - 130*	*04/21/22 15:22*	*04/22/22 16:00*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24.2		5.00		mg/Kg			04/22/22 02:36	1

Client Sample ID: BH01A

Date Collected: 04/19/22 13:10
Date Received: 04/19/22 16:26
Sample Depth: 1

Lab Sample ID: 890-2210-2
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.715		0.100		mg/Kg		04/21/22 11:35	04/22/22 05:50	50
Toluene	10.6		0.100		mg/Kg		04/21/22 11:35	04/22/22 05:50	50
Ethylbenzene	5.36		0.100		mg/Kg		04/21/22 11:35	04/22/22 05:50	50
m-Xylene & p-Xylene	20.4		0.200		mg/Kg		04/21/22 11:35	04/22/22 05:50	50
o-Xylene	4.94		0.100		mg/Kg		04/21/22 11:35	04/22/22 05:50	50
Xylenes, Total	25.3		0.200		mg/Kg		04/21/22 11:35	04/22/22 05:50	50

Client Sample Results

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2210-1
SDG: 03E1558009

Client Sample ID: BH01A

Date Collected: 04/19/22 13:10
Date Received: 04/19/22 16:26
Sample Depth: 1

Lab Sample ID: 890-2210-2

Matrix: Solid

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*196*	*S1+*	*70 - 130*	*04/21/22 11:35*	*04/22/22 05:50*	*50*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*04/21/22 11:35*	*04/22/22 05:50*	*50*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**42.0**		0.200		mg/Kg			04/22/22 11:18	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**1580**		50.0		mg/Kg			04/22/22 17:19	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**1240**	***1 *-**	50.0		mg/Kg		04/21/22 15:22	04/22/22 16:22	1
Diesel Range Organics (Over C10-C28)	**241**	***1 *-**	50.0		mg/Kg		04/21/22 15:22	04/22/22 16:22	1
Oil Range Organics (Over C28-C36)	**100**		50.0		mg/Kg		04/21/22 15:22	04/22/22 16:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*128*		*70 - 130*	*04/21/22 15:22*	*04/22/22 16:22*	*1*
o-Terphenyl	*132*	*S1+*	*70 - 130*	*04/21/22 15:22*	*04/22/22 16:22*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**19.5**		4.96		mg/Kg			04/22/22 02:45	1

Surrogate Summary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2210-1
SDG: 03E1558009

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)
890-2207-A-1-A MS	Matrix Spike	106	100
890-2207-A-1-B MSD	Matrix Spike Duplicate	107	102
890-2210-1	BH01	213 S1+	99
890-2210-2	BH01A	196 S1+	104
LCS 880-23940/1-A	Lab Control Sample	106	103
LCSD 880-23940/2-A	Lab Control Sample Dup	104	101
MB 880-23898/5-A	Method Blank	101	97
MB 880-23940/5-A	Method Blank	99	91

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-13949-A-1-E MS	Matrix Spike	96	91
880-13949-A-1-F MSD	Matrix Spike Duplicate	114	109
890-2210-1	BH01	120	117
890-2210-2	BH01A	128	132 S1+
LCS 880-23954/2-A	Lab Control Sample	25 S1-	19 S1-
LCSD 880-23954/3-A	Lab Control Sample Dup	109	109
MB 880-23954/1-A	Method Blank	120	135 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2210-1
SDG: 03E1558009

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-23898/5-A
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23898

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/21/22 09:32	04/21/22 11:41	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/21/22 09:32	04/21/22 11:41	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/21/22 09:32	04/21/22 11:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/21/22 09:32	04/21/22 11:41	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/21/22 09:32	04/21/22 11:41	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/21/22 09:32	04/21/22 11:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*04/21/22 09:32*	*04/21/22 11:41*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*04/21/22 09:32*	*04/21/22 11:41*	*1*

Lab Sample ID: MB 880-23940/5-A
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23940

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/21/22 11:35	04/21/22 22:17	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/21/22 11:35	04/21/22 22:17	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/21/22 11:35	04/21/22 22:17	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/21/22 11:35	04/21/22 22:17	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/21/22 11:35	04/21/22 22:17	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/21/22 11:35	04/21/22 22:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*04/21/22 11:35*	*04/21/22 22:17*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*04/21/22 11:35*	*04/21/22 22:17*	*1*

Lab Sample ID: LCS 880-23940/1-A
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23940

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1005		mg/Kg		100	70 - 130		
Toluene			0.100	0.09886		mg/Kg		99	70 - 130		
Ethylbenzene			0.100	0.09908		mg/Kg		99	70 - 130		
m-Xylene & p-Xylene			0.200	0.2021		mg/Kg		101	70 - 130		
o-Xylene			0.100	0.1023		mg/Kg		102	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 880-23940/2-A
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 23940

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09617		mg/Kg		96	70 - 130	4	35

QC Sample Results

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2210-1
SDG: 03E1558009

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

Lab Sample ID: LCSD 880-23940/2-A
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 23940

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.09442		mg/Kg		94	70 - 130	5	35
Ethylbenzene			0.100	0.09448		mg/Kg		94	70 - 130	5	35
m-Xylene & p-Xylene			0.200	0.1923		mg/Kg		96	70 - 130	5	35
o-Xylene			0.100	0.09722		mg/Kg		97	70 - 130	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 890-2207-A-1-A MS
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 23940

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U	0.101	0.1025		mg/Kg		102	70 - 130
Toluene	<0.00201	U	0.101	0.09214		mg/Kg		91	70 - 130
Ethylbenzene	<0.00201	U F2 F1	0.101	0.07746		mg/Kg		77	70 - 130
m-Xylene & p-Xylene	<0.00402	U F1	0.202	0.1606		mg/Kg		80	70 - 130
o-Xylene	<0.00201	U F1	0.101	0.07856		mg/Kg		78	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 890-2207-A-1-B MSD
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 23940

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0994	0.09413		mg/Kg		95	70 - 130	9	35
Toluene	<0.00201	U	0.0994	0.08168		mg/Kg		82	70 - 130	12	35
Ethylbenzene	<0.00201	U F2 F1	0.0994	0.03017	F2 F1	mg/Kg		30	70 - 130	88	35
m-Xylene & p-Xylene	<0.00402	U F1	0.199	0.1354	F1	mg/Kg		68	70 - 130	17	35
o-Xylene	<0.00201	U F1	0.0994	0.06657	F1	mg/Kg		67	70 - 130	17	35

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

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

Lab Sample ID: MB 880-23954/1-A
Matrix: Solid
Analysis Batch: 24009

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23954

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		04/21/22 15:22	04/22/22 11:28	1

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2210-1
SDG: 03E1558009

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

Lab Sample ID: MB 880-23954/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24009 — **Prep Batch: 23954**

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		04/21/22 15:22	04/22/22 11:28	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/21/22 15:22	04/22/22 11:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*120*		*70 - 130*	*04/21/22 15:22*	*04/22/22 11:28*	*1*
o-Terphenyl	*135*	*S1+*	*70 - 130*	*04/21/22 15:22*	*04/22/22 11:28*	*1*

Lab Sample ID: LCS 880-23954/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24009 — **Prep Batch: 23954**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	223.2	*-	mg/Kg		22	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	220.8	*-	mg/Kg		22	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*25*	*S1-*	*70 - 130*
o-Terphenyl	*19*	*S1-*	*70 - 130*

Lab Sample ID: LCSD 880-23954/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24009 — **Prep Batch: 23954**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	904.2	*1	mg/Kg		90	70 - 130	121	20
Diesel Range Organics (Over C10-C28)			1000	964.8	*1	mg/Kg		96	70 - 130	126	20

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

Lab Sample ID: 880-13949-A-1-E MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24009 — **Prep Batch: 23954**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1 *-	999	1021		mg/Kg		100	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U *1 *-	999	899.6		mg/Kg		90	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*96*		*70 - 130*
o-Terphenyl	*91*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2210-1
SDG: 03E1558009

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

Lab Sample ID: 880-13949-A-1-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24009 — **Prep Batch: 23954**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1 *-	999	1121		mg/Kg		111	70 - 130	9	20
Diesel Range Organics (Over C10-C28)	<49.9	U *1 *-	999	1081		mg/Kg		108	70 - 130	18	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*114*		*70 - 130*
o-Terphenyl	*109*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-23899/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 23976

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			04/21/22 23:39	1

Lab Sample ID: LCS 880-23899/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 23976

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	256.0		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-23899/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 23976

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	255.7		mg/Kg		102	90 - 110	0	20

Lab Sample ID: 890-2216-A-7-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 23976

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	15.4		249	277.2		mg/Kg		105	90 - 110		

Lab Sample ID: 890-2216-A-7-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 23976

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	15.4		249	273.5		mg/Kg		104	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2210-1
SDG: 03E1558009

GC VOA

Analysis Batch: 23883

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2210-1	BH01	Total/NA	Solid	8021B	23940
890-2210-2	BH01A	Total/NA	Solid	8021B	23940
MB 880-23898/5-A	Method Blank	Total/NA	Solid	8021B	23898
MB 880-23940/5-A	Method Blank	Total/NA	Solid	8021B	23940
LCS 880-23940/1-A	Lab Control Sample	Total/NA	Solid	8021B	23940
LCSD 880-23940/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	23940
890-2207-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	23940
890-2207-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	23940

Prep Batch: 23898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-23898/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 23940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2210-1	BH01	Total/NA	Solid	5035	
890-2210-2	BH01A	Total/NA	Solid	5035	
MB 880-23940/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-23940/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-23940/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2207-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
890-2207-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 24039

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2210-1	BH01	Total/NA	Solid	Total BTEX	
890-2210-2	BH01A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 23954

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2210-1	BH01	Total/NA	Solid	8015NM Prep	
890-2210-2	BH01A	Total/NA	Solid	8015NM Prep	
MB 880-23954/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-23954/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-23954/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-13949-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-13949-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 24009

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2210-1	BH01	Total/NA	Solid	8015B NM	23954
890-2210-2	BH01A	Total/NA	Solid	8015B NM	23954
MB 880-23954/1-A	Method Blank	Total/NA	Solid	8015B NM	23954
LCS 880-23954/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	23954
LCSD 880-23954/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	23954
880-13949-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	23954
880-13949-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	23954

QC Association Summary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2210-1
SDG: 03E1558009

GC Semi VOA

Analysis Batch: 24075

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2210-1	BH01	Total/NA	Solid	8015 NM	
890-2210-2	BH01A	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 23899

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2210-1	BH01	Soluble	Solid	DI Leach	
890-2210-2	BH01A	Soluble	Solid	DI Leach	
MB 880-23899/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-23899/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-23899/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2216-A-7-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2216-A-7-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 23976

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2210-1	BH01	Soluble	Solid	300.0	23899
890-2210-2	BH01A	Soluble	Solid	300.0	23899
MB 880-23899/1-A	Method Blank	Soluble	Solid	300.0	23899
LCS 880-23899/2-A	Lab Control Sample	Soluble	Solid	300.0	23899
LCSD 880-23899/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	23899
890-2216-A-7-C MS	Matrix Spike	Soluble	Solid	300.0	23899
890-2216-A-7-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	23899

Lab Chronicle

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2210-1
SDG: 03E1558009

Client Sample ID: BH01

Date Collected: 04/19/22 13:00
Date Received: 04/19/22 16:26

Lab Sample ID: 890-2210-1

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	23940	04/21/22 11:35	MR	XEN MID
Total/NA	Analysis	8021B		50			23883	04/22/22 05:29	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			24039	04/22/22 11:18	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			24075	04/22/22 17:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	23954	04/21/22 15:22	DM	XEN MID
Total/NA	Analysis	8015B NM		1			24009	04/22/22 16:00	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	23899	04/21/22 09:33	CH	XEN MID
Soluble	Analysis	300.0		1			23976	04/22/22 02:36	CH	XEN MID

Client Sample ID: BH01A

Date Collected: 04/19/22 13:10
Date Received: 04/19/22 16:26

Lab Sample ID: 890-2210-2

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	23940	04/21/22 11:35	MR	XEN MID
Total/NA	Analysis	8021B		50			23883	04/22/22 05:50	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			24039	04/22/22 11:18	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			24075	04/22/22 17:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	23954	04/21/22 15:22	DM	XEN MID
Total/NA	Analysis	8015B NM		1			24009	04/22/22 16:22	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	23899	04/21/22 09:33	CH	XEN MID
Soluble	Analysis	300.0		1			23976	04/22/22 02:45	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2210-1
SDG: 03E1558009

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	T104704400-21-22	06-30-22

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 LEGG BATTERY

Job ID: 890-2210-1
SDG: 03E1558009

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN 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:

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

Sample Summary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2210-1
SDG: 03E1558009

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2210-1	BH01	Solid	04/19/22 13:00	04/19/22 16:26	0.5
890-2210-2	BH01A	Solid	04/19/22 13:10	04/19/22 16:26	1

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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)	Adrian Baker
Company Name:	Ensolum LLC	Company Name:	XTO Energy Inc.
Address:	705 W Wadley Ave Suite 210	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad NM, 88220
Phone:	817-683-2503	Email:	K.jennings@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 Legg Battery	Turn Around	☐ Routine ☑ Rush
Project Number:	03E1558009	Pres. Code	
Project Location:	Eddy	Due Date:	2-Day TAT
Sampler's Name:	Alexis Castro	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

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

Preservative Codes

None: NO | DI Water: H_2O
Cool: Cool | MeOH: Me
HCL: HC | HNO_3: HN
H_2SO_4: H_2 | NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: NaSO$_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	BTEX	TPH	Chlorides (Cl)	Sample Comments
BH01	S	04/19/22	1300	0.5'		1	X	X	X	Inc: NAPP2204943584
BH01A	S	04/19/22	1310	1'		1	X	X	X	cc: 10809 71001

890-2210 Chain of Custody

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		4.19.22 1626			
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2210-1
SDG Number: 03E1558009

Login Number: 2210
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	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: 890-2210-1
SDG Number: 03E1558009

Login Number: 2210
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 04/21/22 11:26 AM

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

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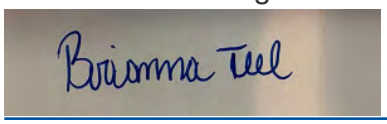
ANALYTICAL REPORT

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

Laboratory Job ID: 890-2211-1
Laboratory Sample Delivery Group: 03E1558009
Client Project/Site: JRU LEGG BATTERY
Revision: 3

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

Attn: Kalei Jennings



Authorized for release by:
5/3/2022 8:31:38 AM
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Designee for

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

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Laboratory Job ID: 890-2211-1
SDG: 03E1558009

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Definitions/Glossary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2211-1
SDG: 03E1558009

Qualifiers

GC VOA

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

GC Semi VOA

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

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
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Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2211-1

REVISION

The report being provided is a revision of the original report sent on 4/22/2022. The report (revision 3) is being revised due to Revised report to correct Total TPH Calculation.

Report revision history

The report being provided is a revision of the original report sent on 4/22/2022. The report (revision 3) is being revised due to Revised report to correct Total TPH Calculation.
Revision 2 - 5/2/2022 - Reason - Per client email, requesting re run on sample BH01B for TPH.

Revision 2 - 5/2/2022 - Reason - Per client email, requesting re run on sample BH01B for TPH.
Revision 1 - 4/27/2022 - Reason - Per client email, corrected sample name from BH01B @ 0.5' to BH01B @ 2'.

Receipt
The sample was received on 4/19/2022 4:26 PM. Unless otherwise noted below, the sample 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 880-23940 and analytical batch 880-23883 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 laboratory control sample (LCS) associated with preparation batch 880-23954 and analytical batch 880-24009 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-23954 and analytical batch 880-24009 recovered outside control limits for the following analytes: <AffectedAnalytes>.

Method 8015MOD_NM: The laboratory control sample (LCS) associated with preparation batch 880-24405 and analytical batch 880-24563 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

Method 8015MOD_NM: The laboratory control sample (LCS) associated with preparation batch 880-24405 and analytical batch 880-24563 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (890-2244-A-21-B MS) and (890-2244-A-21-C MSD). Evidence of matrix interferences is not obvious.

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

Case Narrative

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2211-1
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Job ID: 890-2211-1 (Continued)

Laboratory: Eurofins Carlsbad (Continued)

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 LEGG BATTERY

Job ID: 890-2211-1
SDG: 03E1558009

Client Sample ID: BH01B @ 2'

Date Collected: 04/19/22 13:20
Date Received: 04/19/22 16:26
Sample Depth: 2

Lab Sample ID: 890-2211-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.140		0.00202		mg/Kg		04/21/22 11:35	04/22/22 03:47	1
Toluene	0.691		0.0996		mg/Kg		04/21/22 15:18	04/22/22 14:27	50
Ethylbenzene	0.313		0.00202		mg/Kg		04/21/22 11:35	04/22/22 03:47	1
m-Xylene & p-Xylene	5.83		0.199		mg/Kg		04/21/22 15:18	04/22/22 14:27	50
o-Xylene	1.56		0.0996		mg/Kg		04/21/22 15:18	04/22/22 14:27	50
Xylenes, Total	7.39		0.199		mg/Kg		04/21/22 15:18	04/22/22 14:27	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*253*	*S1+*	*70 - 130*	*04/21/22 11:35*	*04/22/22 03:47*	*1*
1,4-Difluorobenzene (Surr)	*68*	*S1-*	*70 - 130*	*04/21/22 11:35*	*04/22/22 03:47*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	8.53		0.199		mg/Kg			04/22/22 11:18	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	671		50.0		mg/Kg			04/22/22 17:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	213	*-	50.0		mg/Kg		04/28/22 11:23	05/01/22 03:43	1
Diesel Range Organics (Over C10-C28)	458		50.0		mg/Kg		04/28/22 11:23	05/01/22 03:43	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/28/22 11:23	05/01/22 03:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*91*		*70 - 130*	*04/28/22 11:23*	*05/01/22 03:43*	*1*
o-Terphenyl	*89*		*70 - 130*	*04/28/22 11:23*	*05/01/22 03:43*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	22.5		5.00		mg/Kg			04/22/22 03:11	1

Surrogate Summary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2211-1
SDG: 03E1558009

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)
890-2207-A-1-A MS	Matrix Spike	106	100
890-2207-A-1-B MSD	Matrix Spike Duplicate	107	102
890-2211-1	BH01B @ 2'	253 S1+	68 S1-
890-2216-A-1-E MS	Matrix Spike	100	105
890-2216-A-1-F MSD	Matrix Spike Duplicate	99	106
LCS 880-23940/1-A	Lab Control Sample	106	103
LCS 880-23953/1-A	Lab Control Sample	95	103
LCSD 880-23940/2-A	Lab Control Sample Dup	104	101
LCSD 880-23953/2-A	Lab Control Sample Dup	96	100
MB 880-23898/5-A	Method Blank	101	97
MB 880-23940/5-A	Method Blank	99	91
MB 880-23953/5-A	Method Blank	98	103

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)
880-13949-A-1-E MS	Matrix Spike	96	91
880-13949-A-1-F MSD	Matrix Spike Duplicate	114	109
890-2211-1	BH01B @ 2'	91	89
890-2244-A-21-B MS	Matrix Spike	82	62 S1-
890-2244-A-21-C MSD	Matrix Spike Duplicate	73	57 S1-
LCS 880-23954/2-A	Lab Control Sample	25 S1-	19 S1-
LCS 880-24405/2-A	Lab Control Sample	91	79
LCSD 880-23954/3-A	Lab Control Sample Dup	109	109
LCSD 880-24405/3-A	Lab Control Sample Dup	104	100
MB 880-23954/1-A	Method Blank	120	135 S1+
MB 880-24405/1-A	Method Blank	89	87

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2211-1
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Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-23898/5-A
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23898

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/21/22 09:32	04/21/22 11:41	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/21/22 09:32	04/21/22 11:41	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/21/22 09:32	04/21/22 11:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/21/22 09:32	04/21/22 11:41	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/21/22 09:32	04/21/22 11:41	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/21/22 09:32	04/21/22 11:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*04/21/22 09:32*	*04/21/22 11:41*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*04/21/22 09:32*	*04/21/22 11:41*	*1*

Lab Sample ID: MB 880-23940/5-A
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23940

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/21/22 11:35	04/21/22 22:17	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/21/22 11:35	04/21/22 22:17	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/21/22 11:35	04/21/22 22:17	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/21/22 11:35	04/21/22 22:17	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/21/22 11:35	04/21/22 22:17	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/21/22 11:35	04/21/22 22:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*04/21/22 11:35*	*04/21/22 22:17*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*04/21/22 11:35*	*04/21/22 22:17*	*1*

Lab Sample ID: LCS 880-23940/1-A
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23940

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1005		mg/Kg		100	70 - 130		
Toluene			0.100	0.09886		mg/Kg		99	70 - 130		
Ethylbenzene			0.100	0.09908		mg/Kg		99	70 - 130		
m-Xylene & p-Xylene			0.200	0.2021		mg/Kg		101	70 - 130		
o-Xylene			0.100	0.1023		mg/Kg		102	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 880-23940/2-A
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 23940

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09617		mg/Kg		96	70 - 130	4	35

QC Sample Results

Client: Ensolum
Project/Site: JRU LEGG BATTERY

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

Lab Sample ID: LCSD 880-23940/2-A
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 23940

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.09442		mg/Kg		94	70 - 130	5	35
Ethylbenzene			0.100	0.09448		mg/Kg		94	70 - 130	5	35
m-Xylene & p-Xylene			0.200	0.1923		mg/Kg		96	70 - 130	5	35
o-Xylene			0.100	0.09722		mg/Kg		97	70 - 130	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 890-2207-A-1-A MS
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 23940

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U	0.101	0.1025		mg/Kg		102	70 - 130
Toluene	<0.00201	U	0.101	0.09214		mg/Kg		91	70 - 130
Ethylbenzene	<0.00201	U F2 F1	0.101	0.07746		mg/Kg		77	70 - 130
m-Xylene & p-Xylene	<0.00402	U F1	0.202	0.1606		mg/Kg		80	70 - 130
o-Xylene	<0.00201	U F1	0.101	0.07856		mg/Kg		78	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 890-2207-A-1-B MSD
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 23940

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0994	0.09413		mg/Kg		95	70 - 130	9	35
Toluene	<0.00201	U	0.0994	0.08168		mg/Kg		82	70 - 130	12	35
Ethylbenzene	<0.00201	U F2 F1	0.0994	0.03017	F2 F1	mg/Kg		30	70 - 130	88	35
m-Xylene & p-Xylene	<0.00402	U F1	0.199	0.1354	F1	mg/Kg		68	70 - 130	17	35
o-Xylene	<0.00201	U F1	0.0994	0.06657	F1	mg/Kg		67	70 - 130	17	35

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

Lab Sample ID: MB 880-23953/5-A
Matrix: Solid
Analysis Batch: 23987

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23953

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/21/22 15:18	04/22/22 13:37	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/21/22 15:18	04/22/22 13:37	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/21/22 15:18	04/22/22 13:37	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/21/22 15:18	04/22/22 13:37	1

QC Sample Results

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

Lab Sample ID: MB 880-23953/5-A
Matrix: Solid
Analysis Batch: 23987

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23953

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/21/22 15:18	04/22/22 13:37	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/21/22 15:18	04/22/22 13:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*04/21/22 15:18*	*04/22/22 13:37*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*04/21/22 15:18*	*04/22/22 13:37*	*1*

Lab Sample ID: LCS 880-23953/1-A
Matrix: Solid
Analysis Batch: 23987

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23953

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08351		mg/Kg		84	70 - 130		
Toluene			0.100	0.09267		mg/Kg		93	70 - 130		
Ethylbenzene			0.100	0.09526		mg/Kg		95	70 - 130		
m-Xylene & p-Xylene			0.200	0.1903		mg/Kg		95	70 - 130		
o-Xylene			0.100	0.09413		mg/Kg		94	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 880-23953/2-A
Matrix: Solid
Analysis Batch: 23987

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 23953

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08219		mg/Kg		82	70 - 130	2	35
Toluene			0.100	0.09657		mg/Kg		97	70 - 130	4	35
Ethylbenzene			0.100	0.09862		mg/Kg		99	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1984		mg/Kg		99	70 - 130	4	35
o-Xylene			0.100	0.09882		mg/Kg		99	70 - 130	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 890-2216-A-1-E MS
Matrix: Solid
Analysis Batch: 23987

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 23953

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U	0.100	0.08703		mg/Kg		87	70 - 130		
Toluene	<0.00201	U	0.100	0.08753		mg/Kg		87	70 - 130		
Ethylbenzene	<0.00201	U	0.100	0.07868		mg/Kg		79	70 - 130		
m-Xylene & p-Xylene	<0.00402	U	0.200	0.1546		mg/Kg		77	70 - 130		
o-Xylene	<0.00201	U	0.100	0.07694		mg/Kg		77	70 - 130		

QC Sample Results

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

Lab Sample ID: 890-2216-A-1-E MS
Matrix: Solid
Analysis Batch: 23987

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 23953

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		70 - 130
1,4-Difluorobenzene (Surr)	105		70 - 130

Lab Sample ID: 890-2216-A-1-F MSD
Matrix: Solid
Analysis Batch: 23987

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 23953

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0996	0.08359		mg/Kg		84	70 - 130	4	35
Toluene	<0.00201	U	0.0996	0.08837		mg/Kg		89	70 - 130	1	35
Ethylbenzene	<0.00201	U	0.0996	0.08567		mg/Kg		86	70 - 130	9	35
m-Xylene & p-Xylene	<0.00402	U	0.199	0.1705		mg/Kg		86	70 - 130	10	35
o-Xylene	<0.00201	U	0.0996	0.08421		mg/Kg		85	70 - 130	9	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	106		70 - 130

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

Lab Sample ID: MB 880-23954/1-A
Matrix: Solid
Analysis Batch: 24009

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23954

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		04/21/22 15:22	04/22/22 11:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/21/22 15:22	04/22/22 11:28	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/21/22 15:22	04/22/22 11:28	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	120		70 - 130	04/21/22 15:22	04/22/22 11:28	1
o-Terphenyl	135	S1+	70 - 130	04/21/22 15:22	04/22/22 11:28	1

Lab Sample ID: LCS 880-23954/2-A
Matrix: Solid
Analysis Batch: 24009

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23954

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	223.2	*-	mg/Kg		22	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	220.8	*-	mg/Kg		22	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	25	S1-	70 - 130
o-Terphenyl	19	S1-	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2211-1
SDG: 03E1558009

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

Lab Sample ID: LCSD 880-23954/3-A
Matrix: Solid
Analysis Batch: 24009

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 23954

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	904.2	*1	mg/Kg		90	70 - 130	121	20
Diesel Range Organics (Over C10-C28)			1000	964.8	*1	mg/Kg		96	70 - 130	126	20

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

Lab Sample ID: 880-13949-A-1-E MS
Matrix: Solid
Analysis Batch: 24009

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 23954

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1 *-	999	1021		mg/Kg		100	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U *1 *-	999	899.6		mg/Kg		90	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*96*		*70 - 130*
o-Terphenyl	*91*		*70 - 130*

Lab Sample ID: 880-13949-A-1-F MSD
Matrix: Solid
Analysis Batch: 24009

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 23954

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1 *-	999	1121		mg/Kg		111	70 - 130	9	20
Diesel Range Organics (Over C10-C28)	<49.9	U *1 *-	999	1081		mg/Kg		108	70 - 130	18	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*114*		*70 - 130*
o-Terphenyl	*109*		*70 - 130*

Lab Sample ID: MB 880-24405/1-A
Matrix: Solid
Analysis Batch: 24563

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24405

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		04/28/22 11:23	04/30/22 21:38	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/28/22 11:23	04/30/22 21:38	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/28/22 11:23	04/30/22 21:38	1

QC Sample Results

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2211-1
SDG: 03E1558009

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

Lab Sample ID: MB 880-24405/1-A
Matrix: Solid
Analysis Batch: 24563

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24405

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	89		70 - 130	04/28/22 11:23	04/30/22 21:38	1
o-Terphenyl	87		70 - 130	04/28/22 11:23	04/30/22 21:38	1

Lab Sample ID: LCS 880-24405/2-A
Matrix: Solid
Analysis Batch: 24563

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24405

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	687.7	*-	mg/Kg		69	70 - 130
Diesel Range Organics (Over C10-C28)	1000	839.1		mg/Kg		84	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	91		70 - 130
o-Terphenyl	79		70 - 130

Lab Sample ID: LCSD 880-24405/3-A
Matrix: Solid
Analysis Batch: 24563

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 24405

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	598.1	*-	mg/Kg		60	70 - 130	14	20
Diesel Range Organics (Over C10-C28)	1000	903.2		mg/Kg		90	70 - 130	7	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	104		70 - 130
o-Terphenyl	100		70 - 130

Lab Sample ID: 890-2244-A-21-B MS
Matrix: Solid
Analysis Batch: 24563

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 24405

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *-	999	771.3		mg/Kg		77	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U F1	999	773.5		mg/Kg		77	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	82		70 - 130
o-Terphenyl	62	S1-	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2211-1
SDG: 03E1558009

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

Lab Sample ID: 890-2244-A-21-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24563 — **Prep Batch: 24405**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *-	999	880.9		mg/Kg		88	70 - 130	13	20
Diesel Range Organics (Over C10-C28)	<49.9	U F1	999	711.8		mg/Kg		71	70 - 130	8	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*73*		*70 - 130*
o-Terphenyl	*57*	*S1-*	*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-23899/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 23976

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			04/21/22 23:39	1

Lab Sample ID: LCS 880-23899/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 23976

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	256.0		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-23899/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 23976

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	255.7		mg/Kg		102	90 - 110	0	20

Lab Sample ID: 890-2216-A-7-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 23976

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	15.4		249	277.2		mg/Kg		105	90 - 110		

Lab Sample ID: 890-2216-A-7-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 23976

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	15.4		249	273.5		mg/Kg		104	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2211-1
SDG: 03E1558009

GC VOA

Analysis Batch: 23883

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2211-1	BH01B @ 2'	Total/NA	Solid	8021B	23940
MB 880-23898/5-A	Method Blank	Total/NA	Solid	8021B	23898
MB 880-23940/5-A	Method Blank	Total/NA	Solid	8021B	23940
LCS 880-23940/1-A	Lab Control Sample	Total/NA	Solid	8021B	23940
LCSD 880-23940/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	23940
890-2207-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	23940
890-2207-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	23940

Prep Batch: 23898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-23898/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 23940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2211-1	BH01B @ 2'	Total/NA	Solid	5035	
MB 880-23940/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-23940/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-23940/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2207-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
890-2207-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 23953

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2211-1	BH01B @ 2'	Total/NA	Solid	5035	
MB 880-23953/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-23953/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-23953/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2216-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
890-2216-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 23987

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2211-1	BH01B @ 2'	Total/NA	Solid	8021B	23953
MB 880-23953/5-A	Method Blank	Total/NA	Solid	8021B	23953
LCS 880-23953/1-A	Lab Control Sample	Total/NA	Solid	8021B	23953
LCSD 880-23953/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	23953
890-2216-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	23953
890-2216-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	23953

Analysis Batch: 24034

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2211-1	BH01B @ 2'	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 23954

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-23954/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-23954/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-23954/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-13949-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2211-1
SDG: 03E1558009

GC Semi VOA (Continued)

Prep Batch: 23954 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-13949-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 24009

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-23954/1-A	Method Blank	Total/NA	Solid	8015B NM	23954
LCS 880-23954/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	23954
LCSD 880-23954/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	23954
880-13949-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	23954
880-13949-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	23954

Analysis Batch: 24076

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2211-1	BH01B @ 2'	Total/NA	Solid	8015 NM	

Prep Batch: 24405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2211-1	BH01B @ 2'	Total/NA	Solid	8015NM Prep	
MB 880-24405/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-24405/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-24405/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2244-A-21-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2244-A-21-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 24563

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2211-1	BH01B @ 2'	Total/NA	Solid	8015B NM	24405
MB 880-24405/1-A	Method Blank	Total/NA	Solid	8015B NM	24405
LCS 880-24405/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	24405
LCSD 880-24405/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	24405
890-2244-A-21-B MS	Matrix Spike	Total/NA	Solid	8015B NM	24405
890-2244-A-21-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	24405

HPLC/IC

Leach Batch: 23899

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2211-1	BH01B @ 2'	Soluble	Solid	DI Leach	
MB 880-23899/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-23899/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-23899/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2216-A-7-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2216-A-7-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 23976

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2211-1	BH01B @ 2'	Soluble	Solid	300.0	23899
MB 880-23899/1-A	Method Blank	Soluble	Solid	300.0	23899
LCS 880-23899/2-A	Lab Control Sample	Soluble	Solid	300.0	23899
LCSD 880-23899/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	23899
890-2216-A-7-C MS	Matrix Spike	Soluble	Solid	300.0	23899
890-2216-A-7-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	23899

Lab Chronicle

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2211-1
SDG: 03E1558009

Client Sample ID: BH01B @ 2'

Date Collected: 04/19/22 13:20
Date Received: 04/19/22 16:26

Lab Sample ID: 890-2211-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	23953	04/21/22 15:18	MR	XEN MID
Total/NA	Analysis	8021B		50	5 mL	5 mL	23987	04/22/22 14:27	MR	XEN MID
Total/NA	Prep	5035			4.96 g	5 mL	23940	04/21/22 11:35	MR	XEN MID
Total/NA	Analysis	8021B		1			23883	04/22/22 03:47	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			24034	04/22/22 11:18	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			24076	04/22/22 17:22	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	24405	04/28/22 11:23	DM	XEN MID
Total/NA	Analysis	8015B NM		1			24563	05/01/22 03:43	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	23899	04/21/22 09:33	CH	XEN MID
Soluble	Analysis	300.0		1			23976	04/22/22 03:11	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2211-1
SDG: 03E1558009

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	T104704400-21-22	06-30-22

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 LEGG BATTERY

Job ID: 890-2211-1
SDG: 03E1558009

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN 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:

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

Sample Summary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2211-1
SDG: 03E1558009

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2211-1	BH01B @ 2'	Solid	04/19/22 13:20	04/19/22 16:26	2

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Kalei Jennings	Bill to: (if different)	Adrian Baker
Company Name:	Ensolum LLC	Company Name:	XTO Energy Inc.
Address:	705 W Wadley Ave. Suite 240	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	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 Leg Battery	Turn Around	☐ Routine ☑ Rush
Project Number:	03E1558009	Due Date:	2 DAY TAT
Project Location:	Eddy	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Alexis Castro		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	Yes (No)
Samples Received Intact:	(Yes) No	Thermometer ID:	TNM007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	3.8
Total Containers:		Corrected Temperature:	3.6

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	BTEX	TPH	Chlorides
BH01B	S	04/14/22	1320	0.5'		1		X	X	X

890-2211 Chain of Custody

Sample Comments

INC: NAPP2204943884
CC: 10309 71001

AC

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		4.19.22 1626	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2211-1
SDG Number: 03E1558009

Login Number: 2211
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	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: 890-2211-1
SDG Number: 03E1558009

Login Number: 2211
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 04/21/22 11:26 AM

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-2212-1
Laboratory Sample Delivery Group: 03E1558009
Client Project/Site: JRU LEGG BATTERY

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

Attn: Kalei Jennings

JKramer

Authorized for release by:
4/22/2022 6:58:17 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.

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Laboratory Job ID: 890-2212-1
SDG: 03E1558009

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2212-1
SDG: 03E1558009

Qualifiers

GC VOA

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

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 LEGG BATTERY

Job ID: 890-2212-1
SDG: 03E1558009

Job ID: 890-2212-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2212-1

Receipt
The sample was received on 4/19/2022 4:26 PM. Unless otherwise noted below, the sample 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 880-23940 and analytical batch 880-23883 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
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 880-23899 and analytical batch 880-23976 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 LEGG BATTERY

Job ID: 890-2212-1
SDG: 03E1558009

Client Sample ID: SS01

Date Collected: 04/19/22 13:35
Date Received: 04/19/22 16:26
Sample Depth: 0.5

Lab Sample ID: 890-2212-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/21/22 11:35	04/22/22 04:07	1
Toluene	**0.00484**		0.00200		mg/Kg		04/21/22 11:35	04/22/22 04:07	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/21/22 11:35	04/22/22 04:07	1
m-Xylene & p-Xylene	**0.00490**		0.00400		mg/Kg		04/21/22 11:35	04/22/22 04:07	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/21/22 11:35	04/22/22 04:07	1
Xylenes, Total	**0.00490**		0.00400		mg/Kg		04/21/22 11:35	04/22/22 04:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*04/21/22 11:35*	*04/22/22 04:07*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*04/21/22 11:35*	*04/22/22 04:07*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.00974**		0.00400		mg/Kg			04/22/22 11:18	1

Method: 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		04/21/22 15:22	04/22/22 19:03	1
Diesel Range Organics (Over C10-C28)	<50.0	U *1 *-	50.0		mg/Kg		04/21/22 15:22	04/22/22 19:03	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/21/22 15:22	04/22/22 19:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*110*		*70 - 130*	*04/21/22 15:22*	*04/22/22 19:03*	*1*
o-Terphenyl	*118*		*70 - 130*	*04/21/22 15:22*	*04/22/22 19:03*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5.18**	**F1**	5.00		mg/Kg			04/22/22 00:05	1

Surrogate Summary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2212-1
SDG: 03E1558009

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)										
890-2207-A-1-A MS	Matrix Spike	106	100										
890-2207-A-1-B MSD	Matrix Spike Duplicate	107	102										
890-2212-1	SS01	108	93										
LCS 880-23940/1-A	Lab Control Sample	106	103										
LCSD 880-23940/2-A	Lab Control Sample Dup	104	101										
MB 880-23898/5-A	Method Blank	101	97										
MB 880-23940/5-A	Method Blank	99	91										

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)											
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)										
880-13949-A-1-E MS	Matrix Spike	96	91										
880-13949-A-1-F MSD	Matrix Spike Duplicate	114	109										
890-2212-1	SS01	110	118										
LCS 880-23954/2-A	Lab Control Sample	25 S1-	19 S1-										
LCSD 880-23954/3-A	Lab Control Sample Dup	109	109										
MB 880-23954/1-A	Method Blank	120	135 S1+										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2212-1
SDG: 03E1558009

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-23898/5-A
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23898

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/21/22 09:32	04/21/22 11:41	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/21/22 09:32	04/21/22 11:41	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/21/22 09:32	04/21/22 11:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/21/22 09:32	04/21/22 11:41	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/21/22 09:32	04/21/22 11:41	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/21/22 09:32	04/21/22 11:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*04/21/22 09:32*	*04/21/22 11:41*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*04/21/22 09:32*	*04/21/22 11:41*	*1*

Lab Sample ID: MB 880-23940/5-A
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23940

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/21/22 11:35	04/21/22 22:17	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/21/22 11:35	04/21/22 22:17	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/21/22 11:35	04/21/22 22:17	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/21/22 11:35	04/21/22 22:17	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/21/22 11:35	04/21/22 22:17	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/21/22 11:35	04/21/22 22:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*04/21/22 11:35*	*04/21/22 22:17*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*04/21/22 11:35*	*04/21/22 22:17*	*1*

Lab Sample ID: LCS 880-23940/1-A
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23940

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1005		mg/Kg		100	70 - 130		
Toluene			0.100	0.09886		mg/Kg		99	70 - 130		
Ethylbenzene			0.100	0.09908		mg/Kg		99	70 - 130		
m-Xylene & p-Xylene			0.200	0.2021		mg/Kg		101	70 - 130		
o-Xylene			0.100	0.1023		mg/Kg		102	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 880-23940/2-A
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 23940

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09617		mg/Kg		96	70 - 130	4	35

QC Sample Results

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2212-1
SDG: 03E1558009

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

Lab Sample ID: LCSD 880-23940/2-A
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 23940

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.09442		mg/Kg		94	70 - 130	5	35
Ethylbenzene			0.100	0.09448		mg/Kg		94	70 - 130	5	35
m-Xylene & p-Xylene			0.200	0.1923		mg/Kg		96	70 - 130	5	35
o-Xylene			0.100	0.09722		mg/Kg		97	70 - 130	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 890-2207-A-1-A MS
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 23940

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U	0.101	0.1025		mg/Kg		102	70 - 130
Toluene	<0.00201	U	0.101	0.09214		mg/Kg		91	70 - 130
Ethylbenzene	<0.00201	U F2 F1	0.101	0.07746		mg/Kg		77	70 - 130
m-Xylene & p-Xylene	<0.00402	U F1	0.202	0.1606		mg/Kg		80	70 - 130
o-Xylene	<0.00201	U F1	0.101	0.07856		mg/Kg		78	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 890-2207-A-1-B MSD
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 23940

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0994	0.09413		mg/Kg		95	70 - 130	9	35
Toluene	<0.00201	U	0.0994	0.08168		mg/Kg		82	70 - 130	12	35
Ethylbenzene	<0.00201	U F2 F1	0.0994	0.03017	F2 F1	mg/Kg		30	70 - 130	88	35
m-Xylene & p-Xylene	<0.00402	U F1	0.199	0.1354	F1	mg/Kg		68	70 - 130	17	35
o-Xylene	<0.00201	U F1	0.0994	0.06657	F1	mg/Kg		67	70 - 130	17	35

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

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

Lab Sample ID: MB 880-23954/1-A
Matrix: Solid
Analysis Batch: 24009

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23954

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		04/21/22 15:22	04/22/22 11:28	1

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2212-1
SDG: 03E1558009

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

Lab Sample ID: MB 880-23954/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24009 — **Prep Batch: 23954**

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		04/21/22 15:22	04/22/22 11:28	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/21/22 15:22	04/22/22 11:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*120*		*70 - 130*	*04/21/22 15:22*	*04/22/22 11:28*	*1*
o-Terphenyl	*135*	*S1+*	*70 - 130*	*04/21/22 15:22*	*04/22/22 11:28*	*1*

Lab Sample ID: LCS 880-23954/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24009 — **Prep Batch: 23954**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	223.2	*-	mg/Kg		22	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	220.8	*-	mg/Kg		22	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*25*	*S1-*	*70 - 130*
o-Terphenyl	*19*	*S1-*	*70 - 130*

Lab Sample ID: LCSD 880-23954/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24009 — **Prep Batch: 23954**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	904.2	*1	mg/Kg		90	70 - 130	121	20
Diesel Range Organics (Over C10-C28)			1000	964.8	*1	mg/Kg		96	70 - 130	126	20

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

Lab Sample ID: 880-13949-A-1-E MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24009 — **Prep Batch: 23954**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1 *-	999	1021		mg/Kg		100	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U *1 *-	999	899.6		mg/Kg		90	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*96*		*70 - 130*
o-Terphenyl	*91*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2212-1
SDG: 03E1558009

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

Lab Sample ID: 880-13949-A-1-F MSD
Matrix: Solid
Analysis Batch: 24009

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 23954

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1 *-	999	1121		mg/Kg		111	70 - 130	9	20
Diesel Range Organics (Over C10-C28)	<49.9	U *1 *-	999	1081		mg/Kg		108	70 - 130	18	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*114*		*70 - 130*
o-Terphenyl	*109*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-23899/1-A
Matrix: Solid
Analysis Batch: 23976

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			04/21/22 23:39	1

Lab Sample ID: LCS 880-23899/2-A
Matrix: Solid
Analysis Batch: 23976

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	256.0		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-23899/3-A
Matrix: Solid
Analysis Batch: 23976

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	255.7		mg/Kg		102	90 - 110	0	20

Lab Sample ID: 890-2212-1 MS
Matrix: Solid
Analysis Batch: 23976

Client Sample ID: SS01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	5.18	F1	250	287.1	F1	mg/Kg		113	90 - 110		

Lab Sample ID: 890-2212-1 MSD
Matrix: Solid
Analysis Batch: 23976

Client Sample ID: SS01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	5.18	F1	250	272.1		mg/Kg		107	90 - 110	5	20

QC Association Summary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2212-1
SDG: 03E1558009

GC VOA

Analysis Batch: 23883

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2212-1	SS01	Total/NA	Solid	8021B	23940
MB 880-23898/5-A	Method Blank	Total/NA	Solid	8021B	23898
MB 880-23940/5-A	Method Blank	Total/NA	Solid	8021B	23940
LCS 880-23940/1-A	Lab Control Sample	Total/NA	Solid	8021B	23940
LCSD 880-23940/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	23940
890-2207-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	23940
890-2207-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	23940

Prep Batch: 23898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-23898/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 23940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2212-1	SS01	Total/NA	Solid	5035	
MB 880-23940/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-23940/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-23940/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2207-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
890-2207-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 24035

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2212-1	SS01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 23954

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2212-1	SS01	Total/NA	Solid	8015NM Prep	
MB 880-23954/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-23954/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-23954/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-13949-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-13949-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 24009

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2212-1	SS01	Total/NA	Solid	8015B NM	23954
MB 880-23954/1-A	Method Blank	Total/NA	Solid	8015B NM	23954
LCS 880-23954/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	23954
LCSD 880-23954/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	23954
880-13949-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	23954
880-13949-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	23954

HPLC/IC

Leach Batch: 23899

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2212-1	SS01	Soluble	Solid	DI Leach	
MB 880-23899/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-23899/2-A	Lab Control Sample	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2212-1
SDG: 03E1558009

HPLC/IC (Continued)

Leach Batch: 23899 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-23899/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2212-1 MS	SS01	Soluble	Solid	DI Leach	
890-2212-1 MSD	SS01	Soluble	Solid	DI Leach	

Analysis Batch: 23976

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2212-1	SS01	Soluble	Solid	300.0	23899
MB 880-23899/1-A	Method Blank	Soluble	Solid	300.0	23899
LCS 880-23899/2-A	Lab Control Sample	Soluble	Solid	300.0	23899
LCSD 880-23899/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	23899
890-2212-1 MS	SS01	Soluble	Solid	300.0	23899
890-2212-1 MSD	SS01	Soluble	Solid	300.0	23899

Lab Chronicle

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2212-1
SDG: 03E1558009

Client Sample ID: SS01

Date Collected: 04/19/22 13:35
Date Received: 04/19/22 16:26

Lab Sample ID: 890-2212-1

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			5.00 g	5 mL	23940	04/21/22 11:35	MR	XEN MID
Total/NA	Analysis	8021B		1			23883	04/22/22 04:07	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			24035	04/22/22 11:18	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	23954	04/21/22 15:22	DM	XEN MID
Total/NA	Analysis	8015B NM		1			24009	04/22/22 19:03	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	23899	04/21/22 09:33	CH	XEN MID
Soluble	Analysis	300.0		1			23976	04/22/22 00:05	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2212-1
SDG: 03E1558009

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	T104704400-21-22	06-30-22

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
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2212-1
SDG: 03E1558009

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN 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:

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

Sample Summary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2212-1
SDG: 03E1558009

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2212-1	SS01	Solid	04/19/22 13:35	04/19/22 16:26	0.5

Chain of Custody

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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:	Kalei Jennings	Bill to: (if different)	Adrian Baker
Company Name:	Ensolum LLC.	Company Name:	XTO Energy Inc.
Address:	705 W Wadley Ave. Suite 240	Address:	3104 E Greene Street
City, State ZIP:	Midland, TX 79705	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 Legg Battery	Turn Around	☐ Routine ☑ Rush
Project Number:	03E1558009	Due Date:	2 Day TAT
Project Location:	Eddy	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Alexis Castro		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	TNM 907
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

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	BTEX	TPH	Chlorides (Cl⁻)
SS01	S	04/14/22	1335	0.5'		1		X	X	X

890-2212 Chain of Custody

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2SO_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: NaSO$_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Comments

INC: NAPP2209943384
CC: 10804 71001

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		4.19.22 1620			
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2212-1
SDG Number: 03E1558009

Login Number: 2212
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	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: 890-2212-1
SDG Number: 03E1558009

Login Number: 2212
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 04/21/22 11:26 AM

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-2213-1
Laboratory Sample Delivery Group: 03E1558009
Client Project/Site: JRU LEGG BATTERY
Revision: 1

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

Attn: Kalei Jennings

Jkramer

Authorized for release by:
4/27/2022 1:03:21 PM

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

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Laboratory Job ID: 890-2213-1
SDG: 03E1558009

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2213-1
SDG: 03E1558009

Qualifiers

GC VOA

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

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 LEGG BATTERY

Job ID: 890-2213-1
SDG: 03E1558009

Job ID: 890-2213-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2213-1

REVISION

The report being provided is a revision of the original report sent on 4/22/2022. The report (revision 1) is being revised due to Per client email, TOTAL TPH missing on report..

Report revision history

Receipt
The sample was received on 4/19/2022 4:26 PM. Unless otherwise noted below, the sample 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 880-23940 and analytical batch 880-23883 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 laboratory control sample (LCS) associated with preparation batch 880-23954 and analytical batch 880-24009 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-23954 and analytical batch 880-24009 recovered outside control limits for the following analytes: <AffectedAnalytes>.

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 880-23899 and analytical batch 880-23976 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 LEGG BATTERY

Job ID: 890-2213-1
SDG: 03E1558009

Client Sample ID: SS02

Date Collected: 04/19/22 13:40
Date Received: 04/19/22 16:26
Sample Depth: 0.5

Lab Sample ID: 890-2213-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.0127**		0.00199		mg/Kg		04/21/22 11:35	04/22/22 04:28	1
Toluene	**0.00342**		0.00199		mg/Kg		04/21/22 11:35	04/22/22 04:28	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		04/21/22 11:35	04/22/22 04:28	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		04/21/22 11:35	04/22/22 04:28	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		04/21/22 11:35	04/22/22 04:28	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		04/21/22 11:35	04/22/22 04:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*04/21/22 11:35*	*04/22/22 04:28*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*04/21/22 11:35*	*04/22/22 04:28*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0161**		0.00398		mg/Kg			04/22/22 11:18	1

Method: 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			04/22/22 19:48	1

Method: 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		04/21/22 15:22	04/22/22 19:25	1
Diesel Range Organics (Over C10-C28)	<50.0	U *1 *-	50.0		mg/Kg		04/21/22 15:22	04/22/22 19:25	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/21/22 15:22	04/22/22 19:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*04/21/22 15:22*	*04/22/22 19:25*	*1*
o-Terphenyl	*106*		*70 - 130*	*04/21/22 15:22*	*04/22/22 19:25*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.99	U	4.99		mg/Kg			04/22/22 00:32	1

Surrogate Summary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2213-1
SDG: 03E1558009

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)
890-2207-A-1-A MS	Matrix Spike	106	100
890-2207-A-1-B MSD	Matrix Spike Duplicate	107	102
890-2213-1	SS02	104	102
LCS 880-23940/1-A	Lab Control Sample	106	103
LCSD 880-23940/2-A	Lab Control Sample Dup	104	101
MB 880-23898/5-A	Method Blank	101	97
MB 880-23940/5-A	Method Blank	99	91

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-13949-A-1-E MS	Matrix Spike	96	91
880-13949-A-1-F MSD	Matrix Spike Duplicate	114	109
890-2213-1	SS02	97	106
LCS 880-23954/2-A	Lab Control Sample	25 S1-	19 S1-
LCSD 880-23954/3-A	Lab Control Sample Dup	109	109
MB 880-23954/1-A	Method Blank	120	135 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2213-1
SDG: 03E1558009

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-23898/5-A
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23898

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/21/22 09:32	04/21/22 11:41	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/21/22 09:32	04/21/22 11:41	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/21/22 09:32	04/21/22 11:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/21/22 09:32	04/21/22 11:41	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/21/22 09:32	04/21/22 11:41	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/21/22 09:32	04/21/22 11:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*04/21/22 09:32*	*04/21/22 11:41*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*04/21/22 09:32*	*04/21/22 11:41*	*1*

Lab Sample ID: MB 880-23940/5-A
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23940

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/21/22 11:35	04/21/22 22:17	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/21/22 11:35	04/21/22 22:17	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/21/22 11:35	04/21/22 22:17	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/21/22 11:35	04/21/22 22:17	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/21/22 11:35	04/21/22 22:17	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/21/22 11:35	04/21/22 22:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*04/21/22 11:35*	*04/21/22 22:17*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*04/21/22 11:35*	*04/21/22 22:17*	*1*

Lab Sample ID: LCS 880-23940/1-A
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23940

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1005		mg/Kg		100	70 - 130		
Toluene			0.100	0.09886		mg/Kg		99	70 - 130		
Ethylbenzene			0.100	0.09908		mg/Kg		99	70 - 130		
m-Xylene & p-Xylene			0.200	0.2021		mg/Kg		101	70 - 130		
o-Xylene			0.100	0.1023		mg/Kg		102	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 880-23940/2-A
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 23940

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09617		mg/Kg		96	70 - 130	4	35

QC Sample Results

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2213-1
SDG: 03E1558009

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

Lab Sample ID: LCSD 880-23940/2-A
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 23940

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.09442		mg/Kg		94	70 - 130	5	35
Ethylbenzene			0.100	0.09448		mg/Kg		94	70 - 130	5	35
m-Xylene & p-Xylene			0.200	0.1923		mg/Kg		96	70 - 130	5	35
o-Xylene			0.100	0.09722		mg/Kg		97	70 - 130	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 890-2207-A-1-A MS
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 23940

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U	0.101	0.1025		mg/Kg		102	70 - 130
Toluene	<0.00201	U	0.101	0.09214		mg/Kg		91	70 - 130
Ethylbenzene	<0.00201	U F2 F1	0.101	0.07746		mg/Kg		77	70 - 130
m-Xylene & p-Xylene	<0.00402	U F1	0.202	0.1606		mg/Kg		80	70 - 130
o-Xylene	<0.00201	U F1	0.101	0.07856		mg/Kg		78	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 890-2207-A-1-B MSD
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 23940

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0994	0.09413		mg/Kg		95	70 - 130	9	35
Toluene	<0.00201	U	0.0994	0.08168		mg/Kg		82	70 - 130	12	35
Ethylbenzene	<0.00201	U F2 F1	0.0994	0.03017	F2 F1	mg/Kg		30	70 - 130	88	35
m-Xylene & p-Xylene	<0.00402	U F1	0.199	0.1354	F1	mg/Kg		68	70 - 130	17	35
o-Xylene	<0.00201	U F1	0.0994	0.06657	F1	mg/Kg		67	70 - 130	17	35

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

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

Lab Sample ID: MB 880-23954/1-A
Matrix: Solid
Analysis Batch: 24009

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23954

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		04/21/22 15:22	04/22/22 11:28	1

QC Sample Results

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2213-1
SDG: 03E1558009

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

Lab Sample ID: MB 880-23954/1-A
Matrix: Solid
Analysis Batch: 24009

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23954

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		04/21/22 15:22	04/22/22 11:28	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/21/22 15:22	04/22/22 11:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*120*		*70 - 130*	*04/21/22 15:22*	*04/22/22 11:28*	*1*
o-Terphenyl	*135*	*S1+*	*70 - 130*	*04/21/22 15:22*	*04/22/22 11:28*	*1*

Lab Sample ID: LCS 880-23954/2-A
Matrix: Solid
Analysis Batch: 24009

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23954

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	223.2	*-	mg/Kg		22	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	220.8	*-	mg/Kg		22	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*25*	*S1-*	*70 - 130*
o-Terphenyl	*19*	*S1-*	*70 - 130*

Lab Sample ID: LCSD 880-23954/3-A
Matrix: Solid
Analysis Batch: 24009

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 23954

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	904.2	*1	mg/Kg		90	70 - 130	121	20
Diesel Range Organics (Over C10-C28)			1000	964.8	*1	mg/Kg		96	70 - 130	126	20

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

Lab Sample ID: 880-13949-A-1-E MS
Matrix: Solid
Analysis Batch: 24009

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 23954

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1 *-	999	1021		mg/Kg		100	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U *1 *-	999	899.6		mg/Kg		90	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*96*		*70 - 130*
o-Terphenyl	*91*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2213-1
SDG: 03E1558009

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

Lab Sample ID: 880-13949-A-1-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24009 — **Prep Batch: 23954**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1 *-	999	1121		mg/Kg		111	70 - 130	9	20
Diesel Range Organics (Over C10-C28)	<49.9	U *1 *-	999	1081		mg/Kg		108	70 - 130	18	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*114*		*70 - 130*
o-Terphenyl	*109*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-23899/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 23976

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			04/21/22 23:39	1

Lab Sample ID: LCS 880-23899/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 23976

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	256.0		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-23899/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 23976

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	255.7		mg/Kg		102	90 - 110	0	20

Lab Sample ID: 890-2212-A-1-D MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 23976

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	5.18	F1	250	287.1	F1	mg/Kg		113	90 - 110		

Lab Sample ID: 890-2212-A-1-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 23976

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	5.18	F1	250	272.1		mg/Kg		107	90 - 110	5	20

QC Association Summary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2213-1
SDG: 03E1558009

GC VOA

Analysis Batch: 23883

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2213-1	SS02	Total/NA	Solid	8021B	23940
MB 880-23898/5-A	Method Blank	Total/NA	Solid	8021B	23898
MB 880-23940/5-A	Method Blank	Total/NA	Solid	8021B	23940
LCS 880-23940/1-A	Lab Control Sample	Total/NA	Solid	8021B	23940
LCSD 880-23940/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	23940
890-2207-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	23940
890-2207-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	23940

Prep Batch: 23898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-23898/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 23940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2213-1	SS02	Total/NA	Solid	5035	
MB 880-23940/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-23940/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-23940/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2207-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
890-2207-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 24036

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2213-1	SS02	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 23954

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2213-1	SS02	Total/NA	Solid	8015NM Prep	
MB 880-23954/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-23954/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-23954/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-13949-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-13949-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 24009

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2213-1	SS02	Total/NA	Solid	8015B NM	23954
MB 880-23954/1-A	Method Blank	Total/NA	Solid	8015B NM	23954
LCS 880-23954/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	23954
LCSD 880-23954/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	23954
880-13949-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	23954
880-13949-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	23954

Analysis Batch: 24087

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2213-1	SS02	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2213-1
SDG: 03E1558009

HPLC/IC

Leach Batch: 23899

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2213-1	SS02	Soluble	Solid	DI Leach	
MB 880-23899/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-23899/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-23899/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2212-A-1-D MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2212-A-1-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 23976

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2213-1	SS02	Soluble	Solid	300.0	23899
MB 880-23899/1-A	Method Blank	Soluble	Solid	300.0	23899
LCS 880-23899/2-A	Lab Control Sample	Soluble	Solid	300.0	23899
LCSD 880-23899/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	23899
890-2212-A-1-D MS	Matrix Spike	Soluble	Solid	300.0	23899
890-2212-A-1-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	23899

Lab Chronicle

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2213-1
SDG: 03E1558009

Client Sample ID: SS02
Date Collected: 04/19/22 13:40
Date Received: 04/19/22 16:26

Lab Sample ID: 890-2213-1
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	23940	04/21/22 11:35	MR	XEN MID
Total/NA	Analysis	8021B		1			23883	04/22/22 04:28	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			24036	04/22/22 11:18	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			24087	04/22/22 19:48	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	23954	04/21/22 15:22	DM	XEN MID
Total/NA	Analysis	8015B NM		1			24009	04/22/22 19:25	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	23899	04/21/22 09:33	CH	XEN MID
Soluble	Analysis	300.0		1			23976	04/22/22 00:32	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2213-1
SDG: 03E1558009

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	T104704400-21-22	06-30-22

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 LEGG BATTERY

Job ID: 890-2213-1
SDG: 03E1558009

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN 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:

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

Sample Summary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2213-1
SDG: 03E1558009

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2213-1	SS02	Solid	04/19/22 13:40	04/19/22 16:26	0.5

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Kalei Jennings	Bill to: (if different)	Adrian Baker
Company Name:	Ensolum LLC.	Company Name:	XTO Energy Inc.
Address:	705 W Wadley Ave Suite 240	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	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 Levy Battery	Turn Around	
Project Number:	03E1558009	☐ Routine ☑ Rush	
Project Location:	Eddy	Due Date:	2 Day TAT
Sampler's Name:	Alexis Castro	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:	TM-027	
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	Pres. Code	BTEX	TPH	Chlorides (Cl-)
SS02	S	04/19/22	1340	0.5'		1		X	X	X

ANALYSIS REQUEST

890-2213 Chain of Custody

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2SO_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: NaSO$_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Comments

INC: NAPP2204943884
CC: 10800470001

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		4-19-22 1626	4		
3			6		
5					

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2213-1
SDG Number: 03E1558009

Login Number: 2213
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	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: 890-2213-1
SDG Number: 03E1558009

Login Number: 2213
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 04/21/22 11:26 AM

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-2214-1
Laboratory Sample Delivery Group: 03E1558009
Client Project/Site: JRU LEGG BATTERY

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

Attn: Kalei Jennings

JKramer

Authorized for release by:
4/22/2022 8:03:16 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.

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Laboratory Job ID: 890-2214-1
SDG: 03E1558009

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2214-1
SDG: 03E1558009

Qualifiers

GC VOA

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

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 LEGG BATTERY

Job ID: 890-2214-1
SDG: 03E1558009

Job ID: 890-2214-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2214-1

Receipt
The sample was received on 4/19/2022 4:26 PM. Unless otherwise noted below, the sample 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 880-23940 and analytical batch 880-23883 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 laboratory control sample (LCS) associated with preparation batch 880-23954 and analytical batch 880-24009 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-23954 and analytical batch 880-24009 recovered outside control limits for the following analytes: <AffectedAnalytes>.

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 880-23899 and analytical batch 880-23976 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 LEGG BATTERY

Job ID: 890-2214-1
SDG: 03E1558009

Client Sample ID: SS03

Date Collected: 04/19/22 13:45
Date Received: 04/19/22 16:26
Sample Depth: 0.5

Lab Sample ID: 890-2214-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.0143**		0.00201		mg/Kg		04/21/22 11:35	04/22/22 04:48	1
Toluene	**0.00633**		0.00201		mg/Kg		04/21/22 11:35	04/22/22 04:48	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		04/21/22 11:35	04/22/22 04:48	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		04/21/22 11:35	04/22/22 04:48	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		04/21/22 11:35	04/22/22 04:48	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		04/21/22 11:35	04/22/22 04:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*04/21/22 11:35*	*04/22/22 04:48*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*04/21/22 11:35*	*04/22/22 04:48*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0206**		0.00402		mg/Kg			04/22/22 11:18	1

Method: 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			04/22/22 20:56	1

Method: 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		04/21/22 15:22	04/22/22 19:47	1
Diesel Range Organics (Over C10-C28)	<50.0	U *1 *-	50.0		mg/Kg		04/21/22 15:22	04/22/22 19:47	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/21/22 15:22	04/22/22 19:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*121*		*70 - 130*	*04/21/22 15:22*	*04/22/22 19:47*	*1*
o-Terphenyl	*125*		*70 - 130*	*04/21/22 15:22*	*04/22/22 19:47*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**117**		4.98		mg/Kg			04/22/22 00:41	1

Surrogate Summary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2214-1
SDG: 03E1558009

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)										
890-2207-A-1-A MS	Matrix Spike	106	100										
890-2207-A-1-B MSD	Matrix Spike Duplicate	107	102										
890-2214-1	SS03	111	106										
LCS 880-23940/1-A	Lab Control Sample	106	103										
LCSD 880-23940/2-A	Lab Control Sample Dup	104	101										
MB 880-23898/5-A	Method Blank	101	97										
MB 880-23940/5-A	Method Blank	99	91										

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)											
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)										
880-13949-A-1-E MS	Matrix Spike	96	91										
880-13949-A-1-F MSD	Matrix Spike Duplicate	114	109										
890-2214-1	SS03	121	125										
LCS 880-23954/2-A	Lab Control Sample	25 S1-	19 S1-										
LCSD 880-23954/3-A	Lab Control Sample Dup	109	109										
MB 880-23954/1-A	Method Blank	120	135 S1+										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2214-1
SDG: 03E1558009

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-23898/5-A
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23898

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/21/22 09:32	04/21/22 11:41	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/21/22 09:32	04/21/22 11:41	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/21/22 09:32	04/21/22 11:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/21/22 09:32	04/21/22 11:41	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/21/22 09:32	04/21/22 11:41	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/21/22 09:32	04/21/22 11:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*04/21/22 09:32*	*04/21/22 11:41*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*04/21/22 09:32*	*04/21/22 11:41*	*1*

Lab Sample ID: MB 880-23940/5-A
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23940

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/21/22 11:35	04/21/22 22:17	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/21/22 11:35	04/21/22 22:17	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/21/22 11:35	04/21/22 22:17	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/21/22 11:35	04/21/22 22:17	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/21/22 11:35	04/21/22 22:17	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/21/22 11:35	04/21/22 22:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*04/21/22 11:35*	*04/21/22 22:17*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*04/21/22 11:35*	*04/21/22 22:17*	*1*

Lab Sample ID: LCS 880-23940/1-A
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23940

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1005		mg/Kg		100	70 - 130		
Toluene			0.100	0.09886		mg/Kg		99	70 - 130		
Ethylbenzene			0.100	0.09908		mg/Kg		99	70 - 130		
m-Xylene & p-Xylene			0.200	0.2021		mg/Kg		101	70 - 130		
o-Xylene			0.100	0.1023		mg/Kg		102	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 880-23940/2-A
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 23940

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09617		mg/Kg		96	70 - 130	4	35

QC Sample Results

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2214-1
SDG: 03E1558009

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

Lab Sample ID: LCSD 880-23940/2-A
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 23940

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.09442		mg/Kg		94	70 - 130	5	35
Ethylbenzene			0.100	0.09448		mg/Kg		94	70 - 130	5	35
m-Xylene & p-Xylene			0.200	0.1923		mg/Kg		96	70 - 130	5	35
o-Xylene			0.100	0.09722		mg/Kg		97	70 - 130	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 890-2207-A-1-A MS
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 23940

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U	0.101	0.1025		mg/Kg		102	70 - 130
Toluene	<0.00201	U	0.101	0.09214		mg/Kg		91	70 - 130
Ethylbenzene	<0.00201	U F2 F1	0.101	0.07746		mg/Kg		77	70 - 130
m-Xylene & p-Xylene	<0.00402	U F1	0.202	0.1606		mg/Kg		80	70 - 130
o-Xylene	<0.00201	U F1	0.101	0.07856		mg/Kg		78	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 890-2207-A-1-B MSD
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 23940

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0994	0.09413		mg/Kg		95	70 - 130	9	35
Toluene	<0.00201	U	0.0994	0.08168		mg/Kg		82	70 - 130	12	35
Ethylbenzene	<0.00201	U F2 F1	0.0994	0.03017	F2 F1	mg/Kg		30	70 - 130	88	35
m-Xylene & p-Xylene	<0.00402	U F1	0.199	0.1354	F1	mg/Kg		68	70 - 130	17	35
o-Xylene	<0.00201	U F1	0.0994	0.06657	F1	mg/Kg		67	70 - 130	17	35

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

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

Lab Sample ID: MB 880-23954/1-A
Matrix: Solid
Analysis Batch: 24009

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23954

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		04/21/22 15:22	04/22/22 11:28	1

QC Sample Results

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2214-1
SDG: 03E1558009

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

Lab Sample ID: MB 880-23954/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24009 — **Prep Batch: 23954**

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		04/21/22 15:22	04/22/22 11:28	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/21/22 15:22	04/22/22 11:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*120*		*70 - 130*	*04/21/22 15:22*	*04/22/22 11:28*	*1*
o-Terphenyl	*135*	*S1+*	*70 - 130*	*04/21/22 15:22*	*04/22/22 11:28*	*1*

Lab Sample ID: LCS 880-23954/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24009 — **Prep Batch: 23954**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	223.2	*-	mg/Kg		22	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	220.8	*-	mg/Kg		22	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*25*	*S1-*	*70 - 130*
o-Terphenyl	*19*	*S1-*	*70 - 130*

Lab Sample ID: LCSD 880-23954/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24009 — **Prep Batch: 23954**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	904.2	*1	mg/Kg		90	70 - 130	121	20
Diesel Range Organics (Over C10-C28)			1000	964.8	*1	mg/Kg		96	70 - 130	126	20

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

Lab Sample ID: 880-13949-A-1-E MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24009 — **Prep Batch: 23954**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1 *-	999	1021		mg/Kg		100	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U *1 *-	999	899.6		mg/Kg		90	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*96*		*70 - 130*
o-Terphenyl	*91*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2214-1
SDG: 03E1558009

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

Lab Sample ID: 880-13949-A-1-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24009 — **Prep Batch: 23954**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1 *-	999	1121		mg/Kg		111	70 - 130	9	20
Diesel Range Organics (Over C10-C28)	<49.9	U *1 *-	999	1081		mg/Kg		108	70 - 130	18	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*114*		*70 - 130*
o-Terphenyl	*109*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-23899/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 23976

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			04/21/22 23:39	1

Lab Sample ID: LCS 880-23899/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 23976

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	256.0		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-23899/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 23976

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	255.7		mg/Kg		102	90 - 110	0	20

Lab Sample ID: 890-2212-A-1-D MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 23976

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	5.18	F1	250	287.1	F1	mg/Kg		113	90 - 110		

Lab Sample ID: 890-2212-A-1-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 23976

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	5.18	F1	250	272.1		mg/Kg		107	90 - 110	5	20

QC Association Summary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2214-1
SDG: 03E1558009

GC VOA

Analysis Batch: 23883

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2214-1	SS03	Total/NA	Solid	8021B	23940
MB 880-23898/5-A	Method Blank	Total/NA	Solid	8021B	23898
MB 880-23940/5-A	Method Blank	Total/NA	Solid	8021B	23940
LCS 880-23940/1-A	Lab Control Sample	Total/NA	Solid	8021B	23940
LCSD 880-23940/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	23940
890-2207-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	23940
890-2207-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	23940

Prep Batch: 23898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-23898/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 23940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2214-1	SS03	Total/NA	Solid	5035	
MB 880-23940/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-23940/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-23940/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2207-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
890-2207-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 24037

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2214-1	SS03	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 23954

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2214-1	SS03	Total/NA	Solid	8015NM Prep	
MB 880-23954/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-23954/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-23954/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-13949-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-13949-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 24009

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2214-1	SS03	Total/NA	Solid	8015B NM	23954
MB 880-23954/1-A	Method Blank	Total/NA	Solid	8015B NM	23954
LCS 880-23954/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	23954
LCSD 880-23954/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	23954
880-13949-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	23954
880-13949-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	23954

Analysis Batch: 24088

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2214-1	SS03	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2214-1
SDG: 03E1558009

HPLC/IC

Leach Batch: 23899

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2214-1	SS03	Soluble	Solid	DI Leach	
MB 880-23899/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-23899/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-23899/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2212-A-1-D MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2212-A-1-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 23976

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2214-1	SS03	Soluble	Solid	300.0	23899
MB 880-23899/1-A	Method Blank	Soluble	Solid	300.0	23899
LCS 880-23899/2-A	Lab Control Sample	Soluble	Solid	300.0	23899
LCSD 880-23899/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	23899
890-2212-A-1-D MS	Matrix Spike	Soluble	Solid	300.0	23899
890-2212-A-1-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	23899

Lab Chronicle

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2214-1
SDG: 03E1558009

Client Sample ID: SS03
Date Collected: 04/19/22 13:45
Date Received: 04/19/22 16:26

Lab Sample ID: 890-2214-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	23940	04/21/22 11:35	MR	XEN MID
Total/NA	Analysis	8021B		1			23883	04/22/22 04:48	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			24037	04/22/22 11:18	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			24088	04/22/22 20:56	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	23954	04/21/22 15:22	DM	XEN MID
Total/NA	Analysis	8015B NM		1			24009	04/22/22 19:47	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	23899	04/21/22 09:33	CH	XEN MID
Soluble	Analysis	300.0		1			23976	04/22/22 00:41	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2214-1
SDG: 03E1558009

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	T104704400-21-22	06-30-22

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 LEGG BATTERY

Job ID: 890-2214-1
SDG: 03E1558009

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN 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:

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

Sample Summary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2214-1
SDG: 03E1558009

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2214-1	SS03	Solid	04/19/22 13:45	04/19/22 16:26	0.5

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Kalei Jennings	Bill to: (if different)	Adrian Baker
Company Name:	Ensolum LLC	Company Name:	XTO Energy Inc.
Address:	705 W Wadley Ave Suite 210	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	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 Legg Battery	Turn Around	☐ Routine ☑ Rush
Project Number:	03E1558009	Due Date:	2 day TAT
Project Location:	Eddy	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Alexis Castro		
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

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: BTEX	TPH	Chlorides (Cl-)	Sample Comments
SS03	S	04/14/22	1345	0.5'		1		X	X	X	INC: NAPP2204943584 CC: 10804710 01

AC

890-2214 Chain of Custody

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		4.19.22 1624	4		
3			6		
5					

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2214-1
SDG Number: 03E1558009

Login Number: 2214
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	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: 890-2214-1
SDG Number: 03E1558009

Login Number: 2214
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 04/21/22 11:26 AM

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-2215-1
Laboratory Sample Delivery Group: 03E1558009
Client Project/Site: JRU LEGG BATTERY

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

Attn: Kalei Jennings

JKramer

Authorized for release by:
4/22/2022 8:03:16 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.

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Laboratory Job ID: 890-2215-1
SDG: 03E1558009

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2215-1
SDG: 03E1558009

Qualifiers

GC VOA

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

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 LEGG BATTERY

Job ID: 890-2215-1
SDG: 03E1558009

Job ID: 890-2215-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2215-1

Receipt
The sample was received on 4/19/2022 4:26 PM. Unless otherwise noted below, the sample 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 880-23940 and analytical batch 880-23883 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 laboratory control sample (LCS) associated with preparation batch 880-23954 and analytical batch 880-24009 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-23954 and analytical batch 880-24009 recovered outside control limits for the following analytes: <AffectedAnalytes>.

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 880-23899 and analytical batch 880-23976 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 LEGG BATTERY

Job ID: 890-2215-1
SDG: 03E1558009

Client Sample ID: SS04

Date Collected: 04/19/22 13:50
Date Received: 04/19/22 16:26
Sample Depth: 0.5

Lab Sample ID: 890-2215-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.00586**		0.00199		mg/Kg		04/21/22 11:35	04/22/22 05:09	1
Toluene	**0.00437**		0.00199		mg/Kg		04/21/22 11:35	04/22/22 05:09	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		04/21/22 11:35	04/22/22 05:09	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		04/21/22 11:35	04/22/22 05:09	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		04/21/22 11:35	04/22/22 05:09	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		04/21/22 11:35	04/22/22 05:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*04/21/22 11:35*	*04/22/22 05:09*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*04/21/22 11:35*	*04/22/22 05:09*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0102**		0.00398		mg/Kg			04/22/22 11:18	1

Method: 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			04/22/22 20:56	1

Method: 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		04/21/22 15:22	04/22/22 20:08	1
Diesel Range Organics (Over C10-C28)	<49.9	U *1 *-	49.9		mg/Kg		04/21/22 15:22	04/22/22 20:08	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		04/21/22 15:22	04/22/22 20:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*04/21/22 15:22*	*04/22/22 20:08*	*1*
o-Terphenyl	*109*		*70 - 130*	*04/21/22 15:22*	*04/22/22 20:08*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**27.8**		4.95		mg/Kg			04/22/22 00:50	1

Surrogate Summary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2215-1
SDG: 03E1558009

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)
890-2207-A-1-A MS	Matrix Spike	106	100
890-2207-A-1-B MSD	Matrix Spike Duplicate	107	102
890-2215-1	SS04	108	101
LCS 880-23940/1-A	Lab Control Sample	106	103
LCSD 880-23940/2-A	Lab Control Sample Dup	104	101
MB 880-23898/5-A	Method Blank	101	97
MB 880-23940/5-A	Method Blank	99	91

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-13949-A-1-E MS	Matrix Spike	96	91
880-13949-A-1-F MSD	Matrix Spike Duplicate	114	109
890-2215-1	SS04	104	109
LCS 880-23954/2-A	Lab Control Sample	25 S1-	19 S1-
LCSD 880-23954/3-A	Lab Control Sample Dup	109	109
MB 880-23954/1-A	Method Blank	120	135 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2215-1
SDG: 03E1558009

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-23898/5-A
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23898

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/21/22 09:32	04/21/22 11:41	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/21/22 09:32	04/21/22 11:41	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/21/22 09:32	04/21/22 11:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/21/22 09:32	04/21/22 11:41	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/21/22 09:32	04/21/22 11:41	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/21/22 09:32	04/21/22 11:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*04/21/22 09:32*	*04/21/22 11:41*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*04/21/22 09:32*	*04/21/22 11:41*	*1*

Lab Sample ID: MB 880-23940/5-A
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23940

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/21/22 11:35	04/21/22 22:17	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/21/22 11:35	04/21/22 22:17	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/21/22 11:35	04/21/22 22:17	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/21/22 11:35	04/21/22 22:17	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/21/22 11:35	04/21/22 22:17	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/21/22 11:35	04/21/22 22:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*04/21/22 11:35*	*04/21/22 22:17*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*04/21/22 11:35*	*04/21/22 22:17*	*1*

Lab Sample ID: LCS 880-23940/1-A
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23940

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1005		mg/Kg		100	70 - 130		
Toluene			0.100	0.09886		mg/Kg		99	70 - 130		
Ethylbenzene			0.100	0.09908		mg/Kg		99	70 - 130		
m-Xylene & p-Xylene			0.200	0.2021		mg/Kg		101	70 - 130		
o-Xylene			0.100	0.1023		mg/Kg		102	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 880-23940/2-A
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 23940

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09617		mg/Kg		96	70 - 130	4	35

QC Sample Results

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2215-1
SDG: 03E1558009

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

Lab Sample ID: LCSD 880-23940/2-A
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 23940

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.09442		mg/Kg		94	70 - 130	5	35
Ethylbenzene			0.100	0.09448		mg/Kg		94	70 - 130	5	35
m-Xylene & p-Xylene			0.200	0.1923		mg/Kg		96	70 - 130	5	35
o-Xylene			0.100	0.09722		mg/Kg		97	70 - 130	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 890-2207-A-1-A MS
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 23940

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U	0.101	0.1025		mg/Kg		102	70 - 130
Toluene	<0.00201	U	0.101	0.09214		mg/Kg		91	70 - 130
Ethylbenzene	<0.00201	U F2 F1	0.101	0.07746		mg/Kg		77	70 - 130
m-Xylene & p-Xylene	<0.00402	U F1	0.202	0.1606		mg/Kg		80	70 - 130
o-Xylene	<0.00201	U F1	0.101	0.07856		mg/Kg		78	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 890-2207-A-1-B MSD
Matrix: Solid
Analysis Batch: 23883

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 23940

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0994	0.09413		mg/Kg		95	70 - 130	9	35
Toluene	<0.00201	U	0.0994	0.08168		mg/Kg		82	70 - 130	12	35
Ethylbenzene	<0.00201	U F2 F1	0.0994	0.03017	F2 F1	mg/Kg		30	70 - 130	88	35
m-Xylene & p-Xylene	<0.00402	U F1	0.199	0.1354	F1	mg/Kg		68	70 - 130	17	35
o-Xylene	<0.00201	U F1	0.0994	0.06657	F1	mg/Kg		67	70 - 130	17	35

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

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

Lab Sample ID: MB 880-23954/1-A
Matrix: Solid
Analysis Batch: 24009

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23954

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		04/21/22 15:22	04/22/22 11:28	1

QC Sample Results

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2215-1
SDG: 03E1558009

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

Lab Sample ID: MB 880-23954/1-A
Matrix: Solid
Analysis Batch: 24009

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23954

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		04/21/22 15:22	04/22/22 11:28	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/21/22 15:22	04/22/22 11:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*120*		*70 - 130*	*04/21/22 15:22*	*04/22/22 11:28*	*1*
o-Terphenyl	*135*	*S1+*	*70 - 130*	*04/21/22 15:22*	*04/22/22 11:28*	*1*

Lab Sample ID: LCS 880-23954/2-A
Matrix: Solid
Analysis Batch: 24009

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23954

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	223.2	*-	mg/Kg		22	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	220.8	*-	mg/Kg		22	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*25*	*S1-*	*70 - 130*
o-Terphenyl	*19*	*S1-*	*70 - 130*

Lab Sample ID: LCSD 880-23954/3-A
Matrix: Solid
Analysis Batch: 24009

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 23954

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	904.2	*1	mg/Kg		90	70 - 130	121	20
Diesel Range Organics (Over C10-C28)			1000	964.8	*1	mg/Kg		96	70 - 130	126	20

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

Lab Sample ID: 880-13949-A-1-E MS
Matrix: Solid
Analysis Batch: 24009

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 23954

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1 *-	999	1021		mg/Kg		100	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U *1 *-	999	899.6		mg/Kg		90	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*96*		*70 - 130*
o-Terphenyl	*91*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2215-1
SDG: 03E1558009

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

Lab Sample ID: 880-13949-A-1-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24009 — **Prep Batch: 23954**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1 *-	999	1121		mg/Kg		111	70 - 130	9	20
Diesel Range Organics (Over C10-C28)	<49.9	U *1 *-	999	1081		mg/Kg		108	70 - 130	18	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*114*		*70 - 130*
o-Terphenyl	*109*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-23899/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 23976

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			04/21/22 23:39	1

Lab Sample ID: LCS 880-23899/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 23976

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	256.0		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-23899/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 23976

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	255.7		mg/Kg		102	90 - 110	0	20

Lab Sample ID: 890-2212-A-1-D MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 23976

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	5.18	F1	250	287.1	F1	mg/Kg		113	90 - 110		

Lab Sample ID: 890-2212-A-1-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 23976

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	5.18	F1	250	272.1		mg/Kg		107	90 - 110	5	20

QC Association Summary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2215-1
SDG: 03E1558009

GC VOA

Analysis Batch: 23883

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2215-1	SS04	Total/NA	Solid	8021B	23940
MB 880-23898/5-A	Method Blank	Total/NA	Solid	8021B	23898
MB 880-23940/5-A	Method Blank	Total/NA	Solid	8021B	23940
LCS 880-23940/1-A	Lab Control Sample	Total/NA	Solid	8021B	23940
LCSD 880-23940/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	23940
890-2207-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	23940
890-2207-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	23940

Prep Batch: 23898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-23898/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 23940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2215-1	SS04	Total/NA	Solid	5035	
MB 880-23940/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-23940/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-23940/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2207-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
890-2207-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 24038

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2215-1	SS04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 23954

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2215-1	SS04	Total/NA	Solid	8015NM Prep	
MB 880-23954/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-23954/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-23954/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-13949-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-13949-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 24009

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2215-1	SS04	Total/NA	Solid	8015B NM	23954
MB 880-23954/1-A	Method Blank	Total/NA	Solid	8015B NM	23954
LCS 880-23954/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	23954
LCSD 880-23954/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	23954
880-13949-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	23954
880-13949-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	23954

Analysis Batch: 24089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2215-1	SS04	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2215-1
SDG: 03E1558009

HPLC/IC

Leach Batch: 23899

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2215-1	SS04	Soluble	Solid	DI Leach	
MB 880-23899/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-23899/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-23899/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2212-A-1-D MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2212-A-1-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 23976

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2215-1	SS04	Soluble	Solid	300.0	23899
MB 880-23899/1-A	Method Blank	Soluble	Solid	300.0	23899
LCS 880-23899/2-A	Lab Control Sample	Soluble	Solid	300.0	23899
LCSD 880-23899/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	23899
890-2212-A-1-D MS	Matrix Spike	Soluble	Solid	300.0	23899
890-2212-A-1-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	23899

Lab Chronicle

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2215-1
SDG: 03E1558009

Client Sample ID: SS04
Date Collected: 04/19/22 13:50
Date Received: 04/19/22 16:26

Lab Sample ID: 890-2215-1
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	23940	04/21/22 11:35	MR	XEN MID
Total/NA	Analysis	8021B		1			23883	04/22/22 05:09	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			24038	04/22/22 11:18	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			24089	04/22/22 20:56	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	23954	04/21/22 15:22	DM	XEN MID
Total/NA	Analysis	8015B NM		1			24009	04/22/22 20:08	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	23899	04/21/22 09:33	CH	XEN MID
Soluble	Analysis	300.0		1			23976	04/22/22 00:50	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2215-1
SDG: 03E1558009

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	T104704400-21-22	06-30-22

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 LEGG BATTERY

Job ID: 890-2215-1
SDG: 03E1558009

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN 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:

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

Sample Summary

Client: Ensolum
Project/Site: JRU LEGG BATTERY

Job ID: 890-2215-1
SDG: 03E1558009

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2215-1	SS04	Solid	04/19/22 13:50	04/19/22 16:26	0.5

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Kalei Jennings	Bill to: (if different)	Adrian Baker
Company Name:	Ensolum LLC.	Company Name:	XTO Energy Inc.
Address:	705 W Wadley Ave. Suite 210	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	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 Loop Battery	Turn Around	☐ Routine ☑ Rush
Project Number:	03E1558009	Due Date:	2DAY TAT
Project Location:	Eddy	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Alexis Castro		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	NM_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

ANALYSIS REQUEST

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: BTEX	TPH	Cl	Sample Comments
SS04	S	04/14/22	1350	0.5'		1		X	X	X	INC: NAPP2204943884
											CC: 10809710021

890-2215 Chain of Custody

AC

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			4.19.22 1620	2		
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2215-1
SDG Number: 03E1558009

Login Number: 2215
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	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: 890-2215-1
SDG Number: 03E1558009

Login Number: 2215
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 04/21/22 11:26 AM

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-2308-1
Laboratory Sample Delivery Group: 03E1558009
Client Project/Site: JRU LEGGS BATTERY

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

Attn: Kalei Jennings

JKramer

Authorized for release by:
5/18/2022 12:23:06 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.

Client: Ensolum
Project/Site: JRU LEGGS BATTERY

Laboratory Job ID: 890-2308-1
SDG: 03E1558009

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: JRU LEGGS BATTERY

Job ID: 890-2308-1
SDG: 03E1558009

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
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 LEGGS BATTERY

Job ID: 890-2308-1
SDG: 03E1558009

Job ID: 890-2308-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2308-1

Receipt
The samples were received on 5/12/2022 2:26 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 21.2°C

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

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-25611 and analytical batch 880-25727 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 LEGGS BATTERY

Job ID: 890-2308-1
SDG: 03E1558009

Client Sample ID: SS01A

Lab Sample ID: 890-2308-1
Matrix: Solid
Date Collected: 05/12/22 12:45
Date Received: 05/12/22 14:26
Sample Depth: 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:04	05/16/22 22:43	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:04	05/16/22 22:43	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:04	05/16/22 22:43	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/16/22 13:04	05/16/22 22:43	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:04	05/16/22 22:43	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/16/22 13:04	05/16/22 22:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*05/16/22 13:04*	*05/16/22 22:43*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*05/16/22 13:04*	*05/16/22 22:43*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/17/22 11:08	1

Method: 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			05/17/22 09:43	1

Method: 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		05/16/22 08:41	05/16/22 13:51	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/16/22 08:41	05/16/22 13:51	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/16/22 08:41	05/16/22 13:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*05/16/22 08:41*	*05/16/22 13:51*	*1*
o-Terphenyl	*98*		*70 - 130*	*05/16/22 08:41*	*05/16/22 13:51*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.05	U	5.05		mg/Kg			05/17/22 20:37	1

Client Sample ID: SS02A

Lab Sample ID: 890-2308-2
Matrix: Solid
Date Collected: 05/12/22 12:18
Date Received: 05/12/22 14:26
Sample Depth: 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:04	05/16/22 23:03	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:04	05/16/22 23:03	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:04	05/16/22 23:03	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/16/22 13:04	05/16/22 23:03	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:04	05/16/22 23:03	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/16/22 13:04	05/16/22 23:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*05/16/22 13:04*	*05/16/22 23:03*	*1*

Client Sample Results

Client: Ensolum
Project/Site: JRU LEGGS BATTERY

Job ID: 890-2308-1
SDG: 03E1558009

Client Sample ID: SS02A

Lab Sample ID: 890-2308-2
Matrix: Solid
Date Collected: 05/12/22 12:18
Date Received: 05/12/22 14:26
Sample Depth: 2

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*05/16/22 13:04*	*05/16/22 23:03*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			05/17/22 11:08	1

Method: 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			05/17/22 09:43	1

Method: 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		05/16/22 08:41	05/16/22 14:12	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/16/22 08:41	05/16/22 14:12	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/16/22 08:41	05/16/22 14:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*115*		*70 - 130*	*05/16/22 08:41*	*05/16/22 14:12*	*1*
o-Terphenyl	*116*		*70 - 130*	*05/16/22 08:41*	*05/16/22 14:12*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**16.9**		4.98	mg/Kg			05/17/22 20:43	1

Client Sample ID: SS03A

Lab Sample ID: 890-2308-3
Matrix: Solid
Date Collected: 05/12/22 12:15
Date Received: 05/12/22 14:26
Sample Depth: 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		05/16/22 13:04	05/16/22 23:24	1
Toluene	<0.00198	U	0.00198	mg/Kg		05/16/22 13:04	05/16/22 23:24	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		05/16/22 13:04	05/16/22 23:24	1
m-Xylene & p-Xylene	<0.00397	U	0.00397	mg/Kg		05/16/22 13:04	05/16/22 23:24	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		05/16/22 13:04	05/16/22 23:24	1
Xylenes, Total	<0.00397	U	0.00397	mg/Kg		05/16/22 13:04	05/16/22 23:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*05/16/22 13:04*	*05/16/22 23:24*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*05/16/22 13:04*	*05/16/22 23:24*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397	mg/Kg			05/17/22 11:08	1

Method: 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			05/17/22 09:43	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: JRU LEGGS BATTERY

Job ID: 890-2308-1
SDG: 03E1558009

Client Sample ID: SS03A

Lab Sample ID: 890-2308-3
Matrix: Solid
Date Collected: 05/12/22 12:15
Date Received: 05/12/22 14:26
Sample Depth: 2

Method: 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		05/16/22 08:41	05/16/22 14:33	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/16/22 08:41	05/16/22 14:33	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/16/22 08:41	05/16/22 14:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*103*		*70 - 130*	*05/16/22 08:41*	*05/16/22 14:33*	*1*
o-Terphenyl	*107*		*70 - 130*	*05/16/22 08:41*	*05/16/22 14:33*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.97	U	4.97		mg/Kg			05/17/22 20:49	1

Client Sample ID: SS04A

Lab Sample ID: 890-2308-4
Matrix: Solid
Date Collected: 05/12/22 12:10
Date Received: 05/12/22 14:26
Sample Depth: 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		05/16/22 13:04	05/16/22 23:44	1
Toluene	<0.00198	U	0.00198		mg/Kg		05/16/22 13:04	05/16/22 23:44	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		05/16/22 13:04	05/16/22 23:44	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		05/16/22 13:04	05/16/22 23:44	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		05/16/22 13:04	05/16/22 23:44	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		05/16/22 13:04	05/16/22 23:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*05/16/22 13:04*	*05/16/22 23:44*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*05/16/22 13:04*	*05/16/22 23:44*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			05/17/22 11:08	1

Method: 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			05/17/22 09:43	1

Method: 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		05/16/22 08:41	05/16/22 14:54	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/16/22 08:41	05/16/22 14:54	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/16/22 08:41	05/16/22 14:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*05/16/22 08:41*	*05/16/22 14:54*	*1*
o-Terphenyl	*106*		*70 - 130*	*05/16/22 08:41*	*05/16/22 14:54*	*1*

Client Sample Results

Client: Ensolum
Project/Site: JRU LEGGS BATTERY

Job ID: 890-2308-1
SDG: 03E1558009

Client Sample ID: SS04A
Date Collected: 05/12/22 12:10
Date Received: 05/12/22 14:26
Sample Depth: 2

Lab Sample ID: 890-2308-4
Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.95	U	4.95		mg/Kg			05/17/22 20:55	1

Surrogate Summary

Client: Ensolum
Project/Site: JRU LEGGS BATTERY

Job ID: 890-2308-1
SDG: 03E1558009

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)
890-2308-1	SS01A	115	96
890-2308-1 MS	SS01A	105	94
890-2308-1 MSD	SS01A	106	96
890-2308-2	SS02A	110	96
890-2308-3	SS03A	113	96
890-2308-4	SS04A	95	88
LCS 880-25634/1-A	Lab Control Sample	103	95
LCSD 880-25634/2-A	Lab Control Sample Dup	101	94
MB 880-25578/5-A	Method Blank	101	93
MB 880-25634/5-A	Method Blank	103	92

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)
890-2307-A-1-C MS	Matrix Spike	100	88
890-2307-A-1-D MSD	Matrix Spike Duplicate	98	87
890-2308-1	SS01A	96	98
890-2308-2	SS02A	115	116
890-2308-3	SS03A	103	107
890-2308-4	SS04A	102	106
LCS 880-25590/2-A	Lab Control Sample	113	104
LCSD 880-25590/3-A	Lab Control Sample Dup	108	104
MB 880-25590/1-A	Method Blank	113	123

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: JRU LEGGS BATTERY

Job ID: 890-2308-1
SDG: 03E1558009

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-25578/5-A
Matrix: Solid
Analysis Batch: 25591

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25578

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/15/22 16:33	05/16/22 11:44	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/15/22 16:33	05/16/22 11:44	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/15/22 16:33	05/16/22 11:44	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/15/22 16:33	05/16/22 11:44	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/15/22 16:33	05/16/22 11:44	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/15/22 16:33	05/16/22 11:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*05/15/22 16:33*	*05/16/22 11:44*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*05/15/22 16:33*	*05/16/22 11:44*	*1*

Lab Sample ID: MB 880-25634/5-A
Matrix: Solid
Analysis Batch: 25591

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25634

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:04	05/16/22 22:21	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:04	05/16/22 22:21	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:04	05/16/22 22:21	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/16/22 13:04	05/16/22 22:21	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:04	05/16/22 22:21	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/16/22 13:04	05/16/22 22:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*05/16/22 13:04*	*05/16/22 22:21*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*05/16/22 13:04*	*05/16/22 22:21*	*1*

Lab Sample ID: LCS 880-25634/1-A
Matrix: Solid
Analysis Batch: 25591

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25634

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09542		mg/Kg		95	70 - 130		
Toluene			0.100	0.1003		mg/Kg		100	70 - 130		
Ethylbenzene			0.100	0.1024		mg/Kg		102	70 - 130		
m-Xylene & p-Xylene			0.200	0.2061		mg/Kg		103	70 - 130		
o-Xylene			0.100	0.1042		mg/Kg		104	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: LCSD 880-25634/2-A
Matrix: Solid
Analysis Batch: 25591

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 25634

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08697		mg/Kg		87	70 - 130	9	35

QC Sample Results

Client: Ensolum
Project/Site: JRU LEGGS BATTERY

Job ID: 890-2308-1
SDG: 03E1558009

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

Lab Sample ID: LCSD 880-25634/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 25591 — **Prep Batch: 25634**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.09254		mg/Kg		93	70 - 130	8	35
Ethylbenzene			0.100	0.09409		mg/Kg		94	70 - 130	8	35
m-Xylene & p-Xylene			0.200	0.1904		mg/Kg		95	70 - 130	8	35
o-Xylene			0.100	0.09588		mg/Kg		96	70 - 130	8	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*

Lab Sample ID: 890-2308-1 MS — **Client Sample ID: SS01A**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 25591 — **Prep Batch: 25634**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U	0.101	0.07755		mg/Kg		77	70 - 130
Toluene	<0.00199	U	0.101	0.08392		mg/Kg		83	70 - 130
Ethylbenzene	<0.00199	U	0.101	0.08638		mg/Kg		86	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.201	0.1758		mg/Kg		87	70 - 130
o-Xylene	<0.00199	U	0.101	0.08967		mg/Kg		89	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*

Lab Sample ID: 890-2308-1 MSD — **Client Sample ID: SS01A**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 25591 — **Prep Batch: 25634**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.100	0.08053		mg/Kg		80	70 - 130	4	35
Toluene	<0.00199	U	0.100	0.08566		mg/Kg		85	70 - 130	2	35
Ethylbenzene	<0.00199	U	0.100	0.08559		mg/Kg		85	70 - 130	1	35
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1783		mg/Kg		89	70 - 130	1	35
o-Xylene	<0.00199	U	0.100	0.09019		mg/Kg		90	70 - 130	1	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

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

Lab Sample ID: MB 880-25590/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 25580 — **Prep Batch: 25590**

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		05/16/22 08:41	05/16/22 11:32	1

QC Sample Results

Client: Ensolum
Project/Site: JRU LEGGS BATTERY

Job ID: 890-2308-1
SDG: 03E1558009

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

Lab Sample ID: MB 880-25590/1-A
Matrix: Solid
Analysis Batch: 25580

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25590

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		05/16/22 08:41	05/16/22 11:32	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/16/22 08:41	05/16/22 11:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*05/16/22 08:41*	*05/16/22 11:32*	*1*
o-Terphenyl	*123*		*70 - 130*	*05/16/22 08:41*	*05/16/22 11:32*	*1*

Lab Sample ID: LCS 880-25590/2-A
Matrix: Solid
Analysis Batch: 25580

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25590

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1299		mg/Kg		130	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	927.4		mg/Kg		93	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*113*		*70 - 130*
o-Terphenyl	*104*		*70 - 130*

Lab Sample ID: LCSD 880-25590/3-A
Matrix: Solid
Analysis Batch: 25580

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 25590

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1165		mg/Kg		117	70 - 130	11	20
Diesel Range Organics (Over C10-C28)			1000	884.5		mg/Kg		88	70 - 130	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*108*		*70 - 130*
o-Terphenyl	*104*		*70 - 130*

Lab Sample ID: 890-2307-A-1-C MS
Matrix: Solid
Analysis Batch: 25580

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 25590

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	1269		mg/Kg		123	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	903.5		mg/Kg		90	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*100*		*70 - 130*
o-Terphenyl	*88*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: JRU LEGGS BATTERY

Job ID: 890-2308-1
SDG: 03E1558009

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

Lab Sample ID: 890-2307-A-1-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 25580 — **Prep Batch: 25590**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	1250		mg/Kg		121	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	948.0		mg/Kg		95	70 - 130	5	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*98*		*70 - 130*
o-Terphenyl	*87*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-25611/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 25727

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/17/22 17:27	1

Lab Sample ID: LCS 880-25611/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 25727

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	271.7		mg/Kg		109	90 - 110		

Lab Sample ID: LCSD 880-25611/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 25727

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	262.1		mg/Kg		105	90 - 110	4	20

Lab Sample ID: 880-14801-A-3-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 25727

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	844	F1	248	1142	F1	mg/Kg		120	90 - 110		

Lab Sample ID: 880-14801-A-3-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 25727

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	844	F1	248	1018	F1	mg/Kg		70	90 - 110	11	20

QC Association Summary

Client: Ensolum
Project/Site: JRU LEGGS BATTERY

Job ID: 890-2308-1
SDG: 03E1558009

GC VOA

Prep Batch: 25578

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-25578/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 25591

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2308-1	SS01A	Total/NA	Solid	8021B	25634
890-2308-2	SS02A	Total/NA	Solid	8021B	25634
890-2308-3	SS03A	Total/NA	Solid	8021B	25634
890-2308-4	SS04A	Total/NA	Solid	8021B	25634
MB 880-25578/5-A	Method Blank	Total/NA	Solid	8021B	25578
MB 880-25634/5-A	Method Blank	Total/NA	Solid	8021B	25634
LCS 880-25634/1-A	Lab Control Sample	Total/NA	Solid	8021B	25634
LCSD 880-25634/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	25634
890-2308-1 MS	SS01A	Total/NA	Solid	8021B	25634
890-2308-1 MSD	SS01A	Total/NA	Solid	8021B	25634

Prep Batch: 25634

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2308-1	SS01A	Total/NA	Solid	5035	
890-2308-2	SS02A	Total/NA	Solid	5035	
890-2308-3	SS03A	Total/NA	Solid	5035	
890-2308-4	SS04A	Total/NA	Solid	5035	
MB 880-25634/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-25634/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-25634/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2308-1 MS	SS01A	Total/NA	Solid	5035	
890-2308-1 MSD	SS01A	Total/NA	Solid	5035	

Analysis Batch: 25707

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2308-1	SS01A	Total/NA	Solid	Total BTEX	
890-2308-2	SS02A	Total/NA	Solid	Total BTEX	
890-2308-3	SS03A	Total/NA	Solid	Total BTEX	
890-2308-4	SS04A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 25580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2308-1	SS01A	Total/NA	Solid	8015B NM	25590
890-2308-2	SS02A	Total/NA	Solid	8015B NM	25590
890-2308-3	SS03A	Total/NA	Solid	8015B NM	25590
890-2308-4	SS04A	Total/NA	Solid	8015B NM	25590
MB 880-25590/1-A	Method Blank	Total/NA	Solid	8015B NM	25590
LCS 880-25590/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	25590
LCSD 880-25590/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	25590
890-2307-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	25590
890-2307-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	25590

Prep Batch: 25590

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2308-1	SS01A	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: JRU LEGGS BATTERY

Job ID: 890-2308-1
SDG: 03E1558009

GC Semi VOA (Continued)

Prep Batch: 25590 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2308-2	SS02A	Total/NA	Solid	8015NM Prep	
890-2308-3	SS03A	Total/NA	Solid	8015NM Prep	
890-2308-4	SS04A	Total/NA	Solid	8015NM Prep	
MB 880-25590/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-25590/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-25590/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2307-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2307-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 25681

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2308-1	SS01A	Total/NA	Solid	8015 NM	
890-2308-2	SS02A	Total/NA	Solid	8015 NM	
890-2308-3	SS03A	Total/NA	Solid	8015 NM	
890-2308-4	SS04A	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 25611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2308-1	SS01A	Soluble	Solid	DI Leach	
890-2308-2	SS02A	Soluble	Solid	DI Leach	
890-2308-3	SS03A	Soluble	Solid	DI Leach	
890-2308-4	SS04A	Soluble	Solid	DI Leach	
MB 880-25611/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-25611/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-25611/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-14801-A-3-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-14801-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 25727

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2308-1	SS01A	Soluble	Solid	300.0	25611
890-2308-2	SS02A	Soluble	Solid	300.0	25611
890-2308-3	SS03A	Soluble	Solid	300.0	25611
890-2308-4	SS04A	Soluble	Solid	300.0	25611
MB 880-25611/1-A	Method Blank	Soluble	Solid	300.0	25611
LCS 880-25611/2-A	Lab Control Sample	Soluble	Solid	300.0	25611
LCSD 880-25611/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	25611
880-14801-A-3-B MS	Matrix Spike	Soluble	Solid	300.0	25611
880-14801-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	25611

Lab Chronicle

Client: Ensolum
Project/Site: JRU LEGGS BATTERY

Job ID: 890-2308-1
SDG: 03E1558009

Client Sample ID: SS01A
Date Collected: 05/12/22 12:45
Date Received: 05/12/22 14:26

Lab Sample ID: 890-2308-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	25634	05/16/22 13:04	MR	XEN MID
Total/NA	Analysis	8021B		1			25591	05/16/22 22:43	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25707	05/17/22 11:08	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25681	05/17/22 09:43	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	25590	05/16/22 08:41	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25580	05/16/22 13:51	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	25611	05/16/22 10:46	CH	XEN MID
Soluble	Analysis	300.0		1			25727	05/17/22 20:37	CH	XEN MID

Client Sample ID: SS02A
Date Collected: 05/12/22 12:18
Date Received: 05/12/22 14:26

Lab Sample ID: 890-2308-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	25634	05/16/22 13:04	MR	XEN MID
Total/NA	Analysis	8021B		1			25591	05/16/22 23:03	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25707	05/17/22 11:08	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25681	05/17/22 09:43	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	25590	05/16/22 08:41	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25580	05/16/22 14:12	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	25611	05/16/22 10:46	CH	XEN MID
Soluble	Analysis	300.0		1			25727	05/17/22 20:43	CH	XEN MID

Client Sample ID: SS03A
Date Collected: 05/12/22 12:15
Date Received: 05/12/22 14:26

Lab Sample ID: 890-2308-3
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			5.04 g	5 mL	25634	05/16/22 13:04	MR	XEN MID
Total/NA	Analysis	8021B		1			25591	05/16/22 23:24	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25707	05/17/22 11:08	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25681	05/17/22 09:43	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	25590	05/16/22 08:41	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25580	05/16/22 14:33	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	25611	05/16/22 10:46	CH	XEN MID
Soluble	Analysis	300.0		1			25727	05/17/22 20:49	CH	XEN MID

Client Sample ID: SS04A
Date Collected: 05/12/22 12:10
Date Received: 05/12/22 14:26

Lab Sample ID: 890-2308-4
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	25634	05/16/22 13:04	MR	XEN MID
Total/NA	Analysis	8021B		1			25591	05/16/22 23:44	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25707	05/17/22 11:08	SM	XEN MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: JRU LEGGS BATTERY

Job ID: 890-2308-1
SDG: 03E1558009

Client Sample ID: SS04A

Date Collected: 05/12/22 12:10
Date Received: 05/12/22 14:26

Lab Sample ID: 890-2308-4

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			25681	05/17/22 09:43	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	25590	05/16/22 08:41	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25580	05/16/22 14:54	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	25611	05/16/22 10:46	CH	XEN MID
Soluble	Analysis	300.0		1			25727	05/17/22 20:55	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: JRU LEGGS BATTERY

Job ID: 890-2308-1
SDG: 03E1558009

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	T104704400-21-22	06-30-22

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 LEGGS BATTERY

Job ID: 890-2308-1
SDG: 03E1558009

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN 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:

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

Sample Summary

Client: Ensolum
Project/Site: JRU LEGGS BATTERY

Job ID: 890-2308-1
SDG: 03E1558009

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2308-1	SS01A	Solid	05/12/22 12:45	05/12/22 14:26	2
890-2308-2	SS02A	Solid	05/12/22 12:18	05/12/22 14:26	2
890-2308-3	SS03A	Solid	05/12/22 12:15	05/12/22 14:26	2
890-2308-4	SS04A	Solid	05/12/22 12:10	05/12/22 14:26	2

eurofins | Environment Testing Xenco

Chain of Custody

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

Work Order No: _____

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Project Manager:	Kalei Jennings	Bill to: (if different)	
Company Name:	Ensolum	Company Name:	
Address:		Address:	
City, State ZIP:		City, State ZIP:	
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:	SRU Legg Battery	Turn Around	
Project Number:	03E1558009	☒ Routine ☐ Rush	
Project Location:	32.36851, -103.86746	Due Date:	
Sampler's Name:	Reece Hanson	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	Yes (No)
Samples Received Intact:	(Yes) No	Thermometer ID:	TNM 087
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.0
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	21.4
Total Containers:		Corrected Temperature:	21.2

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	BTEX (8021)	TPH (8015)	Cl (EPA 300.0)
SS01 A	soil	5/12/22	1245	2'	Grab	1,402		X	X	X
SS02 A			1216							
SS03 A			1215							
SS04 A	↓	↓	1210	↓	↓	↓		↓	↓	↓

890-2308 Chain of Custody

Preservative Codes

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

Sample Comments

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	5.12.22 1426	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2308-1
SDG Number: 03E1558009

Login Number: 2308
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	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: 890-2308-1
SDG Number: 03E1558009

Login Number: 2308
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 05/16/22 09:25 AM

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

ENSOLUM

APPENDIX E

NMOCD Notifications

From: Hamlet, Robert, EMNRD
To: Collins, Melanie
Cc: DelawareSpills /SM; Aimee Cole; Kalei Jennings; Ashley Ager; Tacoma Morrissey; Pennington, Shelby G; Bratcher, Mike, EMNRD; Nobui, Jennifer, EMNRD; Harimon, Jocelyn, EMNRD
Subject: (Extension Request) - JRU Legg Battery (Incident Number NAPP2204943884)
Date: Tuesday, May 3, 2022 2:25:40 PM
Attachments: image002.jpg
image003.png

[**EXTERNAL EMAIL**]

RE: Incident #**NAPP2204943884**

Melanie,

Your request for an extension to **July 5th, 2022** 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
811 S. First Street | 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: Tuesday, May 3, 2022 10:22 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>
Cc: DelawareSpills /SM <DelawareSpills@exxonmobil.com>; acole@ensolum.com; Kalei Jennings <kjennings@ensolum.com>; aager@ensolum.com; Tacoma Morrissey <tmorrissey@ensolum.com>; Pennington, Shelby G <shelby.g.pennington@exxonmobil.com>
Subject: [EXTERNAL] XTO - Extension Request - JRU Legg Battery (Incident Number NAPP2204943884)

All,

JRU Legg Battery (Incident Number NAPP2204943884)
XTO is requesting an extension for the current deadline of May 5, 2022, for submitting a deferral

report required in 19.15.29.12.B.(1) NMAC at the JRU Legg Battery (Incident Number NAPP2204943884). The release was discovered on February 4, 2022, and vertical delineation inside the secondary containment has been completed. Based on the laboratory analytical results, XTO is requesting a 60-day extension to complete lateral delineation of the impacted soil for deferral. In order to complete the delineation activities and submit a deferral request, XTO requests an extension until July 5, 2022.

Thank you,

Melanie Collins
SSHE Technician
An **ExxonMobil** Subsidiary
6401 Holiday Hill Rd, Bldg 5
Midland, TX 79707
432-218-3709

Green, Garrett J

From: Green, Garrett J
Sent: Friday, February 11, 2022 2:46 PM
To: Mike Bratcher; Victoria Venegas; Rob Hamlet
Cc: Pennington, Shelby G; Baker, Adrian; Allen, Michael; Mascarenas, Aaron; DelawareSpills /SM
Subject: RE: XTO 24 Hour notification - Release date 2/5/22 JRU Legg Battery

All,

I am sending this in regards to an error in this notification. Release occurred during the night of Friday 2/4/2022. Details will be provided with a form C-141.

Thank you,
Garrett

From: Green, Garrett J
Sent: Saturday, February 5, 2022 5:37 PM
To: 'Mike Bratcher' <mike.bratcher@state.nm.us>; 'Victoria Venegas' <Victoria.Venegas@state.nm.us>; 'Rob Hamlet' <robert.hamlet@state.nm.us>; 'emily.hernandez@state.nm.us' <emily.hernandez@state.nm.us>
Cc: Pennington, Shelby G <shelby.g.pennington@exxonmobil.com>; Baker, Adrian <adrian.baker@exxonmobil.com>; Allen, Michael <michael.allen@exxonmobil.com>; Mascarenas, Aaron <aaron.mascarenas@exxonmobil.com>
Subject: XTO 24 Hour notification - Release date 2/5/22 JRU Legg Battery

All,

This is notification of a release greater than 25 barrels that occurred today at the JRU Legg Battery near the GPS coordinates given below. All of the fluids remained in containment and all fluids were recovered by vacuum truck. Details will be provided with a form C-141. Please contact us with any questions or concerns.

GPS: 32.36851,-103.86746

Thank you,

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

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

From: Aimee Cole
To: Tacoma Morrissey; Kalei Jennings; Ben Belill
Subject: FW: XTO - Sampling Notification (week of 5/9/22 - 5/13/22)
Date: Wednesday, May 4, 2022 3:57:05 PM
Attachments: image001.png
image002.png
image003.png
image004.png

For your records.

Aimee Cole
Senior Managing Scientist
720-384-7365
Ensolum, LLC

From: Baker, Adrian <adrian.baker@exxonmobil.com>
Sent: Wednesday, May 4, 2022 1:56 PM
To: ocd.enviro@state.nm.us; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@state.nm.us>; Chad.Hensley@state.nm.us
Cc: DelawareSpills /SM <DelawareSpills@exxonmobil.com>; Aimee Cole <acole@ensolum.com>; Green, Garrett J <garrett.green@exxonmobil.com>
Subject: XTO - Sampling Notification (week of 5/9/22 - 5/13/22)

[**EXTERNAL EMAIL**]

All,

XTO plans to complete final sampling activities at the following sites the week of May 9, 2022.

Wednesday

- PLU 223 / nAPP2204945328, nAPP2205343597, NAPP2201745910
- Remuda Basin #1 / NAB1836137253

Thursday

- PLU 223 / nAPP2204945328, nAPP2205343597, NAPP2201745910
- JRU Legg Battery / nAPP2204943884

Friday

- PLU 223 / nAPP2204945328, nAPP2205343597, NAPP2201745910

Thank you,

Adrian Baker
Environmental Coordinator
Permian Business Unit

XTO Energy Inc.
6401 N. Holiday Hill Dr.
Midland, Tx 79707
Mobile:(432)-236-3808
adrian.baker@exxonmobil.com

Green, Garrett J

From: Green, Garrett J
Sent: Friday, February 11, 2022 2:49 PM
To: Mike Bratcher; Victoria Venegas; Rob Hamlet
Cc: DelawareSpills /SM; Allen, Michael; Mascarenas, Aaron; Childs, Geoffry
Subject: XTO 48 hour liner inspection notification - JRU Legg Battery

Follow Up Flag: Follow up
Flag Status: Flagged

Good afternoon,

This is sent as a 48-hour notification, XTO is scheduled to inspect the lined containment at JRU Legg Battery released on (2/4/2022), on Monday, February 14, 2022, at 10am MST. A 24 hour release notification was sent out on Monday, February 7, 2022 3:25 PM since the release was greater than 25 barrels in volume. Please call us with any questions or concerns.

GPS Coordinates: (32.36851,-103.86746)

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 115769

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 115769
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Deferral Request Approved.	8/26/2022