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	NAPP2217931599
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party XTO Energy				OGRID 5	5380	
Contact Name Garrett Green				Contact Te	Contact Telephone 575-200-0729	
Contact ema	il garrett.gre	en@exxonmobil.c	om	Incident #	‡ (assigned by OCD)	
Contact mail	ling address	3104 E. Greene St	reet, Carlsbad, Nev	w Mexico, 88220		
				of Release So	ource	
Latitude 32.3	33641			Longitude _	Lancitude -103.83180	
Lamude			(NAD 83 in dec	imal degrees to 5 decim		
Site Name	James Ranc	h Unit 108H		Site Type I	Production Well	
Date Release		06/22/2022		API# (if app	pplicable)	
Unit Letter	G4:	T1.	D	Commit		
	Section	Township	Range	Coun	-	
G	01	23S	30E	Eddy	<u> </u>	
Surface Owne	r: State	➤ Federal ☐ Tr	ribal 🔲 Private (A	Jame:)	
			Noture and	Volume of F	Dalaasa	
			Mature and	volume of r	Release	
Material(s) Released (Select all that apply and attach calculations or s Crude Oil Volume Released (bbls) 150		calculations or specific	W-1 D 1 (1-1-1-)			
			1.37		· · · · · · · · · · · · · · · · · · ·	
Produced Water Volume Released (bbls) 7.26			Volume Recovered (bbls) .41			
Is the concentration of total dissolved solids in the produced water >10,000 mg/l?					☐ Yes 🗷 No	
Condensate Volume Released (bbls)			Volume Recovered (bbls)			
Natural Gas Volume Released (Mcf)			Volume Recovered (Mcf)			
Other (describe) Volume/Weight Released (provide units		units)	Volume/Weight Recovered (provide units)			
Cause of Rel	ease Externa	al corrosion caused	l a flowline to relea	ase fluids to soil. A	A vacuum truck recovered all free fluids. A third-p	oarty
			ed for remediation			J

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Page 2 Oil Conservation Division

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Incident ID	NAPP2217931599
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Was this a major	If YES, for what reason(s) does the respon	sible part	y consider this a major release?
release as defined by 19.15.29.7(A) NMAC?	N/A		
` ,			
☐ Yes 🗷 No			
TOTAL TOTAL		0.111	
If YES, was immediate no N/A	otice given to the OCD? By whom? To wh	om? Wh	en and by what means (phone, email, etc)?
N/A			
	Initial Re	espons	e
The responsible	party must undertake the following actions immediately	y unless the	could create a safety hazard that would result in injury
➤ The source of the rele	ease has been stopped.		
▼ The impacted area ha	as been secured to protect human health and	the enviro	onment.
Released materials ha	ave been contained via the use of berms or d	ikes, abso	orbent pads, or other containment devices.
∡ All free liquids and re	ecoverable materials have been removed and	d manage	d appropriately.
If all the actions described	d above have <u>not</u> been undertaken, explain v	why:	
NA			
has begun, please attach	a narrative of actions to date. If remedial of	efforts ha	n immediately after discovery of a release. If remediation we been successfully completed or if the release occurred ch all information needed for closure evaluation.
regulations all operators are	required to report and/or file certain release notif	fications ar	knowledge and understand that pursuant to OCD rules and and perform corrective actions for releases which may endanger not relieve the operator of liability should their operations have
failed to adequately investig	ate and remediate contamination that pose a three	at to groun	dwater, surface water, human health or the environment. In ity for compliance with any other federal, state, or local laws
and/or regulations.	The 141 report does not reneve the operator of	Сэронзгон	rey for compliance with any other redeful, state, or local laws
Printed Name: Garrett G	reen	Title:	SSHE Coordinator
Signature:	A Sun	Date:	06/27/2022
email: garrett.green@exx	xonmobil.com		one: 575-200-0729
OCD Only			
	Hariman	D-4::	06/28/2022
Received by:	пантоп	Date: _	06/28/2022

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Incident ID	NAPP2217931599	
District RP		
Facility ID		
Application ID		

Site Assessment/Characterization

This information must be provided to the appropriate district office no taler 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?	X 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?	X 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 Chacklist. Fach of the following items must be included in the report		

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.

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_ 1	Paį	ge	4	of	27	⁷ 8

Incident ID	NAPP2217931599
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I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.				
Printed Name: _Garrett Green	Title: _Environmental Coordinator			
Signature: Satt Sur	Date:12/19/2022			
email: _garrett.green@exxonmobil.com	Telephone:575-200-0729			
OCD Only				
Received by:Jocelyn Harimon	Date:			

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Incident ID	NAPP2217931599	
District RP		
Facility ID		
Application ID		

Remediation Plan

Remediation Plan Checklist: Each of the following items must be in	cluded 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) ☑ Proposed schedule for remediation (note if remediation plan timeling) 	C)(4) NMAC ne is more than 90 days OCD approval is required)	
Deferral Requests Only: Each of the following items must be confirm	med 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	ne environment, or groundwater.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.		
Printed Name: Garrett Green	Title: Environmental Coordinator	
Signature: Sath Sur	Date:12/19/2022	
email: garrett.green@exxonmobil.com	Telephone:575-200-0729	
	•	
OCD Only		
Received by: Jocelyn Harimon D	Date:	
☐ Approved ☐ Approved with Attached Conditions of App	proval	
Signature: Da	te:	

	Page 6 of 27	8
Incident ID	NAPP2217931599	
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.
Deterral Requests Only. Each of the following tiems must be confirmed as part of any request for deferral of remediation.
Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
Extents of contamination must be fully delineated.
Contamination does not cause an imminent risk to human health, the environment, or groundwater.
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.
Printed Name: Garrett Green Title: Environmental Coordinator
Signature: Date: Date:
email:garrett.green@exxonmobil.com Telephone:575-200-0729
OCD Only
Received by: Jocelyn Harimon Date:12/19/2022
☐ Approved ☐ Approved ☐ Deferral Approved ☐ Deferral Approved
Signature: Robert Hamlet Date: 4/28/2023



December 19, 2022

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

Re: Remediation Work Plan

James Ranch Unit 108H

Incident Number nAPP2217931599

Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared this *Remediation Work Plan* (*Work Plan*) to address impacted soil at the James Ranch Unit 108H (Site). Soil was impacted due to a release of crude oil and produced water. Based on delineation activities and laboratory analytical results, XTO is submitting this *Work Plan* describing remediation actions completed to date and proposing to investigate naturally occurring chloride concentrations within the shallow caliche formation identified in the area.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit G, Section 1, Township 23 South, Range 30 East, in Eddy County, New Mexico (32.33641°N, 103.83180°W) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On June 22, 2022, corrosion on a flowline resulted in the release of 7.26 barrels (bbls) of produced water and 1.59 bbls of crude oil into the pasture underneath active surface flowlines. A vacuum truck was immediately dispatched to the Site to recover the free-standing fluids; approximately 0.41 bbls of produced water and 0.09 bbls of crude oil were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on June 27, 2022. The release was assigned Incident Number nAPP2217931599.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

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

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on a recent soil boring drilled for determination of regional groundwater depth. On June 4, 2019, a soil boring (C-4325) was drilled within a ½-mile east of the Site. Soil boring C-4325 was drilled to a depth of 150 feet bgs. A field geologist logged and described soils continuously. No moisture or groundwater was encountered during drilling activites. The borehole was left open for over 72 hours to

Ensolum, LLC | Environmental, Engineering & Hydrogeologic Consultants 3122 National Parks Highway | Carlsbad, NM 88220 | ensolum.com

XTO Energy, Inc Remediation Work Plan James Ranch Unit 108H

allow for potential slow infill of groundwater. After the 72-hour waiting period without observing groundwater, it was confirmed that groundwater beneath the Site is greater than 150 feet bgs. The borehole was properly abandoned with drill cuttings and hydrated bentonite chips. Shallower soil borings permitted by the NMOSE, C-03559 point of diversion (POD)-1 through POD -4, were drilled and plugged just south of the release in 2012. The deepest soil boring, POD-1, was drilled to 50 feet bgs and no groundwater was encountered in any of the shallow soil borings. All wells used to determing depth to groundwater are depicted on Figure 1 and the Well Record and Log for each well is included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is a freshwater emergent wetland, located approximately 3,919 feet southeast of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is underlain by unstable geology (high potential karst designation area).

Based on the existence of high potential karst underlying the Site, the following NMOCD Table I Closure Criteria (Closure Criteria) apply:

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

DELINEATION SOIL SAMPLING ACTIVITIES

On July 26, 2022, Ensolum personnel completed a Site assessment to evaluate the release extent based on information provided on the Form C-141 and visual observations. Seven delineation soil samples (SS01 through SS07) were collected within and around the release extent from a depth of approximately 0.5 feet bgs. Delineation soil samples SS01 through SS03 were collected within the release extent, and samples SS04 through SS07 were collected around the release extent to confirm the lateral exent. The delineation soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride Hach® chloride QuanTab® test strips. The release extent and delineation soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was completed during the Site assessment and a photographic log is included in Appendix B.

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



XTO Energy, Inc Remediation Work Plan James Ranch Unit 108H

Two potholes (PH01 and PH02) and one borehole (BH03) were advanced by use of heavy equipment and hand auger. Potholes PH01 and PH02 were advanced to a depth of approximately 7 feet bgs and were collected in the vicinity of delineation soil samples SS01 and SS02, respectively. Discrete delineation soil samples were collected from each pothole at depths ranging from 2 feet bgs to 7 feet bgs. Borehole BH03 was advanced in the vicinity of delineation soil sample SS03 to a depth of approximately 1-foot bgs until auger refusal. A sample was collected a depth of 1-foot bgs. Soil from each pothole and borehole was field screened and handled as described above. Field screening results and observations for the potholes and borehole were logged on lithologic/soil sampling logs, which are included in Appendix C. The delineation soil sample locations are depicted on Figure 2.

Ensolum observed a caliche formation in PH01 and PH02 between 3 and 7 feet bgs exhibiting elevated (greater than 3,000 mg/kg) chloride field screening results. As such, Ensolum advanced one pothole (BG01) to evaluate naturally occuring chloride concentrations outside of the release extent and in an area that does not appear to have been disturbed by oil and gas operations. Pothole BG01 was completed approximately 60 feet northeast of the edge of the release extent and was advanced to a depth of 6 feet bgs. Discrete soil samples were collected at depths of 0.5 feet bgs in a poorly graded sand, and 4 feet bgs and 6 feet bgs in the underlying caliche formation. Field screening results and observations for the pothole was logged on lithologic/soil sampling logs, which are included in Appendix C.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results indicate TPH concentrations exceeded 100 mg/kg in samples collected within the release footprint from 0.5 to 4 feet bgs in SS01/PH01 and at the ground surface at SS02 and SS03. Similarly, chloride concentrations exceeded 600 mg/kg within the release footprint in samples from the ground surface in SS01, SS02, and SS03 and at depth in PH01 and PH02. Chloride concentrations detected at depth were variable, ranging from 3,160 mg/kg to 26,700 mg/kg. Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included in Appendix D.

Laboratory analytical results for soil samples from BG01 collected from the underlying caliche formation at 4 feet bgs, and 6 feet bgs, indicated chloride concentrations were within range of those detected in the subsurface in similar lithology within the release footprint.

PROPOSED REMEDIATION WORK PLAN

Based on the presence of elevated TPH concentrations in soil within the release footprint, XTO proposes to excavate soil containing TPH exceeding 100 mg/kg. Based on field screening and laboratory analytical results, the excavation will proceed to approximately 4 feet bgs. Following removal of the soil, Ensolum personnel will collect five-point confirmation soil samples representing at most every 200 square feet of the excavation floor and sidewalls. The soil samples will be handled as described above and delivered to Eurofins for analysis of BTEX, TPH, and chloride.

Based on the laboratory analytical results for chloride concentrations in samples collected from BG01, PH01, and PH02, Ensolum suggests there is potential for naturally occuring elevated chloride in the underlying caliche formation, which may demonstrate a shallowing westerly trend based on auger refusal in BH03 and lessening visible vegetation in the same direction. To evaluate naturally occurring chloride in the identified caliche formation, XTO will advance four additional background potholes (BG02 through BG05) in undisturbed pasture areas located approximately 180 feet to 280 feet from the edge of the release extent in multiple directions. The locations proposed are as close as possible to the



XTO Energy, Inc Remediation Work Plan James Ranch Unit 108H

release but outside of disturbed areas. Soil samples will be collected from each pothole at 1-foot intervals and include both the caliche formation and overlying sand. The soil samples will be field screened for chloride and advanced until chloride concentrations are less than 600 mg/kg or enough representative samples of the caliche have been collected to document naturally occurring conditions. The delineation soil samples will be handled as described above and analyzed at the laboratory for chloride.

Following excavation of TPH-impacted soil within the release footprint and completion of background sampling, XTO will submit a report requesting closure based on removal of impacted soil or a revised work plan to address any remaining chloride in soil exceeding background concentrations. XTO will complete the proposed remediation activities within 90 days of the date of approval of this *Work Plan*.

XTO believes the scope of work described above is equally protective of human health, the environment, and groundwater. As such, XTO respectfully requests approval of the *Work Plan* from NMOCD.

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

Sincerely, Ensolum, LLC

Benjamin J. Belill Project Geologist Ashley L. Ager, M.S., P.G. Program Director

ashley L. ager

cc: Garrett Green, XTO

Shelby Pennington, 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 Record

Appendix B Photographic Log

Appendix C Lithologic / Soil Sampling Logs

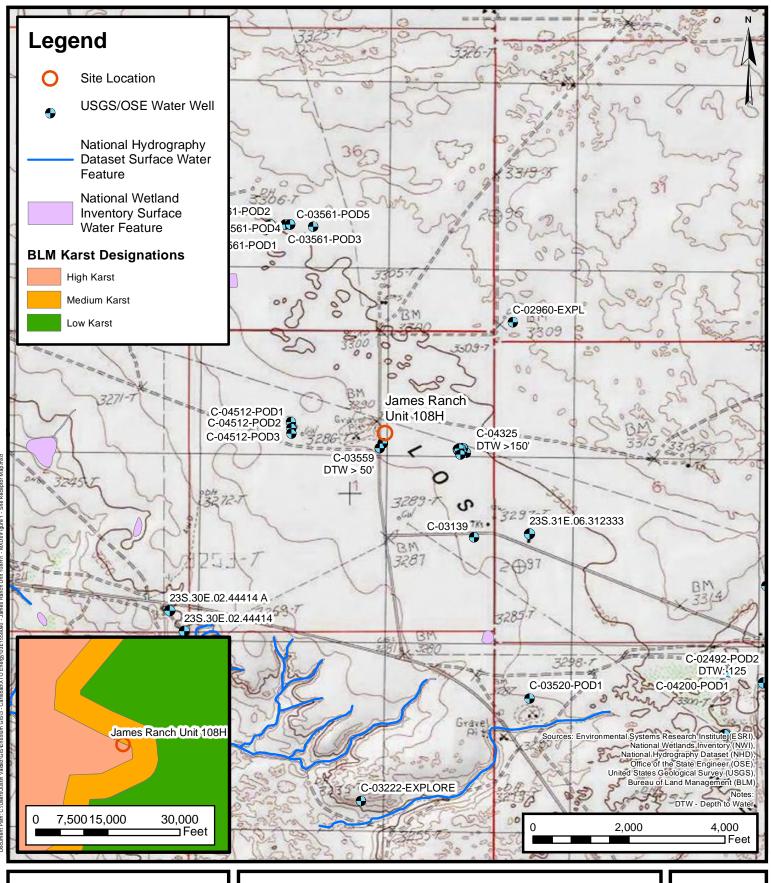
Appendix D Laboratory Analytical Reports & Chain-of-Custody Documentation

Appendix E NMOCD Notifications





FIGURES



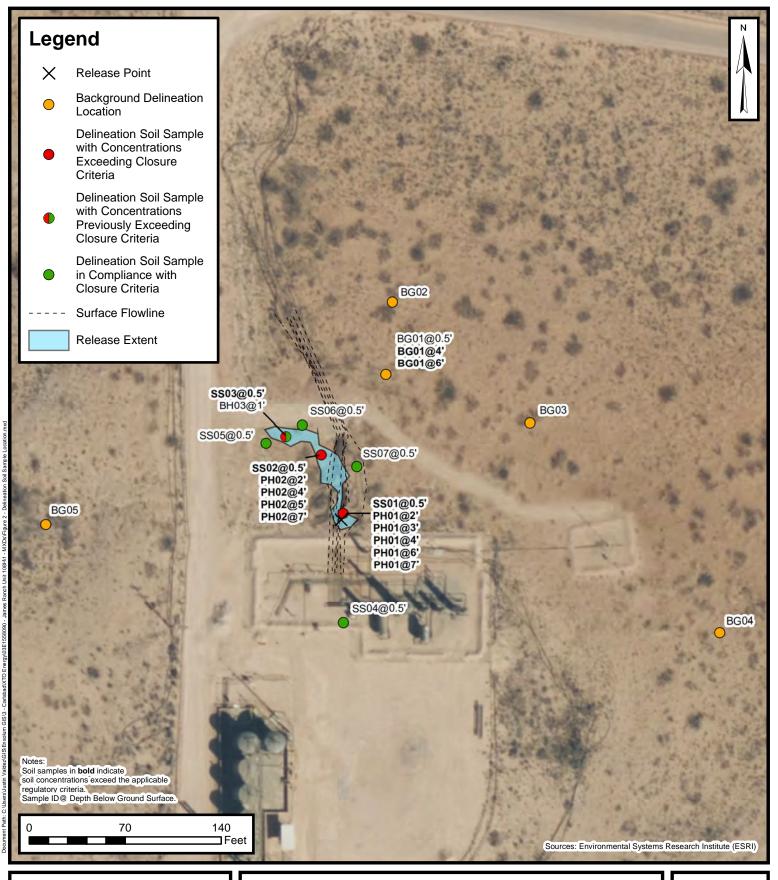


Site Receptor Map

James Ranch Unit 108H XTO Energy, Inc Unit G Sec 1 T23S R30E Eddy County, New Mexico

Eddy County, New Mexico
Incident Number: nAPP2217931599

FIGURE





Delineation Soil Sample Locations

James Ranch Unit 108H XTO Energy, Inc Unit G Sec 1 T23S R30E Eddy County, New Mexico

Incident Number: nAPP2217931599

FIGURE



TABLES



TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS JRU 108H 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 C	losure Criteria (NMAC 19.15.29)	10	50	NE	NE	NE	NE	100	600
				Del	ineation Soil San	nples				
SS01	07/26/2022	0.5	1.05	41.5	2,140	16,300	4,760	18,440	23,200	4,930
PH01	10/20/2022	2	<0.0498	2.40	935	3,250	2,180	4,190	6,370	2,870
PH01	10/20/2022	3	< 0.0497	32.6	848	1,970	1,190	2,820	4,010	12,300
PH01	10/20/2022	4	< 0.0499	27.1	531	1,340	824	1,876	2,700	3,160
PH01	10/20/2022	6	< 0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	26,700
PH01	10/20/2022	7	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	4,100
SS02	07/26/2022	0.5	<0.0499	1.98	1,050	9,700	1,720	10,750	12,500	1,650
PH02	10/20/2022	2	<0.00201	<0.00402	<49.9	63.5	<49.9	63.5	63.5	13,600
PH02	10/20/2022	4	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	22,100
PH02	10/20/2022	5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	6,400
PH02	10/20/2022	7	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	<50.0	5,550
SS03	07/26/2022	0.5	<0.0497	13.3	188	9,420	1,960	9,608	12,400	9,420
BH03	09/08/2022	1	< 0.00199	<0.00398	<49.9	<49.9	75.6	<49.9	75.6	54.1
BG01	10/20/2022	0.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	10.4
BG01	10/20/2022	4	< 0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	4,860
BG01	10/20/2022	6	0.00216	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	4,650
SS04	07/26/2022	0.5	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	131
SS05	07/26/2022	0.5	<0.00199	<0.00398	<49.8	<49.8	62.8	<49.8	62.8	13.6
SS06	07/26/2022	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	10.9
SS07	07/26/2022	0.5	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	8.7

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

Concentrations in **bold** exceed the NMOCD Table 1 Closure Criteria or reclamation standard where applicable.

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

Ensolum 1 of 1



APPENDIX A

Referenced Well Records

LI Emiror			Ca	508 West dsbad, N					Identifier 4325 (MW Project Name: JRU 10	O I) Date 5/22/19 RP Number 2RP-3-104, 2RP-3464, 2RP-3179		
		LITHO	LOGIC			LING LO			Logged By: BEN BELILL	Method Lan C		
Lat Long.	3353	39, 103.	827	697		ning CHLO and MRO	ORIDES, TE D		Hole Diameter 6.15"	Total Depth: 150'		
				0% error fa								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth		Lithology/Remarks				
0	(uz	0.5	N	lwal	0]	 - - - -	(SP-SM)	5;14; grad	15AND, dry, b	bentied, poorly		
D	2112	0.4	7	A ICWIN	2	z'						
٨	Cu2	١. ن	Ч	Awals	3	3′			V			
D	412	0.3	٨	MUDIC C	1	9	¿MICHÉ	0117	CHE w/ Sund, a	day, It bon/ for ton, red sond, rooder		
₽	Ku2	0.1	W	avi D	5	5'		•				
n	hiz	0.5	4	MW (E	6	ر ا ا						
0	6112	0.4	h	MUSI F	7 _	7'						
D	Kuz	0.3	۲	mwiG	8 _	<i>\$</i> ′			V			
0	403	0.[7	HICAW		G	SP	5.A.		dy, It bra/bin,		
D	345	o.g	Ŋ	Mai I	10	12'		54	A	1,000		
D	345	3,1	N	MW (5	11	N T	5P-SM)	Silty	strot, chy b	1 saty poly gradel,		
				my tK	-15	12-	↓	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	m., no odel.	<u> </u>		

LT Environ	-			508 Wes	ronment t Stevens lew Mexi	al, Inc. s Street co 88220)	Identifier: MWO \	Date 5/27/4 RP Number 2RP-3464, 21		
4	51		Comp	liance · E	ngineerin	g · Remed	iation	JRU 10	2RP-3243		
		LITHO	DLOG			ING LO		Logged By: BEN BELILL	Method		
Lat/Long Commer		oride test in	clude a 6		GRO, MR	o, and DRC	ORIDES, TPH, BTEX	Hole Diameter.	Total Depth:		
Moisture Content	Chloride (ppm)	Vapor (ppm)	Vapor (ppm) Sample # Debth Samble Debth Soli/Rock					Lithology/Remarks			
D	4112	۱, ۲	N	MWOIK	12	12'	5P-SM) STA	-A			
0	2112	3.8	N	Mo(L	13	13'					
D	KIIZ	4,9	N	mwin	14	19'					
D	CIIZ	4.8	N	MWO! N	15	15'					
0	<uz< td=""><td>11</td><td>N</td><td>MWOLD</td><td>16</td><td>16'</td><td></td><td></td><td></td></uz<>	11	N	MWOLD	16	16'					
0	4112	0	N	MWIP	17	17'					
P	(In	4,1	Ŋ	MUOIC	18	18'	ML SIL	Triden, benlind,	na plastic, no		
0	(in	6.5	N	MUJR	19	(9'		do			
D	(180	1,3	Ν	mwols	20	20'					
v	(150	9.2	٧	МиојТ	21	21'					
	(112	7.4	N	MUSIU	22	n'					
D	1	1 1	- 1			1		1			
0	4112	5,1	N	MUDIV	23	23'					

About	nmental, Inc.			LT Envi 508 Wes Carlsbad, I		s Street ico 88220		Project Name: JRU 10	Date: 5/22/4 RP Number 2RP-3464, 2RP-317 2RP-3243			
		LITH	IOLO	GIC /SO				Logged By: BEN BELILL H, BTEX, Hole Diameter	Method Total Depth			
at/Long		oride test	nclude a	a 60% error f	GRO, MR	O, and DRO		n, orex, note blancer	, van Sepa			
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks				
D	K112	6.5	M	MUS I M	24]	174	ML	544				
Ð	Cur	4.6	N	Muol X	25	251						
p	(in	5.1	N	wwo 1 A	26	26'						
D	LITZ	9.4	N	MWOI Z	27	27'						
0	£112	0.8	V	orw 1 AA	28	er						
D	2112		N	Muoi AC	1	29						
	- 1			mw= IAC		- 1						
				MUDIA	+	31						
	(112)			MUDI A	1	32						
				MWOIAF	1							
				MWO/AG	‡	- 1						
4	1120	.0	\vee	awo (AH	35	35						
					36	*	10	7				

Released to Imaging: 4/28/2023 8:49:46 AM

-	mental, Inc.		Ca	LT Envi 508 Wes rlsbad, N	ronmenta t Stevens New Mexic	al, Inc. Street co 88220		Identifier: MW0 Project Name:	Date 5/2 2/4 - 5/2 3/6 RP Number 2RP-3464, 2RP-3179 2RP-3243	
4	55		Comp	liance E	ngineering	Remedi	ation		JRU 10	2RP-3243
-t /T		LITHO	OLOG	IC / SO	IL BOR			RTEX	Logged By: BEN BELILL Hole Diameter: 6.15"	Method. Total Depth:
at/Long		oride test in	clude a 6	50% error f	GRO, MR	O, and DRO				
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)		Soil/Rock Type		Lithold	ogy/Remarks
0	(172	1.0	M	Must A	¥36	36	CL	5.7ty	CLAY, dry, re	ed/bra, low plasticity
0	4112	0.0	N	mus A	37 -	37		10	odor.	
0	1112	1.5	N	Muo 1	4 × 38	38				
D	4117	6.0	N	mwl.	LL 39	35				
D	LIIZ	0.0	N	muoi	4m 40	40				
0	KIIZ	0-0	N	MwolA	W 41	41				
0	2112	1.4	W	mwo ()	40 42	47				
9	(11Z	7.8	V	mwa()	4 0 43	43				
۵	K112	1.8	N	Muol	AČ 44	· yu				
p	4117	2.5	V	Mut (4R 45	43				
0	4/12	1.9	N	MU) ()	AS 46	46				
9	1112	2.0	N	mus ()	4 T 47	47				
	1110	٥,٥	N		48	*			V	

LT Environmental, Inc.	nental, Inc.			508 Wes	ronmenta	Street		Identifier MW3	Date: 5/2 3/19		
2	51				New Mexic Engineering			Project Name: JRU 10	RP Number: 2RP-3464, 2RP-317 2RP-3243		
		LITHO	LOG	IC /SO	IL BORI	NG LO	G	Logged By: BEN BELILL	Method:		
Lat/Long Commen	All Chlo	ride test in	clude a	50% error f	Field Scree GRO, MRO actor.		Hole Diameter 6.15"	Total Depth.			
Moisture Content	Chloride (ppm)	Vapor (ppm) Sample # Debth Samble Debth Soil/Rock Type						Lithology/Remarks			
0	Linz	0.3	V	MWO (A	48]	1/8		4 CLAY, day, re	d/bin, low plasticity,		
0	(112	1.3	Ν	MWO A	√ 49 <u> </u>	44	5.76	y CLAT W/ Cali	me, dry, red/brn, lon		
D	<112	1.2	N	Mrs (A	₩ 50 _	50	574	YCLAY day, M	orly enold ton calche ad/brailow plasticity		
0	Lin	1.2	N	MUJIA	× 51	51	1	s edse			
D	(112	1.3	~	MUZIA	y 52	52					
D	4112	1.5	4	mus (₹ 53	53					
D	<112	0.1	N	palvo i C	5 A 54	54					
Q	<in< td=""><td>0.3</td><td>~</td><td>Who</td><td>g Ø 55</td><td>55</td><td></td><td></td><td></td></in<>	0.3	~	Who	g Ø 55	55					
0	(117	7,0	N	pwi	3 C 56	Sie					
Þ	Lu~	7,9	Ņ	Muo1 (D 57	57					
					SE 58	11					
0	/112	23	.1	mys](F 59	155					

0845

Sec.	mental, Inc.		Ca	508 Wes rlsbad, N				j	Project Name:	Date: 5/2 3/19 RP Number: 2RP-3179, 2RP-3464, 2RP-524
		LITHO	OLOG	IC /SO		ING LO			Logged By: BEN BELILL	Method:
at/Long					GRO, MR	ening: CHLO O, and DRO	ORIDES, TPH, B'	TEX,	Hole Diameter:	Total Depth:
ommen	at All Chlo	ride test in	clude a 6	0% error f	actor.					
Moisture	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type		Litholog	y/Remarks
P	4112	28	N	mwo 16	G 60	60	CLS	il+	study, ve	binlind, low
0	4112	2.9	M	umol 6	H 61	6,		Ola	stury, ro or	67
P	<1112	7.8	N	mve i 0	1 62	i or				
D	2117	3.4	N	mwals	J 63	63				
0	<u td="" z<=""><td>1.6</td><td>N</td><td>WMO)</td><td>SK 64</td><td><u> </u></td><td></td><td></td><td></td><td></td></u>	1.6	N	WMO)	SK 64	<u> </u>				
p	1 2000	11.7		mwol G		, s				
P	<111Z	4.5	N	mwol 5	A 66	66				
P	KIIZ	3.7	Ч	mus) (№ 67	1,7				
P					2 68	65				
0	Z112	1.1	N	mwolo	P 69	69				
D	cuz	7.3	N	nulls	Q 70	70			1	
0	(1.2	1.7	N	mubis	R 71	71				
					72	Ţ	1			

LT Environ	mental, Inc.		0	508 Wes	ronmenta t Stevens	al, Inc. Street	Identifi	Wmal	Date 5/23/19		
2	51					Remedi		Project JRU 10		RP Number 2RP-3179, 2RP-3464, 2RP-5243	
		LITH	OLOG	IC /SO	IL BOR	NG LO	G	Logged	By: BEN BELILL	Method	
at/Long		oride test in	nclude a	50% error f	GRO, MR	ning: CHLO O, and DRO	ORIDES, TPH	BTEX, Hole D	nameter	Total Depth	
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type		Litholog	y/Remarks	
₽	1112	3-1	۲	wwo) (5 72	72	LL	SHA			
þ	Kuz	1,0	V	muoj f	773	73					
D	<117	. I.l.	~	pur B	v 74	74					
D	2112	6,0	N	wmol	∀ 75	75					
D	2112	5.6	N	who I	W 76	76					
D	2112	3.4	1	music	¥ 77	77					
9	<112	1.1	٨	WAS)	y 78	78					
P	243	1.2	N	mwals	₹79	74					
					A 80	İ					
ð	2112	47	Ŋ	mws I C	₿ 81	81					
					ر 82						
P	L112	37	N	mws IC	0 83	83					
					84	+	1	× 1	(

LT Environ	Priental, Inc.		Ca	508 Wes Irlsbad, N	ronmenta t Stevens lew Mexic ngineering	Street co 88220	Identifier: MW0 \ Project Name: JRU 10	Date: 5/73/14 RP Number: 2RP-3179, 2RP-3464, 2RP-524.	
		LITH	OLOG	IC /SO	IL BORI	NG LOC	3	Logged By: BEN BELILL	Method:
at/Long					the second second		ORIDES, TPH,		Total Depth
ommen	t All Chlo	ride test in	clude a	50% error f	GRO, MRO	O, and DRO			
Moisture	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Litholo	gy/Remarks
0	4112	4.9	N	Who I C	E 184	811	CL S	5AA	
٥	4112	1.5	N	MV01 C	F 🍎 65_	85		7	
D	<112	7.7	N	MW01 C	G 🗖 80	86			
0	2112	7.4	N	wwo!	H € 87	87			
)	C112	1,6	N	NW210	1 🖜 88	88			
D	4112	1,1	N	mro la	J 🕶 81	81			
D	CIIZ	0.9	N	Mwo (C	K @ 10	90			
þ	<11Z	7.6	N	MUDIC	L - 11	41		LA SILY BLAY, dry	
P	4112	3.8			M ●92	41		plasticity, no odo	
b	<117	1.4	N	mw>1 C	N - 93	97			
		100			0 = 44[
P	2112	0.8	N	MW01 C	P = 95	45		\	

LT Environ	P mental, Inc.			508 Wes arlsbad, I	ronmenta st Stevens New Mexic	Street co 88220		Project Name: JRU 10	Date: 5/23/19 RP Number: 2RP-3179, 2RP-3464, 2RP-524
at/Long		LITH	OLOG	GIC / SO		ening: CHL	ORIDES, TPH,	Logged By: BEN BELILL BTEX, Hole Diameter	Method Total Depth:
ommen	t All Chlo	oride test in	clude a	60% error	GRO, MRO	O, and DRC),		
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)		Soil/Rock Type	Litholo	gy/Remarks
P	1112	1-4	N	MWOL C	Q @ 96]	96	CL s	ilty CLAY brale	red, low plastich,
0	Luz	4.2	N	mwo!	R • 91	47		1. 2467.	
0	2112	2.2	J	MWO!	5 248	98		1	
٥	Luz	1.4	N	MWOLO	1 12	17			
0	Luz	1,1	N	mwol (U • 100	100			
0	Luz	1,5	N	mwo (V ● 10]	121		j	
D	207	0.4	N	MWOLO	- W 3 102	107			
0	Llin	1,4	W	MW0/C	×●103	123			
D	2112	طدا	N	mwalc	Y●101/	104			
P	6112	0,7	N	MWIC	Z 🛡 105	105			
	2112	1.3	N	Mwoll	A \$106	106		1	
	1112	0.6	٨	wwell)	56107	107			
				6	00000			V	

LT Environ	mental, Inc.		Ca	508 Wes Irlsbad, N		al, Inc. Street co 88220 g Remedi		Project Name: JRU 10	Date: 5 /23 / 9/5 RP Number: 2RP-3179, 2RP-3464, 2RP-52	
	LITHOLOGIC / SOIL BORING LOG #/Long: Field Screening: CHLORIDES, TPH.								Logged By BEN BELII	L Method
at/Long					GRO, MR	o, and DRC		РН, ВТЕХ,	Hole Diameter.	Total Depth:
ommen	t All Chlo	ride test in	clude a 6	50% error f	actor.	H		3		
Moisture	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type		Lithe	ology/Remarks
D	2112	1.3	N	and 10	C 7210/8	168	CL	SAA		
D	LIIZ	0.3	N	MW(D	ŋ 73 (d	101		1		
D	LIIZ	0,6	1	mwal (E74 lie	110	5			
D	<1112	0.6	N	mus (f)	F75 II	hi				
D	1117	0,5	N	muoi ()6 76 ki	2 112				
D	<112	3.5	N	muloip	14 77 (1	113				
P	KIIZ	5.3	N	Mulio	578 HG	1111				
D	K112	1.3	N	mwo C	5 79	115				
Đ	<112	3.3	N	nwo P	₹ 80	116				
D	<111 Z	7.9	N	mue(D	L81	117				
D	(112	3,3	N	MV01 (1 82	118				
9	Luc	4.8	4	MVOID	N 83	1119				
					84	#	1	1		

LT Environ	mental, Inc.		0	LT Envi	ronment t Stevens	al, Inc. s Street co 88220			wo/	5/29/19 - 6/3/1
-	58					co 88220 g Remedi	Project Name JRU 10		RP Number 2RP-3404, 2RP-3464 2RP-3179	
		LITHO	LOGIC	C /SOII	111111111111111111111111111111111111111	LING LO		Logged By B	- 1111111111111111111111111111111111111	Method
Lat/Long Commen	t All Chlo	ride test in	clude a 6	50% error f	GRO, DRO	o, and MRC	ORIDES, TPH, B O.	TEX, Hole Diameter 6.15"		Total Depth
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.	Sample Depth	Soil/Rock Type		Lithology/I	Remarks
D	Luz	3.8	~	WWW DO	120	120		SAA		
P	<112	3.1	N	WAY OF	121	121				
D	<112	12	~	mwo) 00	122	222				
0	<112	0,4	N	NW 108	123	1 2 3				
0	TIIS	0.5	N	M40135	124	124				
- 0	ζωι	0.6	N	Ums1 B	T125	175				
D	<11L	0.8	2	W401 D	V 126	126				
0	<112	0.7	4	mwo) i	√127	177				
D	<112	1.0	~	who! D	W128	178				
					χ 129	1				
D				1	1.5	130				
)	4112	1.1	N	muolo	₹131	131				

	LT Environmental, Inc.			Ca	508 Wes arlsbad, I		al, Inc. Street co 88220		Identifier: MUD Project Name: JRU 10	Date: 6/3/19 - 6/4/19 RP Number: 2RP-3404, 2RP-3-2RP-3179
			LITHO	LOGIC	C / SOI	L SAMP	LING LO	G	Logged By: BEN BELILL	Method:
Ш	Lat/Long Commen		oride test in	clude a	50% error	GRO, DRO	oning CHLC		EX, Hole Diameter: 6.15"	Total Depth:
	Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Litholo	gy/Remarks
	0	KIIZ	0.4	N	WHOLE	A 132	132	CL	SAA	
	p	4112	0.7	Ν	WMOI È	B133	133			
	Ø	₹112	0,4	N	MWOIE		134			
	D	Luc	0.9	Ŋ	mwo (E	0135	135			
	9	(I'Z	0.6	N	WASI	E €136	136			
	0	SIIZ	0.7	h	MWOIE	F 137	137			
0	0	luz	1.0	N	MV0) F	6138	138		AY W/ gravel, d lesticity, no och	ry, It brafred, low
5	D	(112	0.1	N	MUOI	H139	134			
0	D	<112	3.8	N	wrole	1140	140	cr e	ABB silty CLAY plasticity, no	brown /red, low
.	0	(III	3.5	N	MWOLE	J141	141			
		(11)	3.1	N	WMDI E	√ 142	142			
	Ø	1112					1.1	1 1 1		
5	0	Ē	1.5	N	WNOIE	L ₁₄₃	143			

	LT Environmental, Inc.			508 Wes arlsbad, I	ironment st Stevens New Mexi Engineering	Street co 88220		Project Name: JRU 10	Date 6 / 19 RP Number 2RP-3404, 2R 2RP-3179
		LITHO	LOGI	C /SOII	L SAMP			Logged By: BEN BELILL	Method
Lat/Long	g:				Field Scree GRO, DRO		ORIDES, TPH, BTEX, O.	Hole Diameter: 6.15"	Total Depth
Comme	nt All Chlo	oride test ir	iclude a	50% error f	factor.				
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/	Remarks
9	4112	3.5	N	WM) E	w • I	144	CL S	NA	
b	(11Z	3,2	٨	WAGOLE	N • _	145			
D	112	2.7	η,	WM01 E	0 •	146			
D	<1172	3.1	N	WASI E	90	147			
D	(112	3.0	Ŋ	WMOVE	Q •	ાપજ			
P	<111Z	1.8	μ	WAO! E	R ● _	144			
D	<11Z	1.5	4	MOLE	50	150	1	_	
					7 _			FORCE	150
					8 =				
					9				
					10				
19					-				
					11				
					7				





STATE ENGINEER OFFICE ROSWELL

PAGE 1 OF 2

											7012	AUG 1	3 P	<u>l: 13 -</u>	
z	POD NUM				BATTERY SB-		POD-1)			OSE FILE NU		<u> </u>	·	<u> </u>	
GENERAL AND WELL LOCATION	WELL OW	NER NA	ME(S)			- (<u></u>		PHONE (OPTI	ONAL)				
77	WELL OW	NER MA	ILING	ADDRESS			_	-		CITY		STATE	······································	ZIP	
WE	6 DES	A DR	IVE	SUITE 370	00, P.O. BOX					MIDLANE) 	TX	79	9702 	
AL AND	WELL LOCATION		LAT	TTUDE	DEGREES 32		MINUTES 20		9.00 N	* ACCURACY REQUIRED; ONE TENTH OF A SECOND					
NER	(FROM	GPS)	LON	GITUDE	103	103 49 5		5.00 W	• DATUM RE	QUIRED: WGS 84					
I. GE	DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS FROM THE CORNER OF HWY 128 AND WIPP RD GO N FOR 4TH OF MILE TURN L FOLLOW CALICHE RD TO SIT												TO SITE.		
	(2.5 ACRE) (10 ACRE) (40 ACRE) (160 ACRE)SECTION							P	<u> </u>	TOWNSHIP	NORTH	RANGE	☑ EAST		
4AL	<u> </u>				1/4		1/4			1	23	SOUTH	30	☐ WEST	
OPTIONAL	SUBDIVIS	IE			LOT NUMI				BER	BLOCK NUMBER		UNITARA	G		
2. (MAP NUMBER		TRACT NU	IMBER			
	LICENSE	1478		NAME OF LICE	ENSED DRILLER			==:		<u> </u>	NAME OF WELL DE				
	DRILLING		_D	DRILLING EN		DEPTH OF COMPLETED WELL (FT) BORE HOLE					DEPTH WATER FIR				
NO	7-3	1-12		7-31-12	<u> </u>		0		<u> </u>	50'		N/A			
DRILLING INFORMATION	COMPLET	ED WELL	. ts:	ARTESIAN	DRY HO	LE	SHALLOV	(UNCC	ONF (NED)		STATIC WATER LE	VEL IN COMI N/A	PLETED WEL	.L (FT)	
NFO	DRILLING	FLUID:		√ AIR	MUD	MUD ADDITIVES - SPECIFY:									
NG	DRILLING	метно): 	ROTARY	П намме	HAMMER CABLE TOOL			ОТНЕ	R - SPECIFY:					
DRILLI	FROM	H (FT)	,	BORE HOL DIA. (IN)	1	CASING MATERIAL		CONNECTION TYPE (CASING)		INSIDE DIA. CASING (IN)	CASING THICKN	WALL ESS (IN)	SLOT SIZE (IN)		
3.1	0	50		5"		١	V/A		!	N/A	N/A	N	/A	N/A	
									<u> </u>		<u> </u>	<u> </u>			
ا ہا		H (FT)		THICKNES (FT)	s			-	-		NCIPAL WATER-BEARING STRATA YIELD				
RAT	FROM	то	<u>'</u>				(INCLODE W	A I E K	DEAKING	CAVITIES OF	R FRACTURE ZON	E9)		(GPM)	
GST		 _								 _					
N. N.															
BEA	 -		\dashv												
4. WATER BEARING STRATA	METHOD (ISED TO	ESTIM	MATE YIELD OF	WATER-BEARING ST	rat/	`				TOTAL ESTIMATED	WELL YIELI	O (GPM)	=====	
											<u> </u>		_		
Í	FOR OSE		NAL	USE - 355	9		POD N	UMBE	R	7	TRN NUMBE		(Version 6/ 7/37	9/08)	

23E. 30E. 1.

LOCATION EXP

- Borcholes

ANNULAR SEAL AND GRAVEL PACK 2' 50' 5" 11BAGS OF 3/8 HOLE PLUG TOP	OD OF EMENT LOAD LOAD TER RING? NO NO NO NO NO NO
DEPTH (FT)	EMENT LOAD LOAD TER RING? NO NO NO NO NO NO
DEPTH (FT)	TER RING? I NO
DEPTH (FT)	TER RING? NO
DEPTH (FT)	NO
FROM TO (FT) (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES) BEA	NO
FROM TO (FT) (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES) BEA	NO
2' 5' 3' BASIN FINE SAND - CALICHE YES	☐ NO ☐ NO ☐ NO ☐ NO ☐ NO ☐ NO
5' 8" 3' TAN FINE SAND - SANDSTONE YES 8' 13' 5' RED FINE SAND YES 13' 15' 2' TAN FINE SAND YES 15' 36' 21' RED FINE SAND (DRK) - SANDSTONE WITH CLAY YES 15' 36' 50' 14' RED SILTY SAND - SILTY CLAY YES 15' 50' YES YES 15' 36' 50' YES 15' 36' 50' 14' RED SILTY SAND - SILTY CLAY YES 15' 15' 15' 15' 15' 15' 15' 15' 15' 15'	☐ NO ☐ NO ☐ NO ☐ NO
8' 13' 5' RED FINE SAND YES 13' 15' 2' TAN FINE SAND YES 15' 36' 21' RED FINE SAND (DRK) - SANDSTONE WITH CLAY YES TD 50' YES ☑ NO☑ NO	
13' 15' 2' TAN FINE SAND YES 15' 36' 21' RED FINE SAND (DRK) - SANDSTONE WITH CLAY YES 36' 50' 14' RED SILTY SAND - SILTY CLAY YES	☑ NO☑ NO
15' 36' 21' RED FINE SAND (DRK) - SANDSTONE WITH CLAY YES 36' 50' 14' RED SILTY SAND - SILTY CLAY YES YE	☑ NO
	Ø NO
	□ NO
	□ NO
	□ NO
	□ №
	□ NO
☐ YES	□ NO
□ YES	□ N0
☐ YES	□ NO
□ YES	□ NO
☐ YES	□ио
ATTACH ADDITIONAL PAGES AS NEEDED TO FULLY DESCRIBE THE GEOLOGIC LOG OF THE WELL	
METHOD: BAILER PUMP AIR LIFT OTHER ~ SPECIFY:	
WELL TEST TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING START TIME, END TO AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD. ADDITIONAL STATEMENTS OR EXPLANATIONS:	IME,
AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING TERROS.	
6 ADDITIONAL STATEMENTS OR EXPLANATIONS: E SOIL BORING WAS PLUGGED AND ABANDONED UPON COMPLETION OF SAMPLING	
SOIL BORING WAS PLUGGED AND ABANDONED UPON COMPLETION OF SAMPLING	
S PEDWARD BRYAN (DRILLING SUPERVISOR)	
7. TEST	
'.' T	
THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE OF CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGIN	.ND EER AND
THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:	
CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINE THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING: 8-10-12	
SIGNATURE OF DRILLER DATE	

FOR OSE INTERNAL USE		WELL RECORD & LOG (Version 6/9/08)
FILE NUMBER (- 3559	POD NUMBER	TRN NUMBER 507/37
LOCATION		PAGE 2 OF 2



APPENDIX B

Photographic Log



Photographic Log
XTO Energy, Inc
James Ranch Unit 108H
Incident Number nAPP2227351943





Photograph 1 Date: 7/26/2022 Description: Site assessment activities, release extent

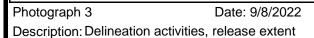
View: Southwest

Photograph 2 Date: 9/8/2022

Description: Delineation activities, release extent

View: Northwest





View: South



Photograph 4 Date: 10/20/2022

Description: Delineation activities, PH01

View: East



APPENDIX C

Lithologic Soil Sampling Logs

								Sample Name: PH01	Date: 10/20/2022		
				15	0	L U	M	Site Name: JRU 108H	3 3 3 3 7 3 7 2 5 7		
		Envi	roni	mental,	Enginee	ring and		Incident Number: NAPP2217931599			
	- E	Hydi	roge	eologic	Consulta	nts		Job Number: 03E1558090			
		LITHOL	.OGI	C / SOIL	SAMPLING	LOG		Logged By: BB	Method: Backhoe		
Cooi	rdinates: 3	2.33641,	-103.	83180				Hole Diameter: N/A	Total Depth: 7'		
			-				•	PID for chloride and vapor, respion factor was added to all chloring	•		
Moisture	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic D	·		
					1	0	SP	0-4', SAND, moist, reddish graded, fine grained, so	me small roots, strong		
М	1,037	3,516	Υ	SS01	0.5	_		H/C odor, dark brown-g	grey staining.		
М	470	438	Ν	PH01	1	_ 1		1'-4', no stain.			
					-	-					
М	2,676	565	N	PH01	2	2					
''	2,070	303	.,	11101	-	- <i>-</i> -					
					_	_					
М	11,748	879	N	PH01	3	3					
					-	-					
М	3,365	1,173	N	PH01	4	- 4	CCHE	4'-7', CALICHE, moist, ligh	t brown-light grev.		
	3,333	_,_,			_	- ·	00	moderately consolidate	ed, some fine-medium		
					_	-		grained poorly graded H/C odor, no stain.	light grey sand, strong		
М	19,297	1,055	N		_	_ 5					
					_	-					
М	21,151	61	N	PH01	6	<u> </u>		6'-7', moderately-poorly o	consolidated, trace H/C		
	,				_	-		odor.	, .		
					_	_					
D	7,673	1.8	N	PH01	7	7	TD	@7', no odor. Total depth at 7 feet bgs.			
					-	-	10	rotar depth at 7 reet bgs.			
					-	8					
						-					
					_	_					
					-	9					
						- -					
					-	10					
						-					
					-	- ,					
					-	11					
						- -					
					-	12					

FNSOLI	M	Sample Name: PH02	Date: 10/20/2022	
ENSOLU		Site Name: JRU 108H		
Environmental, Engineering and		Incident Number: NAPP2217931599		
Hydrogeologic Consultants		Job Number: 03E1558090		
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: BB	Method: Backhoe	
Coordinates: 32.33641,-103.83180	Hole Diameter: N/A Total Depth: 7'			

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M M	2,615 >3600	326 51	Y N	SS02 PH02	0.5 _ 1 _	0	SP	0-3', SAND, moist, reddish brown, poorly graded, fine grained, some small roots, strong H/C odor, dark brown-grey staining. 0.5'-3', no stain. 1'-2.5', mild H/C odor.
М	>3600	8.9	N	PH02	2	2		2.5'-3', no odor.
M	>3600	1.3	N		- - -	- _ 3	ССНЕ	3'-7', CALICHE, moist, light brown-light grey, moderately consolidated, some fine-medium grained poorly graded light grey sand, no
M	11,748	1.0	N	PH02	4 <u> </u>	4		stain, no odor.
D	>3600	0.1	N	PH02	5 <u>-</u>	- - 5		
D	>3600	0.2	N		- - - -	6		6'-7', moderately-poorly consolidated.
D	>3600	0.6	N	PH02	7 <u>-</u> -	7	TD	Total depth at 7 feet bgs.
					- - - -	- - 8		
					- - -	9		
					- - -	10		
					- - -	11		
					-	12		

								Sample Name: BH03	Date: 9/8/2022
		E	N	S	0 1	_ U	M	Site Name: JRU 108H	Date: 37 07 2022
					Engineer		_ _	Incident Number: NAPP2217931	599
S.	ě				Consultar			Job Number: 03E1558090	
		LITHOL	OGIO	C / SOIL S	SAMPLING	LOG		Logged By: BB	Method: Hand Auger
Coord		2.33641,-						Hole Diameter: N/A	Total Depth: 1'
					ith HACH Ch	loride Test S	Strips and	PID for chloride and vapor, respe	,
			_					on factor was added to all chlorid	-
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic De	·
					<u>T</u>	0	SP	0-1', SAND, moist, reddish graded, fine grained, sor	brown, poorly ne small roots, mild
М	280	630	Υ	SS03	0.5	-		H/C odor, dark brown st	
М	<112	8.9	N	BH03	1	_ 1		0.5'-1', no stain, no odor.	
'''		5.5	'	255		 -	TD	Total depth at 1 foot bgs, a	auger refusal.
					-	_			
						2			
					-	-			
						-			
					-	_ 3			
						- -			
					-	<u> </u>			
					_	_			
					-	_			
					_	_ 5			
					_	-			
					_	- -			
					-	_ 6			
						- -			
					-	7			
						_ ′ -			
					-	_			
						8			
					-	-			
					-	_ -			
]	9			
					-	-			
						10			
						_ 10			
					-	_			
					-	11			
					_	-			
					-	_ -			
					<u> </u>	12			



APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation



Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-2653-1

Laboratory Sample Delivery Group: Eddy County NM

Client Project/Site: JRU 108H

For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

RAMER

Authorized for release by: 8/4/2022 3:32:46 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

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

Client: Ensolum
Project/Site: JRU 108H

Laboratory Job ID: 890-2653-1
SDG: Eddy County NM

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QC Association Summary	15
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Sample Summary	21
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2

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Definitions/Glossary

Client: Ensolum Job ID: 890-2653-1
Project/Site: JRU 108H SDG: Eddy County NM

2

Qualifiers

		_	
GC	v	n	Δ
00	•	·	_

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD RPD exceeds control limits.
F1	MS and/or MSD recovery exceeds control limits.
S1+	Surrogate recovery exceeds control limits, high biased.

Indicates the analyte was analyzed for but not detected.

GC Semi VOA

U

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

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)

DL, RA, RE, IN DLC $Indicates\ a\ Dilution,\ Re-analysis,\ Re-extraction,\ or\ additional\ Initial\ metals/anion\ analysis\ of\ the\ sample$

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

Job ID: 890-2653-1 Client: Ensolum Project/Site: JRU 108H SDG: Eddy County NM

Job ID: 890-2653-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-2653-1

Receipt

The samples were received on 7/26/2022 4:02 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.2°C

GC VOA

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-31337 and analytical batch 880-31375 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

Method 8021B: Surrogate recovery for the following sample was outside control limits: SS02 (890-2653-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike duplicate (MSD) recoveries for preparation batch 880-31465 and analytical batch 880-31452 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: SS01 (890-2653-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA

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.

Job ID: 890-2653-1 SDG: Eddy County NM

Client Sample ID: SS01

Date Collected: 07/26/22 09:00 Date Received: 07/26/22 16:02

Sample Depth: 0.5

Client: Ensolum

Project/Site: JRU 108H

Lab Sample ID: 890-2653-1

. Matrix: Solid

Method: 8021B - Volatile Orga	nic Compounds (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.05		0.200	mg/Kg		08/04/22 08:51	08/04/22 14:19	100
Toluene	11.6		0.200	mg/Kg		08/04/22 08:51	08/04/22 14:19	100
Ethylbenzene	5.96		0.200	mg/Kg		08/04/22 08:51	08/04/22 14:19	100
m-Xylene & p-Xylene	15.6		0.400	mg/Kg		08/04/22 08:51	08/04/22 14:19	100
o-Xylene	7.28		0.200	mg/Kg		08/04/22 08:51	08/04/22 14:19	100
Xylenes, Total	22.9		0.400	mg/Kg		08/04/22 08:51	08/04/22 14:19	100
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	139	S1+	70 - 130			08/04/22 08:51	08/04/22 14:19	100
1,4-Difluorobenzene (Surr)	110		70 - 130			08/04/22 08:51	08/04/22 14:19	100

 Method: Total BTEX - Total BTEX Calculation

 Analyte
 Result Total BTEX
 Qualifier
 RL Qualifier
 Unit mg/Kg
 D Prepared Manalyzed
 Analyzed Dil Fac D

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

 Analyte
 Result Total TPH
 Qualifier Qualifier
 RL Result Qualifier
 Unit mg/Kg
 D Prepared Prepared Total TPH
 Analyzed Total TPH
 Dil Fac Total TPH

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	2140		250	mg/Kg		07/29/22 08:50	07/31/22 03:41	5
Diesel Range Organics (Over C10-C28)	16300		250	mg/Kg		07/29/22 08:50	07/31/22 03:41	5
Oll Range Organics (Over C28-C36)	4760		250	mg/Kg		07/29/22 08:50	07/31/22 03:41	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	107		70 - 130			07/29/22 08:50	07/31/22 03:41	5
o-Terphenyl	349	S1+	70 - 130			07/29/22 08:50	07/31/22 03:41	5

 Method: 300.0 - Anions, Ion Chromatography - Soluble

 Analyte
 Result
 Qualifier
 RL
 Unit
 D
 Prepared
 Analyzed
 Dil Fac

 Chloride
 4930
 50.0
 mg/Kg
 07/30/22 22:25
 10

Client Sample ID: SS02
Date Collected: 07/26/22 09:05

Date Received: 07/26/22 16:02

Sample Depth: 0.5

	- "	0 ""			_			B.: E
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0499	U *- *1	0.0499	mg/Kg		08/02/22 14:44	08/04/22 00:59	25
Toluene	0.109	*- *1	0.0499	mg/Kg		08/02/22 14:44	08/04/22 00:59	25
Ethylbenzene	0.574	*- *1	0.0499	mg/Kg		08/02/22 14:44	08/04/22 00:59	25
m-Xylene & p-Xylene	0.836	*- *1	0.0998	mg/Kg		08/02/22 14:44	08/04/22 00:59	25
o-Xylene	0.458	*+ *1	0.0499	mg/Kg		08/02/22 14:44	08/04/22 00:59	25
Xylenes, Total	1.29	*1	0.0998	mg/Kg		08/02/22 14:44	08/04/22 00:59	25

Eurofins Carlsbad

Lab Sample ID: 890-2653-2

Matrix: Solid

1 2

3

7

8

10

12

Job ID: 890-2653-1 SDG: Eddy County NM

Project/Site: JRU 108H

Client Sample ID: SS02 Lab Sample ID: 890-2653-2 Date Collected: 07/26/22 09:05 Matrix: Solid

Date Received: 07/26/22 16:02

Sample Depth: 0.5

Client: Ensolum

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	186	S1+	70 - 130			08/02/22 14:44	08/04/22 00:59	25
1,4-Difluorobenzene (Surr)	94		70 - 130			08/02/22 14:44	08/04/22 00:59	25
Method: Total BTEX - Total BTE	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	1.98		0.0998	mg/Kg			08/04/22 09:41	1
Method: 8015 NM - Diesel Rang	e Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
,								
Total TPH Method: 8015B NM - Diesel Rar	•		250	mg/Kg			07/31/22 10:38	1
*	12500		250	mg/Kg			07/31/22 10:38	1
Total TPH Method: 8015B NM - Diesel Rar Analyte	nge Organics (DI Result	RO) (GC) Qualifier	RL	Unit	D	Prepared 07/20/20 09:50	Analyzed	Dil Fac
otal TPH Method: 8015B NM - Diesel Rar Analyte Basoline Range Organics	nge Organics (DI				<u>D</u>	Prepared 07/29/22 08:50		
Oracl TPH Method: 8015B NM - Diesel Rar Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over	nge Organics (DI Result		RL	Unit	<u>D</u>		Analyzed	5
Method: 8015B NM - Diesel Rar Analyte Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	nge Organics (DI Result 1050 9700		RL 250	Unit mg/Kg mg/Kg	<u>D</u>	07/29/22 08:50 07/29/22 08:50	Analyzed 07/31/22 04:00 07/31/22 04:00	5
Fotal TPH Method: 8015B NM - Diesel Rar Analyte Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over	nge Organics (DI Result 1050		RL	<mark>Unit</mark> mg/Kg	<u>D</u>	07/29/22 08:50	Analyzed 07/31/22 04:00	5
Method: 8015B NM - Diesel Rar Analyte Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) DII Range Organics (Over	nge Organics (DI Result 1050 9700		RL 250	Unit mg/Kg mg/Kg	<u>D</u>	07/29/22 08:50 07/29/22 08:50	Analyzed 07/31/22 04:00 07/31/22 04:00	5
Method: 8015B NM - Diesel Rar Analyte Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) DII Range Organics (Over C28-C36)	nge Organics (DI Result 1050 9700 1720	Qualifier	RL 250 250 250	Unit mg/Kg mg/Kg	<u>D</u>	07/29/22 08:50 07/29/22 08:50 07/29/22 08:50	Analyzed 07/31/22 04:00 07/31/22 04:00 07/31/22 04:00	5

Client Sample ID: SS03 Lab Sample ID: 890-2653-3 Date Collected: 07/26/22 09:10 **Matrix: Solid**

RL

25.0

Unit

mg/Kg

D

Prepared

Result Qualifier

1650

Date Received: 07/26/22 16:02

Sample Depth: 0.5

Analyte

Chloride

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0497	U *- *1	0.0497	mg/Kg		08/02/22 14:44	08/04/22 01:19	25
Toluene	0.594	*- *1	0.0497	mg/Kg		08/02/22 14:44	08/04/22 01:19	25
Ethylbenzene	3.66	*- *1	0.0497	mg/Kg		08/02/22 14:44	08/04/22 01:19	25
m-Xylene & p-Xylene	8.72	*- *1	0.0994	mg/Kg		08/02/22 14:44	08/04/22 01:19	25
o-Xylene	0.276	*+ *1	0.0497	mg/Kg		08/02/22 14:44	08/04/22 01:19	25
Xylenes, Total	9.00	*1	0.0994	mg/Kg		08/02/22 14:44	08/04/22 01:19	25
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			08/02/22 14:44	08/04/22 01:19	25
1,4-Difluorobenzene (Surr)	90		70 - 130			08/02/22 14:44	08/04/22 01:19	25
- Method: Total BTEX - Total B1	EX Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	13.3		0.0994	mg/Kg			08/04/22 09:41	1

Eurofins Carlsbad

Dil Fac

Analyzed

07/30/22 22:48

Matrix: Solid

Lab Sample ID: 890-2653-3

07/31/22 04:20

Analyzed

07/30/22 22:56

07/29/22 08:50

Prepared

D

Client Sample Results

Client: Ensolum Job ID: 890-2653-1
Project/Site: JRU 108H SDG: Eddy County NM

Client Sample ID: SS03

Date Collected: 07/26/22 09:10 Date Received: 07/26/22 16:02

Sample Depth: 0.5

o-Terphenyl

Analyte

Chloride

Method: 8015 NM - Diesel Range	Organics (DRO) (GC)						
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	12400	249	mg/Kg			07/31/22 10:38	1
Method: 8015B NM - Diesel Rang	e Organics (DRO) (GC)						
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	1000	249	mg/Kg		07/29/22 08:50	07/31/22 04:20	5
Diesel Range Organics (Over C10-C28)	9420	249	mg/Kg		07/29/22 08:50	07/31/22 04:20	5
Oll Range Organics (Over C28-C36)	1960	249	mg/Kg		07/29/22 08:50	07/31/22 04:20	5
Surrogate	%Recovery Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	106	70 - 130			07/29/22 08:50	07/31/22 04:20	5

70 - 130

RL

5.05

Unit

mg/Kg

178 S1+

Result Qualifier

188

Method: 300.0 - Anions, Ion Chromatography - Soluble

13

Dil Fac

Surrogate Summary

Job ID: 890-2653-1 Client: Ensolum Project/Site: JRU 108H SDG: Eddy County NM

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limit
		BFB1	DFBZ1	
_ab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-17728-A-1-A MS	Matrix Spike	105	97	
880-17728-A-1-B MSD	Matrix Spike Duplicate	102	97	
390-2653-1	SS01	139 S1+	110	
390-2653-2	SS02	186 S1+	94	
390-2653-3	SS03	117	90	
390-2656-A-1-F MS	Matrix Spike	104	96	
890-2656-A-1-G MSD	Matrix Spike Duplicate	106	93	
CS 880-31337/1-A	Lab Control Sample	113	93	
CS 880-31465/1-A	Lab Control Sample	103	94	
CSD 880-31337/2-A	Lab Control Sample Dup	90	87	
CSD 880-31465/2-A	Lab Control Sample Dup	106	97	
MB 880-31323/5-A	Method Blank	106	87	
MB 880-31337/5-A	Method Blank	99	87	
MB 880-31465/5-A	Method Blank	100	91	
Surrogate Legend				
BFB = 4-Bromofluorobei	nzene (Surr)			

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
b Sample ID	Client Sample ID	(70-130)	(70-130)	
0-2646-A-1-B MS	Matrix Spike	87	84	
0-2646-A-1-C MSD	Matrix Spike Duplicate	87	84	
0-2653-1	SS01	107	349 S1+	
0-2653-2	SS02	98	162 S1+	
0-2653-3	SS03	106	178 S1+	
CS 880-30965/2-A	Lab Control Sample	101	102	
CSD 880-30965/3-A	Lab Control Sample Dup	93	93	
B 880-30965/1-A	Method Blank	91	101	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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Released to Imaging: 4/28/2023 8:49:46 AM

Client: Ensolum Job ID: 890-2653-1 Project/Site: JRU 108H SDG: Eddy County NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-31323/5-A

Analysis Batch: 31375

Matrix: Solid

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31323

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/02/22 13:15	08/03/22 10:46	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130	08/02/22 13:15	08/03/22 10:46	1
1,4-Difluorobenzene (Surr)	87		70 - 130	08/02/22 13:15	08/03/22 10:46	1

Lab Sample ID: MB 880-31337/5-A

Client Sample ID: Method Blank

			•	oumpio isi momou siaim
Matrix: Solid				Prep Type: Total/NA
Analysis Batch: 31375				Prep Batch: 31337
	MB MB			

Analyte	Result Qua	alifier RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200 U	0.00200	mg/Kg		08/02/22 14:44	08/03/22 21:53	1
Toluene	<0.00200 U	0.00200	mg/Kg		08/02/22 14:44	08/03/22 21:53	1
Ethylbenzene	<0.00200 U	0.00200	mg/Kg		08/02/22 14:44	08/03/22 21:53	1
m-Xylene & p-Xylene	<0.00400 U	0.00400	mg/Kg		08/02/22 14:44	08/03/22 21:53	1
o-Xylene	<0.00200 U	0.00200	mg/Kg		08/02/22 14:44	08/03/22 21:53	1
Xylenes, Total	<0.00400 U	0.00400	mg/Kg		08/02/22 14:44	08/03/22 21:53	1

мв мв

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130	08/02/22 14:	44 08/03/22 21:53	1
1,4-Difluorobenzene (Surr)	87		70 - 130	08/02/22 14:	44 08/03/22 21:53	1

Lab Sample ID: LCS 880-31337/1-A

Matrix: Solid

Analysis Batch: 31375

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 31337

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09999		mg/Kg		100	70 - 130	
Toluene	0.100	0.1031		mg/Kg		103	70 - 130	
Ethylbenzene	0.100	0.1082		mg/Kg		108	70 - 130	
m-Xylene & p-Xylene	0.200	0.2220		mg/Kg		111	70 - 130	
o-Xylene	0.100	0.1387	*+	mg/Kg		139	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	113	70 - 130
1.4-Difluorobenzene (Surr)	93	70 - 130

Lab Sample ID: LCSD 880-31337/2-A

Matrix: Solid

Analysis Batch: 31375

Client Sample ID	: Lab Control	Sample Dup
	Dean T	mar Tatal/NIA

Prep Type: Total/NA

Prep Batch: 31337

	Spike	LCSD L	-C2D				%Rec		RPD
Analyte	Added	Result Q	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.0998	0.05262 *-	- *1	mg/Kg		53	70 - 130	62	35

QC Sample Results

Client: Ensolum Job ID: 890-2653-1 Project/Site: JRU 108H SDG: Eddy County NM

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

Lab Sample ID: LCSD 880-31337/2-A

Matrix: Solid

Analysis Batch: 31375

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 31337

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Toluene	0.0998	0.06071	*- *1	mg/Kg		61	70 - 130	52	35	
Ethylbenzene	0.0998	0.06794	*- *1	mg/Kg		68	70 - 130	46	35	
m-Xylene & p-Xylene	0.200	0.1297	*- *1	mg/Kg		65	70 - 130	52	35	
o-Xylene	0.0998	0.09111	*1	mg/Kg		91	70 - 130	41	35	
	Toluene Ethylbenzene m-Xylene & p-Xylene	Analyte Added Toluene 0.0998 Ethylbenzene 0.0998 m-Xylene & p-Xylene 0.200	Analyte Added Result Toluene 0.0998 0.06071 Ethylbenzene 0.0998 0.06794 m-Xylene & p-Xylene 0.200 0.1297	Analyte Added Result Qualifier Toluene 0.0998 0.06071 *- *1 Ethylbenzene 0.0998 0.06794 *- *1 m-Xylene & p-Xylene 0.200 0.1297 *- *1	Analyte Added Result Qualifier Unit Toluene 0.0998 0.06071 *- *1 mg/Kg Ethylbenzene 0.0998 0.06794 *- *1 mg/Kg m-Xylene & p-Xylene 0.200 0.1297 *- *1 mg/Kg	Analyte Added Result Qualifier Unit D Toluene 0.0998 0.06071 *- *1 mg/Kg Ethylbenzene 0.0998 0.06794 *- *1 mg/Kg m-Xylene & p-Xylene 0.200 0.1297 *- *1 mg/Kg	Analyte Added Result Qualifier Unit D %Rec Toluene 0.0998 0.06071 *- *1 mg/Kg 61 Ethylbenzene 0.0998 0.06794 *- *1 mg/Kg 68 m-Xylene & p-Xylene 0.200 0.1297 *- *1 mg/Kg 65	Analyte Added Result Qualifier Unit D %Rec Limits Toluene 0.0998 0.06071 *- *1 mg/Kg 61 70 - 130 Ethylbenzene 0.0998 0.06794 *- *1 mg/Kg 68 70 - 130 m-Xylene & p-Xylene 0.200 0.1297 *- *1 mg/Kg 65 70 - 130	Analyte Added Result Qualifier Unit D %Rec Limits RPD Toluene 0.0998 0.06071 *- *1 mg/Kg 61 70 - 130 52 Ethylbenzene 0.0998 0.06794 *- *1 mg/Kg 68 70 - 130 46 m-Xylene & p-Xylene 0.200 0.1297 *- *1 mg/Kg 65 70 - 130 52	Analyte Added Result Qualifier Unit D %Rec Limits RPD Limits Toluene 0.0998 0.06071 *- *1 mg/Kg 61 70 - 130 52 35 Ethylbenzene 0.0998 0.06794 *- *1 mg/Kg 68 70 - 130 46 35 m-Xylene & p-Xylene 0.200 0.1297 *- *1 mg/Kg 65 70 - 130 52 35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	90		70 - 130
1,4-Difluorobenzene (Surr)	87		70 - 130

Lab Sample ID: 890-2656-A-1-F MS Client Sample ID: Matrix Spike

Matrix: Solid

Prep Type: Total/NA **Analysis Batch: 31375**

Prep Batch: 31337

Spike MS MS %Rec Sample Sample Result Qualifier Analyte Added Result Qualifier Unit %Rec Limits Benzene <0.00199 U *- *1 0.101 0.08722 87 70 - 130 mg/Kg Toluene <0.00199 U *- *1 0.101 0.08202 mg/Kg 82 70 - 130 Ethylbenzene <0.00199 U*-*1 0.101 0.08158 mg/Kg 81 70 - 130 0.201 m-Xylene & p-Xylene <0.00398 U *- *1 0.1625 81 70 - 130 mg/Kg o-Xylene <0.00199 U*+*1 0.101 0.09304 mg/Kg 92 70 - 130

MS MS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	104	70 - 130
1,4-Difluorobenzene (Surr)	96	70 - 130

Lab Sample ID: 890-2656-A-1-G MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Analysis Batch: 31375

Prep Type: Total/NA Prep Batch: 31337

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00199	U *- *1	0.0998	0.09326		mg/Kg		93	70 - 130	7	35
Toluene	<0.00199	U *- *1	0.0998	0.08591		mg/Kg		86	70 - 130	5	35
Ethylbenzene	<0.00199	U *- *1	0.0998	0.08696		mg/Kg		87	70 - 130	6	35
m-Xylene & p-Xylene	<0.00398	U *- *1	0.200	0.1684		mg/Kg		84	70 - 130	4	35
o-Xylene	<0.00199	U *+ *1	0.0998	0.09635		mg/Kg		97	70 - 130	3	35

MSD MSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	106	70 - 130
1,4-Difluorobenzene (Surr)	93	70 - 130

Lab Sample ID: MB 880-31465/5-A

Matrix: Solid

Analysis Batch: 31452

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31465

мв мв

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg	_	08/04/22 08:51	08/04/22 10:53	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/04/22 08:51	08/04/22 10:53	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/04/22 08:51	08/04/22 10:53	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/04/22 08:51	08/04/22 10:53	1

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QC Sample Results

Client: Ensolum Job ID: 890-2653-1 Project/Site: JRU 108H SDG: Eddy County NM

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

Lab Sample ID: MB 880-31465/5-A

Matrix: Solid

Analysis Batch: 31452

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31465

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/04/22 08:51	08/04/22 10:53	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/04/22 08:51	08/04/22 10:53	1

MD MD

MR MR

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100	70 - 130	08/04/22 08:51	08/04/22 10:53	1
1,4-Difluorobenzene (Surr)	91	70 - 130	08/04/22 08:51	08/04/22 10:53	1

Lab Sample ID: LCS 880-31465/1-A **Client Sample ID: Lab Control Sample**

Matrix: Solid

Prep Type: Total/NA **Analysis Batch: 31452** Prep Batch: 31465

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09988		mg/Kg		100	70 - 130	
Toluene	0.100	0.1006		mg/Kg		101	70 - 130	
Ethylbenzene	0.100	0.1038		mg/Kg		104	70 - 130	
m-Xylene & p-Xylene	0.200	0.2107		mg/Kg		105	70 - 130	
o-Xylene	0.100	0.1145		mg/Kg		114	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	103	70 - 130
1,4-Difluorobenzene (Surr)	94	70 - 130

Lab Sample ID: LCSD 880-31465/2-A

Matrix: Solid

Analysis Batch: 31452

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

Prep Batch: 31465

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09085		mg/Kg		91	70 - 130	9	35
Toluene	0.100	0.08782		mg/Kg		88	70 - 130	14	35
Ethylbenzene	0.100	0.09053		mg/Kg		91	70 - 130	14	35
m-Xylene & p-Xylene	0.200	0.1832		mg/Kg		92	70 - 130	14	35
o-Xylene	0.100	0.1004		mg/Kg		100	70 - 130	13	35

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	106	70 - 130
1,4-Difluorobenzene (Surr)	97	70 ₋ 130

Lab Sample ID: 880-17728-A-1-A MS

Matrix: Solid

Analysis Batch: 31452

Client Sample	e ID: N	latrix S	pike
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Prep Type: Total/NA

Prep Batch: 31465

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U	0.100	0.08136		mg/Kg		81	70 - 130	
Toluene	<0.00200	U	0.100	0.07618		mg/Kg		76	70 - 130	
Ethylbenzene	<0.00200	U F1	0.100	0.07372		mg/Kg		74	70 - 130	
m-Xylene & p-Xylene	<0.00399	U F1	0.200	0.1469		mg/Kg		73	70 - 130	
o-Xylene	<0.00200	U	0.100	0.07974		mg/Kg		80	70 - 130	

Job ID: 890-2653-1 SDG: Eddy County NM

Client: Ensolum Project/Site: JRU 108H

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

Lab Sample ID: 880-17728-A-1-A MS

Matrix: Solid

Analysis Batch: 31452

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 31465

MS MS Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 105 70 - 130 1,4-Difluorobenzene (Surr) 97 70 - 130

Lab Sample ID: 880-17728-A-1-B MSD

Matrix: Solid

Analysis Batch: 31452

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 31465

									-		
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00200	U	0.0998	0.08732		mg/Kg		87	70 - 130	7	35
Toluene	<0.00200	U	0.0998	0.07748		mg/Kg		78	70 - 130	2	35
Ethylbenzene	<0.00200	U F1	0.0998	0.06936	F1	mg/Kg		69	70 - 130	6	35
m-Xylene & p-Xylene	<0.00399	U F1	0.200	0.1380	F1	mg/Kg		69	70 - 130	6	35
o-Xylene	<0.00200	U	0.0998	0.07575		mg/Kg		76	70 - 130	5	35

MSD MSD

%Recovery Qualifier Surrogate Limits 4-Bromofluorobenzene (Surr) 102 70 - 130 1,4-Difluorobenzene (Surr) 97 70 - 130

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

Lab Sample ID: MB 880-30965/1-A

Matrix: Solid

Analysis Batch: 31053

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 30965

	МВ	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		07/29/22 08:50	07/30/22 19:51	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		07/29/22 08:50	07/30/22 19:51	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/29/22 08:50	07/30/22 19:51	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	91		70 - 130	07/29/22 08:5	07/30/22 19:51	1
o-Terphenyl	101		70 - 130	07/29/22 08:5	07/30/22 19:51	1

Lab Sample ID: LCS 880-30965/2-A

Matrix: Solid

Analysis Batch: 31053

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 30965

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	1058		mg/Kg		106	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	1040		mg/Kg		104	70 - 130	
C10-C28)								

C10-C28)

	LUS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	101		70 - 130
o-Terphenyl	102		70 - 130

Lab Sample ID: LCSD 880-30965/3-A

Job ID: 890-2653-1 Client: Ensolum Project/Site: JRU 108H SDG: Eddy County NM

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

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 30965

Prep Type: Total/NA

Prep Type: Total/NA

Prep Batch: 30965

-	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	949.7		mg/Kg		95	70 - 130	11	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	972.0		mg/Kg		97	70 - 130	7	20

C10-C28)

Matrix: Solid

Analysis Batch: 31053

LCSD LCSD

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

Lab Sample ID: 890-2646-A-1-B MS Client Sample ID: Matrix Spike

Matrix: Solid

Analysis Batch: 31053

Spike MS MS %Rec Sample Sample Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits 999 70 - 130 Gasoline Range Organics <49.9 U 1211 mg/Kg 116 (GRO)-C6-C10 Diesel Range Organics (Over <49.9 U 999 846.5 mg/Kg 85 70 - 130

C10-C28)

MS MS Surrogate %Recovery Qualifier Limits 1-Chlorooctane 87 70 - 130 o-Terphenyl 84 70 - 130

Lab Sample ID: 890-2646-A-1-C MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Analysis Batch: 31053

Prep Batch: 30965 Sample Sample Spike MSD MSD %Rec **RPD** Limit Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD <49.9 U 999 125 20 Gasoline Range Organics 1295 70 - 130 mg/Kg (GRO)-C6-C10 <49.9 U 999 863.7 86 70 - 130 20 Diesel Range Organics (Over mg/Kg 2 C10-C28)

Surrogate	%Recovery Qualifier	Limits
1-Chlorooctane	87	70 _ 130
o-Terphenyl	84	70 - 130

MSD MSD

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-30913/1-A Client Sample ID: Method Blank **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 31002

MB MB Analyte Result Qualifier RL Unit Analyzed Dil Fac D Prepared Chloride <5.00 U 5.00 07/30/22 22:01 mg/Kg

Client: Ensolum Job ID: 890-2653-1 Project/Site: JRU 108H SDG: Eddy County NM

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-30913/2-A Client Sample ID: Lab Control Sample **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 31002

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit %Rec Limits D Chloride 250 261.9 mg/Kg 105 90 - 110

Lab Sample ID: LCSD 880-30913/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 31002

Spike LCSD LCSD %Rec RPD Added Qualifier RPD Limit Analyte Result Unit D %Rec Limits Chloride 250 267.7 mg/Kg 107 90 - 110 20

Lab Sample ID: 890-2653-1 MS **Client Sample ID: SS01 Matrix: Solid Prep Type: Soluble**

Analysis Batch: 31002

MS MS %Rec Sample Sample Spike Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Chloride 4930 2500 7650 mg/Kg 109 90 - 110

Lab Sample ID: 890-2653-1 MSD **Client Sample ID: SS01 Matrix: Solid Prep Type: Soluble**

Analysis Batch: 31002

MSD MSD RPD Sample Sample Spike %Rec Qualifier Analyte Qualifier Added Unit %Rec RPD Limit Result Result Limits Chloride 4930 2500 7677 110 90 - 110 20 mg/Kg

Lab Sample ID: 890-2659-A-1-B MS Client Sample ID: Matrix Spike **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 31002

Sample Sample Spike MS MS %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits 250 Chloride 149 378.1 mg/Kg 92 90 - 110

Lab Sample ID: 890-2659-A-1-C MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Analysis Batch: 31002

Sample Sample Spike MSD MSD %Rec **RPD** Result Qualifier Added RPD Limit Analyte Result Qualifier Unit D %Rec Limits Chloride 149 250 378.6 mg/Kg 92 90 - 110 20

Eurofins Carlsbad

Prep Type: Soluble

QC Association Summary

Client: Ensolum
Project/Site: JRU 108H
Job ID: 890-2653-1
SDG: Eddy County NM

GC VOA

Prep Batch: 31323	Prep	Bat	tch:	313	323
-------------------	------	-----	------	-----	-----

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-31323/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 31337

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2653-2	SS02	Total/NA	Solid	5035	
890-2653-3	SS03	Total/NA	Solid	5035	
MB 880-31337/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31337/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31337/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2656-A-1-F MS	Matrix Spike	Total/NA	Solid	5035	
890-2656-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 31375

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2653-2	SS02	Total/NA	Solid	8021B	31337
890-2653-3	SS03	Total/NA	Solid	8021B	31337
MB 880-31323/5-A	Method Blank	Total/NA	Solid	8021B	31323
MB 880-31337/5-A	Method Blank	Total/NA	Solid	8021B	31337
LCS 880-31337/1-A	Lab Control Sample	Total/NA	Solid	8021B	31337
LCSD 880-31337/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31337
890-2656-A-1-F MS	Matrix Spike	Total/NA	Solid	8021B	31337
890-2656-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	31337

Analysis Batch: 31452

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2653-1	SS01	Total/NA	Solid	8021B	31465
MB 880-31465/5-A	Method Blank	Total/NA	Solid	8021B	31465
LCS 880-31465/1-A	Lab Control Sample	Total/NA	Solid	8021B	31465
LCSD 880-31465/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31465
880-17728-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	31465
880-17728-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	31465

Prep Batch: 31465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2653-1	SS01	Total/NA	Solid	5035	
MB 880-31465/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31465/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31465/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17728-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-17728-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 31483

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2653-1	SS01	Total/NA	Solid	Total BTEX	Fiep Batch
890-2653-2	SS02	Total/NA	Solid	Total BTEX	
890-2653-3	SS03	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Ensolum Job ID: 890-2653-1
Project/Site: JRU 108H SDG: Eddy County NM

GC Semi VOA

Prep Batch: 30965

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2653-1	SS01	Total/NA	Solid	8015NM Prep	
890-2653-2	SS02	Total/NA	Solid	8015NM Prep	
890-2653-3	SS03	Total/NA	Solid	8015NM Prep	
MB 880-30965/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30965/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30965/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2646-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2646-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 31053

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2653-1	SS01	Total/NA	Solid	8015B NM	30965
890-2653-2	SS02	Total/NA	Solid	8015B NM	30965
890-2653-3	SS03	Total/NA	Solid	8015B NM	30965
MB 880-30965/1-A	Method Blank	Total/NA	Solid	8015B NM	30965
LCS 880-30965/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30965
LCSD 880-30965/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30965
890-2646-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	30965
890-2646-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30965

Analysis Batch: 31125

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2653-1	SS01	Total/NA	Solid	8015 NM	
890-2653-2	SS02	Total/NA	Solid	8015 NM	
890-2653-3	SS03	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 30913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
890-2653-1	SS01	Soluble	Solid	DI Leach	
890-2653-2	SS02	Soluble	Solid	DI Leach	
890-2653-3	SS03	Soluble	Solid	DI Leach	
MB 880-30913/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-30913/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-30913/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2653-1 MS	SS01	Soluble	Solid	DI Leach	
890-2653-1 MSD	SS01	Soluble	Solid	DI Leach	
890-2659-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2659-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 31002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2653-1	SS01	Soluble	Solid	300.0	30913
890-2653-2	SS02	Soluble	Solid	300.0	30913
890-2653-3	SS03	Soluble	Solid	300.0	30913
MB 880-30913/1-A	Method Blank	Soluble	Solid	300.0	30913
LCS 880-30913/2-A	Lab Control Sample	Soluble	Solid	300.0	30913
LCSD 880-30913/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30913
890-2653-1 MS	SS01	Soluble	Solid	300.0	30913
890-2653-1 MSD	SS01	Soluble	Solid	300.0	30913

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QC Association Summary

Client: Ensolum

Project/Site: JRU 108H

Job ID: 890-2653-1

SDG: Eddy County NM

HPLC/IC (Continued)

Analysis Batch: 31002 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2659-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30913
890-2659-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30913

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Date Received: 07/26/22 16:02

Job ID: 890-2653-1

Client: Ensolum Project/Site: JRU 108H SDG: Eddy County NM

Client Sample ID: SS01 Lab Sample ID: 890-2653-1 Date Collected: 07/26/22 09:00

Matrix: Solid

Batch Batch Dil Initial Final Batch Prepared Prep Type Туре Method Run Factor Amount Amount Number or Analyzed Analyst Lab 5035 31465 Total/NA Prep 5.00 g 5 mL 08/04/22 08:51 MR EETSC MID 8021B Total/NA Analysis 100 5 mL 5 mL 31452 08/04/22 14:19 MR EETSC MID Total/NA Analysis Total BTEX 31483 08/04/22 09:41 SM EETSC MIE 1 Total/NA 8015 NM EETSC MIE Analysis 1 31125 07/31/22 10:38 AJ Total/NA 8015NM Prep 30965 07/29/22 08:50 EETSC MIE Prep 10.01 g 10 mL DM Total/NA Analysis 8015B NM 5 31053 07/31/22 03:41 AJ EETSC MID Soluble DI Leach 5 g 50 mL 30913 07/28/22 10:42 CH EETSC MIE Leach Soluble Analysis 300.0 10 31002 07/30/22 22:25 SMC EETSC MID

Client Sample ID: SS02 Lab Sample ID: 890-2653-2

Date Collected: 07/26/22 09:05 **Matrix: Solid**

Date Received: 07/26/22 16:02

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	31337	08/02/22 14:44	MR	EETSC MID
Total/NA	Analysis	8021B		25	5 mL	5 mL	31375	08/04/22 00:59	MR	EETSC MII
Total/NA	Analysis	Total BTEX		1			31483	08/04/22 09:41	SM	EETSC MIE
Total/NA	Analysis	8015 NM		1			31125	07/31/22 10:38	AJ	EETSC MII
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	30965	07/29/22 08:50	DM	EETSC MIL
Total/NA	Analysis	8015B NM		5			31053	07/31/22 04:00	AJ	EETSC MII
Soluble	Leach	DI Leach			5.01 g	50 mL	30913	07/28/22 10:42	CH	EETSC MID
Soluble	Analysis	300.0		5			31002	07/30/22 22:48	SMC	EETSC MID

Client Sample ID: SS03 Lab Sample ID: 890-2653-3 Date Collected: 07/26/22 09:10 **Matrix: Solid**

Date Received: 07/26/22 16:02

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	31337	08/02/22 14:44	MR	EETSC MID
Total/NA	Analysis	8021B		25	5 mL	5 mL	31375	08/04/22 01:19	MR	EETSC MID
Total/NA	Analysis	Total BTEX		1			31483	08/04/22 09:41	SM	EETSC MID
Total/NA	Analysis	8015 NM		1			31125	07/31/22 10:38	AJ	EETSC MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	30965	07/29/22 08:50	DM	EETSC MIE
Total/NA	Analysis	8015B NM		5			31053	07/31/22 04:20	AJ	EETSC MIC
Soluble	Leach	DI Leach			4.95 g	50 mL	30913	07/28/22 10:42	CH	EETSC MIE
Soluble	Analysis	300.0		1			31002	07/30/22 22:56	SMC	EETSC MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum Job ID: 890-2653-1
Project/Site: JRU 108H SDG: Eddy County NM

Laboratory: Eurofins Midland

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

Authority	P	Program	Identification Number	Expiration Date 06-30-23	
Texas	N	NELAP	T104704400-22-24		
The following analytes the agency does not of	' '	out the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes for whic	
Analysis Method	Prep Method	Matrix	Analyte		
8015 NM		Solid	Total TPH		
Total BTEX		Solid	Total BTEX		

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Method Summary

Client: Ensolum Job ID: 890-2653-1 Project/Site: JRU 108H SDG: Eddy County NM

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

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

Sample Summary

Client: Ensolum

Project/Site: JRU 108H

Job ID: 890-2653-1 SDG: Eddy County NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	De
890-2653-1	SS01	Solid	07/26/22 09:00	07/26/22 16:02	0.5
890-2653-2	SS02	Solid	07/26/22 09:05	07/26/22 16:02	0.5
890-2653-3	SS03	Solid	07/26/22 09:10	07/26/22 16:02	0.5

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7-21-22 1608

eurofins **Environment Testing**

Phone:

Address: Company Name:

3122 National Parks Hwy.

Ensolum Ben Belill

Project Manager:

Bill to: (if different)

Company Name:

XTO Energy, Inc. Garrett Green

State of Project:

Program: UST/PST 🗌 PRP 🗌 Brownfields 🗌 RRC 🔲 Superfund 🗌

Work Order Comments

www.xenco.com

Page

Chain of Custody

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 Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300

Work Order No:

Parameters CHLORIDES (EPA: 300.0) TPH (8015) BTEX (8021	→ → O # Parameters × × CHLORIDES (EPA: 300.0) × × TPH (8015) × × BTEX (8021	D D D C Parameters				Ceived by 4:30pm Ceived	A 30pm A
Sample Com	Sample Comments Incident ID: nAPP2217931599	Sample Comments Incident ID: nAPP221793 Cost Center: 1139071001	Sample Com Incident ID: nAPP2 Cost Center: 1139	Sample Cor Incident ID: nAPF Cost Center: 113	Sample Continuity Incident ID: nAF	Sample Colincident ID: nAPr	
CHLOR CHLOR TPH (8)	O * of * of * of * × × CHLOR × × TPH (8 × × BTEX (→ → → S * o * o * o * o * o * o * o * o * o *					→ → → → → → → → → → → → → → → → → → →
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Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-2653-1 SDG Number: Eddy County NM

List Source: Eurofins Carlsbad

Login Number: 2653 List Number: 1 Creator: Clifton, Cloe

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: 890-2653-1

SDG Number: Eddy County NM

List Source: Eurofins Midland

List Source: Eurofins Midland
List Creation: 07/28/22 10:13 AM

List Number: 2 Creator: Rodriguez, Leticia

Login Number: 2653

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	N/A	

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<6mm (1/4").





ANALYTICAL REPORT

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

Laboratory Job ID: 890-2655-1

Laboratory Sample Delivery Group: Eddy County NM

Client Project/Site: JRU 108H

For:

eurofins

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill



Authorized for release by: 8/5/2022 12:32:51 PM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

results through EOL

.....LINKS

Review your project

Have a Question?

Received by OCD: 12/19/2022 1:08:47 PM

Visit us at:

www.eurofinsus.com/Env Released to Imaging: 4/28/2023 8:49:46 AM

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

Client: Ensolum
Project/Site: JRU 108H

Laboratory Job ID: 890-2655-1
SDG: Eddy County NM

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Definitions/Glossary

Client: Ensolum Job ID: 890-2655-1 Project/Site: JRU 108H SDG: Eddy County NM

Qualifiers

GC	VOA
Oua	lifior

Qualifici	Qualifici Bookipacii
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*1	LCS/LCSD RPD exceeds control limits.
F1	MS and/or MSD recovery exceeds control limits

F2 MS/MSD RPD exceeds control limits

Qualifier Description

Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description

Indicates the analyte was analyzed for but not detected.

HPLC/IC

· ·	Qualifier	Qualifier Description
	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)
DI DA DE IN	

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 **Practical Quantitation Limit PQL**

PRES Presumptive **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

Toxicity Equivalent Factor (Dioxin) TEF **TEQ** Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

Eurofins Carlsbad

QC

Case Narrative

Client: Ensolum Job ID: 890-2655-1
Project/Site: JRU 108H SDG: Eddy County NM

Job ID: 890-2655-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-2655-1

Receipt

The sample was received on 7/26/2022 4:02 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 4.2° C

GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 880-31414 and analytical batch 880-31453 was outside control limits. Sample matrix interference is suspected.

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.

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Matrix: Solid

Lab Sample ID: 890-2655-1

Client Sample Results

Client: Ensolum Job ID: 890-2655-1 Project/Site: JRU 108H SDG: Eddy County NM

Client Sample ID: SS04

Date Collected: 07/26/22 09:30 Date Received: 07/26/22 16:02

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *1 F1 F2	0.00200	mg/Kg		08/03/22 11:41	08/04/22 23:29	1
Toluene	<0.00200	U F1 F2	0.00200	mg/Kg		08/03/22 11:41	08/04/22 23:29	1
Ethylbenzene	<0.00200	U F1 F2	0.00200	mg/Kg		08/03/22 11:41	08/04/22 23:29	1
m-Xylene & p-Xylene	<0.00401	U *- F1 F2	0.00401	mg/Kg		08/03/22 11:41	08/04/22 23:29	1
o-Xylene	<0.00200	U F1	0.00200	mg/Kg		08/03/22 11:41	08/04/22 23:29	1
Xylenes, Total	<0.00401	U *- F1 F2	0.00401	mg/Kg		08/03/22 11:41	08/04/22 23:29	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	123		70 - 130			08/03/22 11:41	08/04/22 23:29	1
1,4-Difluorobenzene (Surr)	108		70 - 130			08/03/22 11:41	08/04/22 23:29	1
Method: Total BTEX - Total BTEX	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte	•	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			07/31/22 10:38	1
Method: 8015B NM - Diesel Rang	je Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		07/29/22 08:50	07/31/22 03:21	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		07/29/22 08:50	07/31/22 03:21	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/29/22 08:50	07/31/22 03:21	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	84		70 - 130			07/29/22 08:50	07/31/22 03:21	1
o-Terphenyl	92		70 - 130			07/29/22 08:50	07/31/22 03:21	1
Method: 300.0 - Anions, Ion Chro								
Analyte	Result	Qualifier		Unit mg/Kg	D	Prepared	Analyzed 07/30/22 23:43	Dil Fac

Surrogate Summary

Job ID: 890-2655-1 Client: Ensolum Project/Site: JRU 108H SDG: Eddy County NM

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
390-2655-1	SS04	123	108	
890-2655-1 MS	SS04	98	102	
890-2655-1 MSD	SS04	111	102	
LCS 880-31414/1-A	Lab Control Sample	80	120	
LCSD 880-31414/2-A	Lab Control Sample Dup	81	107	
MB 880-31200/5-A	Method Blank	82	106	
MB 880-31414/5-A	Method Blank	83	105	

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

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

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

				Percent Surrogate Recovery (Acceptance Limit
		1CO1	OTPH1	
ab Sample ID	Client Sample ID	(70-130)	(70-130)	
0-2646-A-1-B MS	Matrix Spike	87	84	
90-2646-A-1-C MSD	Matrix Spike Duplicate	87	84	
90-2655-1	SS04	84	92	
CS 880-30965/2-A	Lab Control Sample	101	102	
SD 880-30965/3-A	Lab Control Sample Dup	93	93	
1B 880-30965/1-A	Method Blank	91	101	
Surrogate Legend				
1CO = 1-Chlorooctane				

OTPH = o-Terphenyl

Job ID: 890-2655-1 SDG: Eddy County NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-31200/5-A

Matrix: Solid Analysis Batch: 31453

Client: Ensolum

Project/Site: JRU 108H

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31200

1

	MB	MR						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/01/22 14:58	08/04/22 10:53	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/01/22 14:58	08/04/22 10:53	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/01/22 14:58	08/04/22 10:53	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/01/22 14:58	08/04/22 10:53	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/01/22 14:58	08/04/22 10:53	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/01/22 14:58	08/04/22 10:53	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	82		70 - 130	08/01/22 14:58	08/04/22 10:53	1
1,4-Difluorobenzene (Surr)	106		70 - 130	08/01/22 14:58	8 08/04/22 10:53	1

Lab Sample ID: MB 880-31414/5-A Client Sample ID: Method Blank **Matrix: Solid** Prep Type: Total/NA

Prep Batch: 31414 **Analysis Batch: 31453**

MR MR Analyte Result Qualifier RL Unit Prepared Analyzed Dil Fac Benzene <0.00200 U 0.00200 mg/Kg 08/03/22 11:41 08/04/22 23:07 Toluene <0.00200 U 0.00200 mg/Kg 08/03/22 11:41 08/04/22 23:07 Ethylbenzene <0.00200 U 0.00200 mg/Kg 08/03/22 11:41 08/04/22 23:07 08/03/22 11:41 m-Xylene & p-Xylene <0.00400 U 0.00400 mg/Kg 08/04/22 23:07 <0.00200 U o-Xylene 0.00200 mg/Kg 08/03/22 11:41 08/04/22 23:07 Xylenes, Total <0.00400 U 0.00400 08/03/22 11:41 08/04/22 23:07 mg/Kg

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		70 - 130	08/03/22 11:41	08/04/22 23:07	1
1,4-Difluorobenzene (Surr)	105		70 - 130	08/03/22 11:41	08/04/22 23:07	1

Lab Sample ID: LCS 880-31414/1-A Client Sample ID: Lab Control Sample **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 31453

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit %Rec Limits Benzene 0.100 0.1214 mg/Kg 121 70 - 130 Toluene 0.100 0.09865 mg/Kg 99 70 - 130 Ethylbenzene 0.100 0.09199 mg/Kg 92 70 - 130 0.200 0.07945 *m-Xylene & p-Xylene mg/Kg 40 70 - 130 0.100 0.08730 70 - 130 o-Xylene mg/Kg 87

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	80	70 _ 130
1.4-Difluorobenzene (Surr)	120	70 - 130

Lab Sample ID: LCSD 880-31414/2-A

Matrix: Solid

Analysis Batch: 31453							Prep Batch: 31					
	Spike	LCSD	LCSD				%Rec		RPD			
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit			
Benzene	0.100	0.07448	*1	mg/Kg		74	70 - 130	48	35			

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Prep Type: Total/NA

Client Sample ID: Lab Control Sample Dup

Prep Batch: 31414

Page 7 of 20

QC Sample Results

Client: Ensolum Job ID: 890-2655-1 Project/Site: JRU 108H SDG: Eddy County NM

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

Lab Sample ID: LCSD 880-31414/2-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid** Prep Type: Total/NA Prep Batch: 31414

Analysis Batch: 31453

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene	0.100	0.07311		mg/Kg		73	70 - 130	30	35
Ethylbenzene	0.100	0.07141		mg/Kg		71	70 - 130	25	35
m-Xylene & p-Xylene	0.200	0.06955	*_	mg/Kg		35	70 - 130	13	35
o-Xylene	0.100	0.07107		mg/Kg		71	70 - 130	21	35

LCSD LCSD %Recovery Qualifier Limits Surrogate 70 - 130 4-Bromofluorobenzene (Surr) 81 1,4-Difluorobenzene (Surr) 107 70 - 130

Lab Sample ID: 890-2655-1 MS

Client Sample ID: SS04 **Matrix: Solid** Prep Type: Total/NA Analysis Batch: 31453 Prep Batch: 31414

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U *1 F1	0.101	0.05843	F1	mg/Kg		58	70 - 130	
		F2								
Toluene	<0.00200	U F1 F2	0.101	0.05184	F1	mg/Kg		52	70 - 130	
Ethylbenzene	<0.00200	U F1 F2	0.101	0.05405	F1	mg/Kg		54	70 - 130	
m-Xylene & p-Xylene	<0.00401	U *- F1 F2	0.201	0.1046	F1	mg/Kg		52	70 - 130	
o-Xylene	<0.00200	U F1	0.101	0.05325	F1	mg/Kg		53	70 - 130	

MS MS

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		70 - 130
1.4-Difluorobenzene (Surr)	102		70 - 130

Lab Sample ID: 890-2655-1 MSD

Matrix: Solid

Analysis Batch: 31453

Client Sample ID: SS04 Prep Type: Total/NA Prep Batch: 31414

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00200	U *1 F1 F2	0.0990	0.03449	F1 F2	mg/Kg		35	70 - 130	52	35
Toluene	<0.00200	U F1 F2	0.0990	0.03593	F1 F2	mg/Kg		36	70 - 130	36	35
Ethylbenzene	<0.00200	U F1 F2	0.0990	0.03345	F1 F2	mg/Kg		34	70 - 130	47	35
m-Xylene & p-Xylene	<0.00401	U *- F1 F2	0.198	0.07182	F1 F2	mg/Kg		36	70 - 130	37	35
o-Xylene	<0.00200	U F1	0.0990	0.03786	F1	mg/Kg		38	70 - 130	34	35

Surrogate	%Recovery 0	Qualifier	Limits
4-Bromofluorobenzene (Surr)	111		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

QC Sample Results

Job ID: 890-2655-1 Client: Ensolum Project/Site: JRU 108H SDG: Eddy County NM

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

Lab Sample ID: MB 880-30965/1-A

Analysis Batch: 31053

Matrix: Solid

Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 30965

07/29/22 08:50

07/30/22 19:51

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		07/29/22 08:50	07/30/22 19:51	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		07/29/22 08:50	07/30/22 19:51	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/29/22 08:50	07/30/22 19:51	1
	MB	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	91		70 - 130			07/29/22 08:50	07/30/22 19:51	1

Lab Sample ID: LCS 880-30965/2-A **Client Sample ID: Lab Control Sample Matrix: Solid** Prep Type: Total/NA Prep Batch: 30965

70 - 130

Analysis Batch: 31053

o-Terphenyl

LCS LCS Spike %Rec Added Analyte Result Qualifier Unit D %Rec Limits 1058 Gasoline Range Organics 1000 106 70 - 130 mg/Kg (GRO)-C6-C10 1000 Diesel Range Organics (Over 1040 mg/Kg 104 70 - 130C10-C28)

LCS LCS %Recovery Qualifier Limits Surrogate 1-Chlorooctane 101 70 - 130 o-Terphenyl 102 70 - 130

101

Lab Sample ID: LCSD 880-30965/3-A Client Sample ID: Lab Control Sample Dup Prep Type: Total/NA

Matrix: Solid

Analysis Batch: 31053

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	949.7		mg/Kg		95	70 - 130	11	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	972.0		mg/Kg		97	70 - 130	7	20
C10-C28)									

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

Lab Sample ID: 890-2646-A-1-B MS Client Sample ID: Matrix Spike

Matrix: Solid

Analysis Batch: 31053

Released to Imaging: 4/28/2023 8:49:46 AM

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	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	<49.9	U	999	1211		mg/Kg		116	70 - 130	
(GRO)-C6-C10										
Diesel Range Organics (Over	<49.9	U	999	846.5		mg/Kg		85	70 - 130	
C10-C28)										

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Prep Type: Total/NA

Prep Batch: 30965

Prep Batch: 30965

Prep Batch: 30965

Client: Ensolum Job ID: 890-2655-1 Project/Site: JRU 108H SDG: Eddy County NM

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

Lab Sample ID: 890-2646-A-1-B MS Client Sample ID: Matrix Spike Prep Type: Total/NA

Matrix: Solid

Analysis Batch: 31053

MS	MS	
%Recovery	Qualifier	Limits
87		70 - 130
84		70 - 130

Lab Sample ID: 890-2646-A-1-C MSD Client Sample ID: Matrix Spike Duplicate

Surrogate 1-Chlorooctane o-Terphenyl

Matrix: Solid				Prep Type: Tot	al/NA
Analysis Batch: 31053				Prep Batch: 3	30965
	Sample Sample	Spike	MSD MSD	%Rec	RPD

-	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	<49.9	U	999	1295		mg/Kg		125	70 - 130	7	20
(GRO)-C6-C10											
Diesel Range Organics (Over	<49.9	U	999	863.7		mg/Kg		86	70 - 130	2	20
C10-C28)											

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	87		70 - 130
o-Terphenyl	84		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-30913/1-A Client Sample ID: Method Blank **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 31002

	IVID IVID	В					
Analyte	Result Qu	ualifier RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00 U	5.00	mg/Kg			07/30/22 22:01	1

Lab Sample ID: LCS 880-30913/2-A Client Sample ID: Lab Control Sample **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 31002

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	261.9		mg/Kg		105	90 - 110	

Lab Sample ID: LCSD 880-30913/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 31002

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	250	267.7		mg/Kg	_	107	90 - 110	2	20

Lab Sample ID: 890-2653-A-1-B MS Client Sample ID: Matrix Spike **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 31002

Analysis Batom 61002	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	4930		2500	7650		mg/Kg		109	90 - 110	

QC Sample Results

Client: Ensolum Job ID: 890-2655-1 Project/Site: JRU 108H SDG: Eddy County NM

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-2653-A-1-C MSD Client Sample ID: Matrix Spike Duplicate **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 31002

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	4930		2500	7677		mg/Kg		110	90 - 110	0	20

Lab Sample ID: 890-2659-A-1-B MS Client Sample ID: Matrix Spike **Matrix: Solid**

Prep Type: Soluble

Analysis Batch: 31002

Sample Sample Spike MS MS %Rec Result Qualifier Added Analyte Result Qualifier Unit D %Rec Limits Chloride 149 250 378.1 mg/Kg 92 90 - 110

Lab Sample ID: 890-2659-A-1-C MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid Prep Type: Soluble

Analysis Batch: 31002

Sample Sample MSD MSD %Rec RPD Spike Result Qualifier Analyte Added Result Qualifier Unit Limits **RPD** Limit Chloride 149 250 378.6 90 - 110 20 mg/Kg

QC Association Summary

Client: Ensolum Job ID: 890-2655-1
Project/Site: JRU 108H SDG: Eddy County NM

GC VOA

Prep Batch: 31200

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-31200/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 31414

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2655-1	SS04	Total/NA	Solid	5035	
MB 880-31414/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31414/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31414/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2655-1 MS	SS04	Total/NA	Solid	5035	
890-2655-1 MSD	SS04	Total/NA	Solid	5035	

Analysis Batch: 31453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2655-1	SS04	Total/NA	Solid	8021B	31414
MB 880-31200/5-A	Method Blank	Total/NA	Solid	8021B	31200
MB 880-31414/5-A	Method Blank	Total/NA	Solid	8021B	31414
LCS 880-31414/1-A	Lab Control Sample	Total/NA	Solid	8021B	31414
LCSD 880-31414/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31414
890-2655-1 MS	SS04	Total/NA	Solid	8021B	31414
890-2655-1 MSD	SS04	Total/NA	Solid	8021B	31414

Analysis Batch: 31592

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2655-1	SS04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 30965

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2655-1	SS04	Total/NA	Solid	8015NM Prep	
MB 880-30965/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30965/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30965/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2646-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2646-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 31053

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2655-1	SS04	Total/NA	Solid	8015B NM	30965
MB 880-30965/1-A	Method Blank	Total/NA	Solid	8015B NM	30965
LCS 880-30965/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30965
LCSD 880-30965/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30965
890-2646-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	30965
890-2646-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30965

Analysis Batch: 31124

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2655-1	SS04	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum Job ID: 890-2655-1
Project/Site: JRU 108H SDG: Eddy County NM

HPLC/IC

Leach Batch: 30913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2655-1	SS04	Soluble	Solid	DI Leach	
MB 880-30913/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-30913/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-30913/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2653-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2653-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
890-2659-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2659-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 31002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2655-1	SS04	Soluble	Solid	300.0	30913
MB 880-30913/1-A	Method Blank	Soluble	Solid	300.0	30913
LCS 880-30913/2-A	Lab Control Sample	Soluble	Solid	300.0	30913
LCSD 880-30913/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30913
890-2653-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30913
890-2653-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30913
890-2659-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30913
890-2659-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30913

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Lab Chronicle

Client: Ensolum Job ID: 890-2655-1
Project/Site: JRU 108H SDG: Eddy County NM

Client Sample ID: SS04

Lab Sample ID: 890-2655-1

Matrix: Solid

Date Collected: 07/26/22 09:30 Date Received: 07/26/22 16:02

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	31414	08/03/22 11:41	MR	EETSC MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31453	08/04/22 23:29	MR	EETSC MII
Total/NA	Analysis	Total BTEX		1			31592	08/05/22 13:19	AJ	EETSC MIE
Total/NA	Analysis	8015 NM		1			31124	07/31/22 10:38	AJ	EETSC MIC
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	30965	07/29/22 08:50	DM	EETSC MIE
Total/NA	Analysis	8015B NM		1			31053	07/31/22 03:21	AJ	EETSC MIE
Soluble	Leach	DI Leach			5 g	50 mL	30913	07/28/22 10:42	СН	EETSC MII
Soluble	Analysis	300.0		1			31002	07/30/22 23:43	SMC	EETSC MII

Laboratory References:

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

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Accreditation/Certification Summary

Client: Ensolum Job ID: 890-2655-1
Project/Site: JRU 108H SDG: Eddy County NM

Laboratory: Eurofins Midland

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

Authority	P	Program	Identification Number	Expiration Date
Texas		NELAP	T104704400-22-24	06-30-23
The following analytes the agency does not of	' '	out the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes for whic
Analysis Method	Prep Method	Matrix	Analyte	
8015 NM		Solid	Total TPH	
Total BTEX		Solid	Total BTEX	

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Method Summary

Client: Ensolum Job ID: 890-2655-1
Project/Site: JRU 108H SDG: Eddy County NM

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

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:

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

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Sample Summary

Client: Ensolum Project/Site: JRU 108H Job ID: 890-2655-1

SDG: Eddy County NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2655-1	SS04	Solid	07/26/22 09:30	07/26/22 16:02	0.5

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Project Manager:

Bill to: (if different)

Ben Belill Ensolum

Company Name:
Address:
City, State ZIP:

3122 National Parks Hwy Carlsbad, NM 88220

Company Name:
Address:
City, State ZIP:

Garrett Green

XTO Energy, Inc.

3104 E. Green Street

Carlsbad, NM 88220

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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

Deliverables: EDD ADaPT Other:
Reporting: Level III Level III PST/UST TRRP Level IV
State of Project:
Program: UST/PST ☐ PRP☐ Brownfields ☐ RRC ☐ Superfund ☐
Work Order Comments
www.xenco.com Page of
1 1
WORK Order No.
IAI LI OLA LIO.

	1	Relinquished by Signature	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.	Circle Method(s) and Metal(s) to be analyzed	Total 200.7 / 6010							SS04	Sample Identification	Total Containers:	Sample Custody Seals:	Cooler Custody Seals:	Samples Received Intact:	SAMPLE RECEIPT	PO #:	Sampler's Name:	Project Location:	Project Number:	Project Name:	Phone: 989
		majurge)	ent and relinquishmen be liable only for the c charge of \$85.00 will b	etal(s) to be anal	200.8 / 6020:							S	ation Matrix		Yes No WA	Yes No MA	(Kes) No	Temp Blank:	N/A	Liz Cheli	Eddy County, NM	03E1558090	JRU 108H	9898540852
	(hc)	Received	t of samples consi ost of samples and e applied to each p	yzed	84							7/26/2022	Date Sampled	Corrected Temperature:	Temperature Reading:	Correction Factor:	Thermometer ID:	(Yes) No				90		
	The state of the s	Received by: (Signature)	litutes a valid pur I shall not assume project and a char	TCLP / SPL	8RCRA 13PPM							930	Time C	mperature:	Reading:	actor:	r ID:	Wet Ice:	the lab, if received by 4:30pm	TAT starts the day received by	Due Date:	✓ Routine	Turn Around	Email: b
		re)	chase order from e any responsibili ge of \$5 for each	TCLP / SPLP 6010: BRCRA	M Texas 11 Al Sb As Ba							0.5 Comp	Depth Grab/	4.3	T	0 U	100 M	Yes No	ed by 4:30pm	ay received by	5 day TAT	Rush	round	Email: bbelill@ensolum.com
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Revis	1			.1/74	TI Sr					t Cent		dent ID	Samp)H+Asc	\cetate-	Na ₂ S ₂ O ₃ : NaSO ₃	NaHSO ₄ : NABIS	H ₃ PO ₄ : HP	H ₂ S0 ₄ : H ₂	HCL: HC	Cool: Cool	None: NO	Prese	
Revised Date: 08/25/2020 Rev. 2020 2		Date/Time		Hg: 1631 / 245.1 / 7470 / 7471	Pho Mg Mn Mo Ni K Se Ag SiO ₂ Na Sr Ti Sn U V Zn					Cost Center: 1139071001		Incident ID: nAPP2217931599	Sample Comments	NaOH+Ascorbic Acid: SAPC	Zn Acetate+NaOH: Zn	aSO ₃	ABIS		NaOH: Na	HNO3: HN	MeOH: Me	DI Water: H ₂ O	Preservative Codes	Clier
v 2020										_		159		0					D)	_	O	H ₂ O	"	

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-2655-1 SDG Number: Eddy County NM

List Source: Eurofins Carlsbad

Login Number: 2655 List Number: 1 Creator: Clifton, Cloe

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

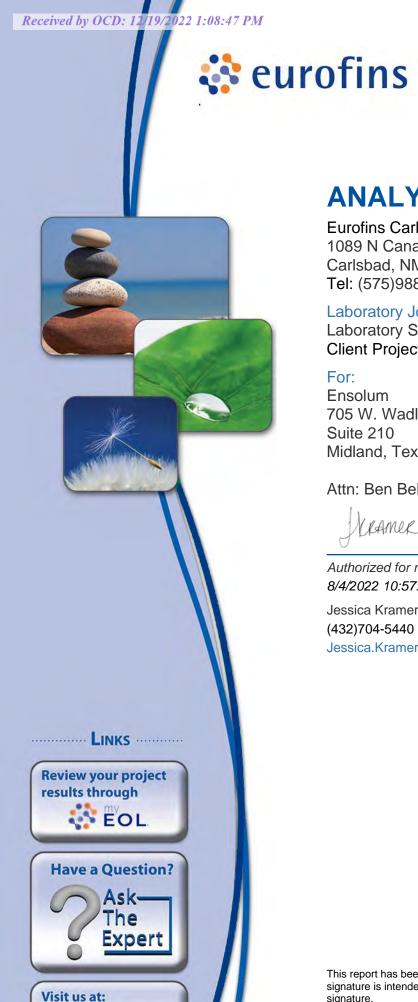
Client: Ensolum Job Number: 890-2655-1 SDG Number: Eddy County NM

List Source: Eurofins Midland

Login Number: 2655 List Number: 2 List Creation: 07/28/22 10:13 AM

Creator: Rodriguez, Leticia

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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Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-2656-1

Laboratory Sample Delivery Group: 03E1558090

Client Project/Site: JRU 108H

For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

RAMER

Authorized for release by: 8/4/2022 10:57:48 AM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

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

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

Client: Ensolum Laboratory Job ID: 890-2656-1 Project/Site: JRU 108H

SDG: 03E1558090

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Definitions/Glossary

Job ID: 890-2656-1 Client: Ensolum Project/Site: JRU 108H SDG: 03E1558090

Qualifiers

GC VOA	
Qualifier	Qualifier Description
*_	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased

, high biased. LCS/LCSD RPD exceeds control limits.

U Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier **Qualifier Description** S1+ Surrogate recovery exceeds control limits, high biased.

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)

Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

LOQ Limit of Quantitation (DoD/DOE) MCL MDA

DL, RA, RE, IN

DLC

EDL

LOD

EPA recommended "Maximum Contaminant Level" Minimum Detectable Activity (Radiochemistry)

Estimated Detection Limit (Dioxin)

Limit of Detection (DoD/DOE)

Decision Level Concentration (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

Practical Quantitation Limit **PQL PRES** Presumptive

Quality Control QC RER Relative Error Ratio (Radiochemistry)

Reporting Limit or Requested Limit (Radiochemistry) RL

RPD Relative Percent Difference, a measure of the relative difference between two points

Toxicity Equivalent Factor (Dioxin) TEF **TEQ** Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

Case Narrative

Job ID: 890-2656-1 Client: Ensolum Project/Site: JRU 108H SDG: 03E1558090

Job ID: 890-2656-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-2656-1

Receipt

The sample was received on 7/26/2022 4:02 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 4.2°C

GC VOA

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-31337 and analytical batch 880-31375 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.

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

GC Semi VOA

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-30966 and analytical batch 880-31081 was outside the upper control limits.

Method 8015MOD NM: Surrogate recovery for the following sample was outside control limits: (LCS 880-30966/2-A). Evidence of matrix interferences is not obvious.

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

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
 Job ID: 890-2656-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Client Sample ID: SS05 Lab Sample ID: 890-2656-1

Date Collected: 07/26/22 09:25

Date Received: 07/26/22 16:02

Matrix: Solid

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	<0.00199	U *- *1	0.00199	mg/Kg		08/02/22 14:44	08/03/22 22:15		
Toluene	<0.00199	U *- *1	0.00199	mg/Kg		08/02/22 14:44	08/03/22 22:15	1	
Ethylbenzene	<0.00199	U *- *1	0.00199	mg/Kg		08/02/22 14:44	08/03/22 22:15		
m-Xylene & p-Xylene	<0.00398	U *- *1	0.00398	mg/Kg		08/02/22 14:44	08/03/22 22:15		
o-Xylene	<0.00199	U *+ *1	0.00199	mg/Kg		08/02/22 14:44	08/03/22 22:15	•	
Xylenes, Total	<0.00398	U *1	0.00398	mg/Kg		08/02/22 14:44	08/03/22 22:15		
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa	
4-Bromofluorobenzene (Surr)	106		70 - 130			08/02/22 14:44	08/03/22 22:15		
1,4-Difluorobenzene (Surr)	96		70 - 130			08/02/22 14:44	08/03/22 22:15		
Method: Total BTEX - Total BT	EX Calculation								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa	
Total BTEX	<0.00398	U	0.00398	mg/Kg			08/04/22 09:41	•	
Method: 8015 NM - Diesel Ran	ge Organics (DR	O) (GC)							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa	
Total TPH	62.8		49.8	mg/Kg			08/01/22 15:09	•	
Method: 8015B NM - Diesel Ra	nge Organics (D	RO) (GC)							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		07/29/22 08:55	07/31/22 13:23	,	
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		07/29/22 08:55	07/31/22 13:23	,	
Oll Range Organics (Over C28-C36)	62.8		49.8	mg/Kg		07/29/22 08:55	07/31/22 13:23		
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa	
1-Chlorooctane	97		70 - 130			07/29/22 08:55	07/31/22 13:23	7	
o-Terphenyl	121		70 - 130			07/29/22 08:55	07/31/22 13:23		
Method: 300.0 - Anions, Ion Ch	nromatography -	Soluble							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	13.6		4.95	mg/Kg			07/30/22 23:51		

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Surrogate Summary

 Client: Ensolum
 Job ID: 890-2656-1

 Project/Site: JRU 108H
 SDG: 03E1558090

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)	
890-2656-1	SS05	106	96	
890-2656-1 MS	SS05	104	96	
890-2656-1 MSD	SS05	106	93	
LCS 880-31337/1-A	Lab Control Sample	113	93	
LCSD 880-31337/2-A	Lab Control Sample Dup	90	87	
MB 880-31323/5-A	Method Blank	106	87	
MB 880-31337/5-A	Method Blank	99	87	

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)	
890-2654-A-1-C MS	Matrix Spike	102	110	
890-2654-A-1-D MSD	Matrix Spike Duplicate	99	106	
890-2656-1	SS05	97	121	
LCS 880-30966/2-A	Lab Control Sample	123	137 S1+	
LCSD 880-30966/3-A	Lab Control Sample Dup	107	121	
MB 880-30966/1-A	Method Blank	106	138 S1+	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-2656-1 Project/Site: JRU 108H SDG: 03E1558090

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-31323/5-A

Matrix: Solid

Analysis Batch: 31375

Client Sample ID: Method Blank

Prep Type: Total/NA
Prep Batch: 31323

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/02/22 13:15	08/03/22 10:46	1

	MB N	ИB			
Surrogate	%Recovery Q	Qualifier Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106	70 - 130	08/02/22 13:15	08/03/22 10:46	1
1,4-Difluorobenzene (Surr)	87	70 - 130	08/02/22 13:15	08/03/22 10:46	1

Lab Sample ID: MB 880-31337/5-A

Matrix: Solid

Analysis Batch: 31375

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

Prep Batch: 31337

ı		МВ	МВ					•	
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Benzene	<0.00200	U	0.00200	mg/Kg		08/02/22 14:44	08/03/22 21:53	1
	Toluene	<0.00200	U	0.00200	mg/Kg		08/02/22 14:44	08/03/22 21:53	1
	Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/02/22 14:44	08/03/22 21:53	1
I	m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/02/22 14:44	08/03/22 21:53	1
	o-Xylene	<0.00200	U	0.00200	mg/Kg		08/02/22 14:44	08/03/22 21:53	1
	Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/02/22 14:44	08/03/22 21:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130	08/02/22 14:-	08/03/22 21:53	1
1,4-Difluorobenzene (Surr)	87		70 - 130	08/02/22 14:-	14 08/03/22 21:53	1

Lab Sample ID: LCS 880-31337/1-A

Matrix: Solid

Analysis Batch: 31375

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 31337

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09999		mg/Kg		100	70 - 130	
Toluene	0.100	0.1031		mg/Kg		103	70 - 130	
Ethylbenzene	0.100	0.1082		mg/Kg		108	70 - 130	
m-Xylene & p-Xylene	0.200	0.2220		mg/Kg		111	70 - 130	
o-Xylene	0.100	0.1387	*+	mg/Kg		139	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	113		70 - 130
1,4-Difluorobenzene (Surr)	93		70 - 130

Lab Sample ID: LCSD 880-31337/2-A

Matrix: Solid

Analysis Batch: 31375

Client Sample	ID: Lab Control	Sample Dup
	Danie To	T-4-1/NIA

Prep Type: Total/NA

Prep Batch: 31337

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.0998	0.05262	*- *1	mg/Kg		53	70 - 130	62	35

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QC Sample Results

Client: Ensolum Job ID: 890-2656-1 SDG: 03E1558090 Project/Site: JRU 108H

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

Lab Sample ID: LCSD 880-31337/2-A

Matrix: Solid Analysis Batch: 31375 Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 31337

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene	0.0998	0.06071	*- *1	mg/Kg		61	70 - 130	52	35
Ethylbenzene	0.0998	0.06794	*- *1	mg/Kg		68	70 - 130	46	35
m-Xylene & p-Xylene	0.200	0.1297	*- *1	mg/Kg		65	70 - 130	52	35
o-Xylene	0.0998	0.09111	*1	mg/Kg		91	70 - 130	41	35

LCSD LCSD

Surrogate	%Recovery Q	ualifier	Limits
4-Bromofluorobenzene (Surr)	90		70 - 130
1,4-Difluorobenzene (Surr)	87		70 - 130

Lab Sample ID: 890-2656-1 MS

Matrix: Solid

Analysis Batch: 31375

Client Sample ID: SS05 Prep Type: Total/NA

Prep Batch: 31337

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00199	U *- *1	0.101	0.08722		mg/Kg	_	87	70 - 130	
Toluene	<0.00199	U *- *1	0.101	0.08202		mg/Kg		82	70 - 130	
Ethylbenzene	<0.00199	U *- *1	0.101	0.08158		mg/Kg		81	70 - 130	
m-Xylene & p-Xylene	<0.00398	U *- *1	0.201	0.1625		mg/Kg		81	70 - 130	
o-Xylene	< 0.00199	U *+ *1	0.101	0.09304		mg/Kg		92	70 - 130	

MS MS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	104	70 - 130
1,4-Difluorobenzene (Surr)	96	70 - 130

Lab Sample ID: 890-2656-1 MSD

Matrix: Solid

Analysis Batch: 31375

Client Sample ID: SS05

Prep Type: Total/NA

Prep Batch: 31337

Timely Cit Button City											• • • • •
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00199	U *- *1	0.0998	0.09326		mg/Kg		93	70 - 130	7	35
Toluene	<0.00199	U *- *1	0.0998	0.08591		mg/Kg		86	70 - 130	5	35
Ethylbenzene	<0.00199	U *- *1	0.0998	0.08696		mg/Kg		87	70 - 130	6	35
m-Xylene & p-Xylene	<0.00398	U *- *1	0.200	0.1684		mg/Kg		84	70 - 130	4	35
o-Xylene	<0.00199	U *+ *1	0.0998	0.09635		mg/Kg		97	70 - 130	3	35

MSD MSD

Surrogate	%Recovery	Quaimer	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	93		70 - 130

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

Lab Sample ID: MB 880-30966/1-A

Matrix: Solid

Analysis Batch: 31081

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

Prep Batch: 30966

мв мв Result Qualifier Unit Prepared Gasoline Range Organics <50.0 U 50.0 mg/Kg 07/29/22 08:55 07/31/22 10:35

(GRO)-C6-C10

Client: Ensolum Job ID: 890-2656-1 Project/Site: JRU 108H SDG: 03E1558090

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

Lab Sample ID: MB 880-30966/1-A **Matrix: Solid**

Analysis Batch: 31081

Diesel Range Organics (Over

Analyte

C10-C28)

Client Sample ID: Method Blank

07/31/22 10:35

Prep Type: Total/NA Prep Batch: 30966

MB MB Result Qualifier RL Unit Prepared Analyzed Dil Fac <50.0 U 50.0 07/29/22 08:55 07/31/22 10:35 mg/Kg

OII Range Organics (Over C28-C36) 50.0 <50.0 U mg/Kg

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130	07/29/22 08:55	07/31/22 10:35	1
o-Terphenyl	138	S1+	70 - 130	07/29/22 08:55	07/31/22 10:35	1

Lab Sample ID: LCS 880-30966/2-A Client Sample ID: Lab Control Sample

Matrix: Solid

Analysis Batch: 31081

Prep Type: Total/NA

07/29/22 08:55

Prep Batch: 30966

LCS LCS Spike Analyte Added Result Qualifier Unit %Rec Limits Gasoline Range Organics 1000 1127 113 70 - 130 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 1195 mg/Kg 120 70 - 130C10-C28)

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	123		70 - 130
o-Terphenyl	137	S1+	70 - 130

Lab Sample ID: LCSD 880-30966/3-A

Matrix: Solid

Analysis Batch: 31081

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 30966

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	1048		mg/Kg		105	70 - 130	7	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	1111		mg/Kg		111	70 - 130	7	20
C10-C28)									

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	107		70 - 130
o-Terphenyl	121		70 - 130

Lab Sample ID: 890-2654-A-1-C MS

Matrix: Solid

Analysis Batch: 31081

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 30966

MS MS Spike %Rec Sample Sample Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Gasoline Range Organics <49.9 U 999 70 - 130 1120 108 mg/Kg (GRO)-C6-C10 999 993.9 Diesel Range Organics (Over <49.9 U mg/Kg 96 70 - 130

C10-C28)

	IVIS	IVIS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	102		70 - 130
o-Terphenyl	110		70 - 130

Job ID: 890-2656-1 SDG: 03E1558090

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

Lab Sample ID: 890-2654-A-1-D MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid Analysis Batch: 31081 Prep Type: Total/NA Prep Batch: 30966

Sample Sample Spike MSD MSD RPD Result Qualifier RPD Limit Analyte Added Result Qualifier Unit %Rec Limits Gasoline Range Organics <49.9 U 999 1143 mg/Kg 111 70 - 130 2 20 (GRO)-C6-C10 Diesel Range Organics (Over <49.9 U 999 989.3 mg/Kg 70 - 130 96 0

C10-C28)

Client: Ensolum

Project/Site: JRU 108H

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	99		70 - 130
o-Terphenyl	106		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-30913/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 31002

мв мв

Analyte	Result (Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			07/30/22 22:01	1

Lab Sample ID: LCS 880-30913/2-A **Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Soluble**

Analysis Batch: 31002

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	261.9	-	mg/Kg		105	90 - 110	

Lab Sample ID: LCSD 880-30913/3-A Client Sample ID: Lab Control Sample Dup **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 31002

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	250	267.7		mg/Kg		107	90 - 110	2	20	

Lab Sample ID: 890-2653-A-1-B MS Client Sample ID: Matrix Spike **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 31002

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	4930		2500	7650		ma/Ka		109	90 110	

Lab Sample ID: 890-2653-A-1-C MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Analysis Batch: 31002											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	4930		2500	7677		ma/Ka		110	90 110		20

Eurofins Carlsbad

Prep Type: Soluble

QC Sample Results

Client: Ensolum Job ID: 890-2656-1 Project/Site: JRU 108H SDG: 03E1558090

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-2659-A-1-B MS Client Sample ID: Matrix Spike **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 31002

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	149		250	378.1		mg/Kg		92	90 - 110	

Lab Sample ID: 890-2659-A-1-C MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid **Prep Type: Soluble**

Analysis Batch: 31002

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	149		250	378.6		mg/Kg		92	90 - 110	0	20

QC Association Summary

 Client: Ensolum
 Job ID: 890-2656-1

 Project/Site: JRU 108H
 SDG: 03E1558090

GC VOA

Prep Batch: 31323	323
-------------------	-----

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-31323/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 31337

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2656-1	SS05	Total/NA	Solid	5035	
MB 880-31337/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31337/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31337/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2656-1 MS	SS05	Total/NA	Solid	5035	
890-2656-1 MSD	SS05	Total/NA	Solid	5035	

Analysis Batch: 31375

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2656-1	SS05	Total/NA	Solid	8021B	31337
MB 880-31323/5-A	Method Blank	Total/NA	Solid	8021B	31323
MB 880-31337/5-A	Method Blank	Total/NA	Solid	8021B	31337
LCS 880-31337/1-A	Lab Control Sample	Total/NA	Solid	8021B	31337
LCSD 880-31337/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31337
890-2656-1 MS	SS05	Total/NA	Solid	8021B	31337
890-2656-1 MSD	SS05	Total/NA	Solid	8021B	31337

Analysis Batch: 31477

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2656-1	SS05	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 30966

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2656-1	SS05	Total/NA	Solid	8015NM Prep	
MB 880-30966/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30966/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30966/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2654-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2654-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 31081

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2656-1	SS05	Total/NA	Solid	8015B NM	30966
MB 880-30966/1-A	Method Blank	Total/NA	Solid	8015B NM	30966
LCS 880-30966/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30966
LCSD 880-30966/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30966
890-2654-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	30966
890-2654-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30966

Analysis Batch: 31203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2656-1	SS05	Total/NA	Solid	8015 NM	

QC Association Summary

 Client: Ensolum
 Job ID: 890-2656-1

 Project/Site: JRU 108H
 SDG: 03E1558090

HPLC/IC

Leach Batch: 30913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2656-1	SS05	Soluble	Solid	DI Leach	
MB 880-30913/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-30913/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-30913/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2653-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2653-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
890-2659-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2659-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 31002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2656-1	SS05	Soluble	Solid	300.0	30913
MB 880-30913/1-A	Method Blank	Soluble	Solid	300.0	30913
LCS 880-30913/2-A	Lab Control Sample	Soluble	Solid	300.0	30913
LCSD 880-30913/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30913
890-2653-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30913
890-2653-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30913
890-2659-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30913
890-2659-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30913

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Date Received: 07/26/22 16:02

Lab Chronicle

Client: Ensolum Job ID: 890-2656-1 Project/Site: JRU 108H SDG: 03E1558090

Client Sample ID: SS05 Lab Sample ID: 890-2656-1 Date Collected: 07/26/22 09:25

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	31337	08/02/22 14:44	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31375	08/03/22 22:15	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			31477	08/04/22 09:41	SM	XEN MID
Total/NA	Analysis	8015 NM		1			31203	08/01/22 15:09	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	30966	07/29/22 08:55	DM	XEN MID
Total/NA	Analysis	8015B NM		1			31081	07/31/22 13:23	SM	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	30913	07/28/22 10:42	CH	XEN MID
Soluble	Analysis	300.0		1			31002	07/30/22 23:51	SMC	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

 Client: Ensolum
 Job ID: 890-2656-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Laboratory: Eurofins Midland

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

Authority	Pr	ogram	Identification Number	Expiration Date
Texas	NE	ELAP	T104704400-22-24	06-30-23
The following analytes	are included in this report by	it the leberatory is not cortifi	ed by the governing authority. This list ma	arrimalizada amaliztaa farr
the agency does not of	• •	it the laboratory is not certifi	ed by the governing authority. This list his	ay include arialytes for
0 ,	• •	Matrix	Analyte	ay include analytes for
the agency does not of	fer certification.	•	, , ,	ay include analytes for

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Method Summary

Job ID: 890-2656-1 Client: Ensolum Project/Site: JRU 108H SDG: 03E1558090

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 108H

Job ID: 890-2656-1

SDG: 03E1558090

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2656-1	SS05	Solid	07/26/22 09:25	07/26/22 16:02	0.5

Circle Method(s) and Metal

ee ne.

(603)

eurofins:

Phone:

City, State ZIP:

Carlsbad, NM 88220 3122 National Parks Hwy

City, State ZIP:

Carlsbad, NM 88220 3104 E. Green Street XTO Energy, Inc. Garrett Green

Address: Company Name:

Address:

Project Manager:

Ben Belill Ensolum

Bill to: (if different)

Company Name:

Sampler's Name:

Project Location:

Project Number:

Project Name:

SAMPLE RECEIPT

Cooler Custody Seals: Samples Received Intact:

Sample Custody Seals:

Chain of Custody

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

Work Order No:

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

hone: 9	9898540852		Email:	Email: bbelill@ensolum.com	um.cor	ıs				Deliverables. EDD []	ADari L	Culei	
roject Name:	JRU 108H	Ĩ	Turn	Turn Around					ANALYSIS REQU	QUEST	Prese	Preservative Codes	
roject Number:	03E1558090	090	☑ Routine	Rush	Pres. Code			_			None: NO	DI Water: H ₂ O	
roject Location:	Eddy County, NM	, NM	Due Date:	5 day TAT							Cool: Cool	MeOH: Me	
ampler's Name:	Liz Cheli		TAT starts the	TAT starts the day received by							HCL: HC	HNO ₃ : HN	
0 #	N/A)	the lab, if rece	the lab, if received by 4:30pm	rs		_				H ₂ S0 ₄ : H ₂	NaOH: Na	
AMPLE RECEIPT	Temp Blank:	(thes No	Wet Ice:	Yes) No	nete	.0)					H₃PO₄: HP		
amples Received Intact:	ct: Yes No	Thermometer ID:		ECO MY	ran	300					NaHSO ₄ : NABIS	ABIS	
ooler Custody Seals:	≼	A Correction Factor:	Factor:	0.0	Pa	PA:			890-2656 Chain of	of Custody	Na ₂ S ₂ O ₃ : NaSO ₃	3SO ₃	
ample Custody Seals:	Yes No N/A	A Temperature Reading:	e Reading:	h. h) (E			-	-	Zn Acetate+NaOH: Zn	NaOH: Zn	
otal Containers:	1 1	Corrected T	Corrected Temperature:	E .		RIDES	015)	8021			NaOH+Ascc	NaOH+Ascorbic Acid: SAPC	
Sample identification	ication Matrix	Date Sampled	Time Sampled	Depth Comp	# of Cont	CHLOR	TPH (8	BTEX (Samp	Sample Comments	Page
SS05	S	7/26/2022	925	0.5 Comp		×	×	×			Incident ID	ncident ID: nAPP2217931599	
											Cost Cente	Cost Center: 1139071001	
							ļ.,						
								1					
Total 200.7 / 6010) 200.8 / 6020:		BRCRA 13P	BRCRA 13PPM Texas 11 Al Sb As Ba	20 2	Sb As	Ba Be	e B	TCLB / SEI B 6010: RECEA Sh. As Ba Be B Cd Cr Co Cu Fe Pb M. Mo Ni	Mg Mn Mo Ni K Se Ag	Se Ag SiO ₂ Na Sr Ti Sn U V Zn Ha: 1631/245.1/7470/7471	U V Zn	
incle Method(s) and Metal(s) to be analyzed	Merails) to be alla	Пусво	I CEF / OF	20.00	5	2	0						
tice: Signature of this doc service. Eurofins Xenco v Eurofins Xenco. A minim	ument and relinquishme will be liable only for the um charge of \$86.00 will	ent of samples cor cost of samples a be applied to eacl	nstitutes a valid p ind shall not assu h project and a ch	urchase order from me any responsib narge of \$5 for eac	n client c lifty for a	ompany ny losse submit	to Eurof s or expe	îns Xen enses in rofins X	Nice: 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 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 Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$6 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	It assigns standard terms and conditions re due to circumstances beyond the contro will be enforced unless previously negotia	nditions e control negotiated.		
Relinquished by (Signature)	Signature)	Receive	Received by: (Signature)	ture)		Date/Time	Time		Relinquished by: (Signature)	e) Received by: (Signature)	(Signature)	Date/Time	

Revised Date: 08/25/2020 Rev. 2020 2

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-2656-1 SDG Number: 03E1558090

Login Number: 2656 List Source: Eurofins Carlsbad

List Number: 1 Creator: Clifton, Cloe

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	

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Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-2656-1 SDG Number: 03E1558090

List Source: Eurofins Midland

List Number: 2 Creator: Rodriguez, Leticia

Login Number: 2656

List Creation: 07/28/22 10:13 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 campered 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	
s the Field Sampler's name present on COC?	True	
here 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	
ppropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is 6mm (1/4").	N/A	



Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-2657-1

Laboratory Sample Delivery Group: Eddy County NM

Client Project/Site: JRU 108H

For:

eurofins 🔆

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill



Authorized for release by: 8/4/2022 10:57:48 AM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

Review your project results through EOL

.....LINKS

Received by OCD: 12/19/2022 1:08:47 PM

Have a Question?



Visit us at:

www.eurofinsus.com/Env Released to Imaging: 4/28/2023 8:49:46 AM

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

Client: Ensolum

Project/Site: JRU 108H

Laboratory Job ID: 890-2657-1 SDG: Eddy County NM

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Definitions/Glossary

Client: Ensolum

Job ID: 890-2657-1

Project/Site: JRU 108H

SDG: Eddy County NM

Qualifiers

GC VOA

 Qualifier
 Qualifier Description

 * LCS and/or LCSD is outside acceptance limits, low biased.

 *+
 LCS and/or LCSD is outside acceptance limits, high biased.

 *1
 LCS/LCSD RPD exceeds control limits.

U Indicates the analyte was analyzed for but not detected.

GC Semi VOA

 Qualifier
 Qualifier Description

 S1+
 Surrogate recovery exceeds control limits, high biased.

U Indicates the analyte was analyzed for but not detected.

HPLC/IC

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.

Eisted 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

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Case Narrative

Job ID: 890-2657-1 Client: Ensolum Project/Site: JRU 108H SDG: Eddy County NM

Job ID: 890-2657-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-2657-1

Receipt

The sample was received on 7/26/2022 4:02 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 4.2°C

GC VOA

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-31337 and analytical batch 880-31375 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.

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

GC Semi VOA

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-30966 and analytical batch 880-31081 was outside the upper control limits.

Method 8015MOD NM: Surrogate recovery for the following sample was outside control limits: (LCS 880-30966/2-A). Evidence of matrix interferences is not obvious.

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

HPLC/IC

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

Matrix: Solid

Lab Sample ID: 890-2657-1

Client Sample Results

Client: Ensolum

Project/Site: JRU 108H

Job ID: 890-2657-1

SDG: Eddy County NM

Client Sample ID: SS06

Date Collected: 07/26/22 09:32 Date Received: 07/26/22 16:02

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *- *1	0.00199	mg/Kg		08/02/22 14:44	08/03/22 22:56	1
Toluene	< 0.00199	U *- *1	0.00199	mg/Kg		08/02/22 14:44	08/03/22 22:56	1
Ethylbenzene	< 0.00199	U *- *1	0.00199	mg/Kg		08/02/22 14:44	08/03/22 22:56	1
m-Xylene & p-Xylene	<0.00398	U *- *1	0.00398	mg/Kg		08/02/22 14:44	08/03/22 22:56	1
o-Xylene	< 0.00199	U *+ *1	0.00199	mg/Kg		08/02/22 14:44	08/03/22 22:56	1
Xylenes, Total	<0.00398	U *1	0.00398	mg/Kg		08/02/22 14:44	08/03/22 22:56	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130			08/02/22 14:44	08/03/22 22:56	1
1,4-Difluorobenzene (Surr)	92		70 - 130			08/02/22 14:44	08/03/22 22:56	1
Method: Total BTEX - Total BTE	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			08/04/22 09:41	1
Analyte Total TPH		Qualifier	RL	Unit mg/Kg	D	Prepared	Analyzed 08/01/22 15:09	Dil Fac
Iotal IPH	<50.0	U	50.0	mg/Kg				
							06/01/22 15:09	1
Method: 8015B NM - Diesel Ran	ge Organics (D	RO) (GC)					06/01/22 15:09	1
	• •	RO) (GC) Qualifier	RL	Unit	<u>D</u>	Prepared	Analyzed	1 Dil Fac
Analyte Gasoline Range Organics	• •	Qualifier	RL 50.0	Unit mg/Kg	<u>D</u>	Prepared 07/29/22 08:55		Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result	Qualifier U			<u>D</u>	<u>.</u>	Analyzed	
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <50.0	Qualifier U	50.0	mg/Kg	<u>D</u>	07/29/22 08:55	Analyzed 07/31/22 13:44	1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result <50.0 <50.0	Qualifier U U U	50.0	mg/Kg	<u>D</u>	07/29/22 08:55 07/29/22 08:55	Analyzed 07/31/22 13:44 07/31/22 13:44	1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result <50.0 <50.0 <50.0	Qualifier U U U	50.0 50.0 50.0	mg/Kg	<u>D</u>	07/29/22 08:55 07/29/22 08:55 07/29/22 08:55	Analyzed 07/31/22 13:44 07/31/22 13:44 07/31/22 13:44	1 1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result	Qualifier U U U	50.0 50.0 50.0 <i>Limits</i>	mg/Kg	<u>D</u>	07/29/22 08:55 07/29/22 08:55 07/29/22 08:55 Prepared	Analyzed 07/31/22 13:44 07/31/22 13:44 07/31/22 13:44 Analyzed	1 1 1 Dil Fac
Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Method: 300.0 - Anions, Ion Chro	Result	Qualifier U U Qualifier	50.0 50.0 50.0 Limits 70 - 130	mg/Kg	<u> </u>	07/29/22 08:55 07/29/22 08:55 07/29/22 08:55 Prepared 07/29/22 08:55	Analyzed 07/31/22 13:44 07/31/22 13:44 07/31/22 13:44 Analyzed 07/31/22 13:44	1 1 1 1 Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result	Qualifier U U Qualifier	50.0 50.0 50.0 Limits 70 - 130	mg/Kg	<u>D</u>	07/29/22 08:55 07/29/22 08:55 07/29/22 08:55 Prepared 07/29/22 08:55	Analyzed 07/31/22 13:44 07/31/22 13:44 07/31/22 13:44 Analyzed 07/31/22 13:44	1 1 1 1 Dil Fac

DFBZ = 1,4-Difluorobenzene (Surr)

OTPH = o-Terphenyl

Surrogate Summary

Client: Ensolum Job ID: 890-2657-1
Project/Site: JRU 108H SDG: Eddy County NM

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

•				
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2656-A-1-F MS	Matrix Spike	104	96	
890-2656-A-1-G MSD	Matrix Spike Duplicate	106	93	
890-2657-1	SS06	107	92	
LCS 880-31337/1-A	Lab Control Sample	113	93	
LCSD 880-31337/2-A	Lab Control Sample Dup	90	87	
MB 880-31323/5-A	Method Blank	106	87	
MB 880-31337/5-A	Method Blank	99	87	
Surrogate Legend				
BFB = 4-Bromofluoroben	zene (Surr)			

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)	
		1001	OTPH1		
ab Sample ID	Client Sample ID	(70-130)	(70-130)		
90-2654-A-1-C MS	Matrix Spike	102	110		
90-2654-A-1-D MSD	Matrix Spike Duplicate	99	106		
90-2657-1	SS06	95	117		
CS 880-30966/2-A	Lab Control Sample	123	137 S1+		
CSD 880-30966/3-A	Lab Control Sample Dup	107	121		
1B 880-30966/1-A	Method Blank	106	138 S1+		
Surrogate Legend					
1CO = 1-Chlorooctane					

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Job ID: 890-2657-1

Client: Ensolum SDG: Eddy County NM Project/Site: JRU 108H

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-31323/5-A

Matrix: Solid

Matrix: Solid

Analysis Batch: 31375

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31323

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/02/22 13:15	08/03/22 10:46	1

MB MB

Surrogate	%Recovery Qua	lifier Limits
4-Bromofluorobenzene (Surr)	106	70 - 130
1,4-Difluorobenzene (Surr)	87	70 - 130

Prepared Dil Fac Analyzed 08/02/22 13:15 08/03/22 10:46 08/02/22 13:15 08/03/22 10:46

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31337

Analysis Batch: 31375 мв мв

Lab Sample ID: MB 880-31337/5-A

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/02/22 14:44	08/03/22 21:53	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/02/22 14:44	08/03/22 21:53	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/02/22 14:44	08/03/22 21:53	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/02/22 14:44	08/03/22 21:53	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/02/22 14:44	08/03/22 21:53	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/02/22 14:44	08/03/22 21:53	1

мв мв

Surrogate	%Recovery	Qualifier	Limits	Prepare	ed Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130	08/02/22 1	4:44 08/03/22 21:53	3 1
1,4-Difluorobenzene (Surr)	87		70 - 130	08/02/22 1	4:44 08/03/22 21:53	3 1

Lab Sample ID: LCS 880-31337/1-A

Matrix: Solid

Analysis Batch: 31375

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 31337

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09999		mg/Kg		100	70 - 130	
Toluene	0.100	0.1031		mg/Kg		103	70 - 130	
Ethylbenzene	0.100	0.1082		mg/Kg		108	70 - 130	
m-Xylene & p-Xylene	0.200	0.2220		mg/Kg		111	70 - 130	
o-Xylene	0.100	0.1387	*+	mg/Kg		139	70 - 130	

LCS LCS

Surrogate	%Recovery Qual	lifier Limits
4-Bromofluorobenzene (Surr)	113	70 - 130
1,4-Difluorobenzene (Surr)	93	70 - 130

Lab Sample ID: LCSD 880-31337/2-A

Matrix: Solid

Analysis Batch: 31375

Client Sample ID	: Lab Control	Sample Dup
	Dean T	mar Tatal/NIA

Prep Type: Total/NA

Prep Batch: 31337

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.0998	0.05262	*- *1	mg/Kg		53	70 - 130	62	35

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Prep Batch: 31337

Prep Batch: 31337

Prep Type: Total/NA

QC Sample Results

Client: Ensolum Job ID: 890-2657-1 Project/Site: JRU 108H SDG: Eddy County NM

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

Lab Sample ID: LCSD 880-31337/2-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 31375

Spike	LCSD	LCSD				%Rec		RPD
Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
0.0998	0.06071	*- *1	mg/Kg		61	70 - 130	52	35
0.0998	0.06794	*- *1	mg/Kg		68	70 - 130	46	35
0.200	0.1297	*- *1	mg/Kg		65	70 - 130	52	35
0.0998	0.09111	*1	mg/Kg		91	70 - 130	41	35
	0.0998 0.0998 0.200	Added Result 0.0998 0.06071 0.0998 0.06794 0.200 0.1297	Added Result Qualifier 0.0998 0.06071 *- *1 0.0998 0.06794 *- *1 0.200 0.1297 *- *1	Added Result Qualifier Unit 0.0998 0.06071 *- *1 mg/Kg 0.0998 0.06794 *- *1 mg/Kg 0.200 0.1297 *- *1 mg/Kg	Added Result Qualifier Unit D 0.0998 0.06071 *- *1 mg/Kg 0.0998 0.06794 *- *1 mg/Kg 0.200 0.1297 *- *1 mg/Kg	Added Result Qualifier Unit D %Rec 0.0998 0.06071 *- *1 mg/Kg 61 0.0998 0.06794 *- *1 mg/Kg 68 0.200 0.1297 *- *1 mg/Kg 65	Added Result Qualifier Unit D %Rec Limits 0.0998 0.06071 *- *1 mg/Kg 61 70 - 130 0.0998 0.06794 *- *1 mg/Kg 68 70 - 130 0.200 0.1297 *- *1 mg/Kg 65 70 - 130	Added Result Qualifier Unit D %Rec Limits RPD 0.0998 0.06071 *- *1 mg/Kg 61 70 - 130 52 0.0998 0.06794 *- *1 mg/Kg 68 70 - 130 46 0.200 0.1297 *- *1 mg/Kg 65 70 - 130 52

LCSD LCSD %Recovery Qualifier Surrogate Limits 70 - 130 4-Bromofluorobenzene (Surr) 90 1,4-Difluorobenzene (Surr) 87 70 - 130

Lab Sample ID: 890-2656-A-1-F MS Client Sample ID: Matrix Spike Prep Type: Total/NA

Matrix: Solid

Analysis Batch: 31375

				MS				%Rec
Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
<0.00199	U *- *1	0.101	0.08722		mg/Kg		87	70 - 130
<0.00199	U *- *1	0.101	0.08202		mg/Kg		82	70 - 130
<0.00199	U *- *1	0.101	0.08158		mg/Kg		81	70 - 130
<0.00398	U *- *1	0.201	0.1625		mg/Kg		81	70 - 130
<0.00199	U *+ *1	0.101	0.09304		mg/Kg		92	70 - 130
	<0.00199 <0.00199 <0.00398	<0.00199 U*-*1 <0.00199 U*-*1 <0.00199 U*-*1 <0.00398 U*-*1 <0.00199 U*+*1	<0.00199 U *- *1 0.101 <0.00199 U *- *1 0.101 <0.00398 U *- *1 0.201	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199

MS MS %Recovery Qualifier Surrogate Limits 70 - 130 4-Bromofluorobenzene (Surr) 104 70 - 130 1,4-Difluorobenzene (Surr) 96

Lab Sample ID: 890-2656-A-1-G MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Analysis Batch: 31375									Prep	Batch:	31337
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00199	U *- *1	0.0998	0.09326		mg/Kg		93	70 - 130	7	35
Toluene	<0.00199	U *- *1	0.0998	0.08591		mg/Kg		86	70 - 130	5	35
Ethylbenzene	< 0.00199	U *- *1	0.0998	0.08696		mg/Kg		87	70 - 130	6	35
m-Xylene & p-Xylene	<0.00398	U *- *1	0.200	0.1684		mg/Kg		84	70 - 130	4	35
o-Xylene	<0.00199	U *+ *1	0.0998	0.09635		mg/Kg		97	70 - 130	3	35

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

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

Lab Sample ID: MB 880-30966/1-A Client Sample ID: Method Blank

Analysis Batch: 31081

мв мв Result Qualifier RL Unit Prepared Gasoline Range Organics <50.0 U 50.0 mg/Kg 07/29/22 08:55 07/31/22 10:35

(GRO)-C6-C10

Matrix: Solid

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Prep Type: Total/NA

Prep Batch: 30966

Client: Ensolum Job ID: 890-2657-1
Project/Site: JRU 108H SDG: Eddy County NM

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

Lab Sample ID: MB 880-30966/1-A

Matrix: Solid

Analysis Batch: 31081

MB MB

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30966

	IVID	IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		07/29/22 08:55	07/31/22 10:35	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/29/22 08:55	07/31/22 10:35	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130			07/29/22 08:55	07/31/22 10:35	1
o-Terphenyl	138	S1+	70 - 130			07/29/22 08:55	07/31/22 10:35	1

Lab Sample ID: LCS 880-30 Matrix: Solid	900/2-A						Cilein	. Sample		pe: Total/N
Analysis Batch: 31081			Spike	LCS	LCS				%Rec	Batch: 3096
Analyte			Added		Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics			1000	1127		mg/Kg		113	70 - 130	
(GRO)-C6-C10										
Diesel Range Organics (Over			1000	1195		mg/Kg		120	70 - 130	
C10-C28)										
	LCS	LCS								
Surrogate	%Recovery	Qualifier	Limits							
1-Chlorooctane	123		70 - 130							
o-Terphenyl	137	S1+	70 ₋ 130							

Matrix: Solid Analysis Batch: 31081								Type: To Batch:	
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1048		mg/Kg		105	70 - 130	7	20
Diesel Range Organics (Over C10-C28)	1000	1111		mg/Kg		111	70 - 130	7	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	107		70 - 130
o-Terphenyl	121		70 - 130

110

Lab Sample ID: 890-2654-A-1- Matrix: Solid Analysis Batch: 31081	C MS							Client	Prep T	Matrix Spike ype: Total/NA Batch: 30966
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	1120		mg/Kg		108	70 - 130	
Diesel Range Organics (Over C10-C28)	<49.9	U	999	993.9		mg/Kg		96	70 - 130	
	MS	MS								
Surrogate	%Recovery	Qualifier	Limits							
1-Chlorooctane	102		70 - 130							

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70 - 130

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Client Sample ID: Lab Control Sample Dup

o-Terphenyl

Lab Sample ID: LCSD 880-30966/3-A

Job ID: 890-2657-1

Client: Ensolum SDG: Eddy County NM Project/Site: JRU 108H

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

%Recovery Qualifier

99

106

4930

Lab Sample ID: 890-2654-A Matrix: Solid Analysis Batch: 31081	-1-D MSD					CI	ient S	ample IC	•	oike Dup Type: To Batch:	tal/NA
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	1143		mg/Kg		111	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	989.3		mg/Kg		96	70 - 130	0	20
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								

70 - 130

70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: LCSD 880-30913/3-A

o-Terphenyl

1-Chlorooctane

380-30913/1-A		Client Sample ID: Method Blank							
						Prep Type:	Soluble		
02									
МВ	MB								
Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac		
<5.00	U	5.00	mg/Kg			07/30/22 22:01	1		
				D	Prepared		Dil	Fac 1	

Lab Sample ID: LCS 880-30913/2-A			Client Sample ID: Lab Control Sample
Matrix: Solid			Prep Type: Soluble
Analysis Batch: 31002			
	Spike	LCS LCS	%Rec

Matrix: Solid Analysis Batch: 31002							Prep	Type: So	oluble
-	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit

Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	250	267.7		mg/Kg		107	90 - 110	2	20
Lab Sample ID: 890-2653-A-1-B MS						Client	Sample ID	: Matrix	Spike

Matrix: Solid				Prep Type: Soluble
Analysis Batch: 31002				
	Sample Sample	Spike	MS MS	%Rec

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	4930		2500	7650		mg/Kg		109	90 - 110	

Lab Sample ID: 890-2653-A-1-C MSD Matrix: Solid Analysis Batch: 31002							Client S	ample I	D: Matrix S Prep	Spike Dup o Type: S	
Analysis Daton. 01002	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit

7677

mg/Kg

2500

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Client Sample ID: Lab Control Sample Dup

110

90 - 110

20

Chloride

Client Sample ID: Matrix Spike

Client Sample ID: Matrix Spike Duplicate

Prep Type: Soluble

Prep Type: Soluble

QC Sample Results

Client: Ensolum Job ID: 890-2657-1 Project/Site: JRU 108H SDG: Eddy County NM

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-2659-A-1-B MS

Matrix: Solid

Analysis Batch: 31002

_	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	149		250	378.1		mg/Kg		92	90 - 110	

Lab Sample ID: 890-2659-A-1-C MSD

Matrix: Solid

1	Analysis Batch: 31002											
		Sample	Sample	Spike	MSD	MSD				%Rec		RPD
	Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
l	Chloride	149		250	378.6		mg/Kg		92	90 - 110	0	20

QC Association Summary

Client: Ensolum Job ID: 890-2657-1
Project/Site: JRU 108H SDG: Eddy County NM

GC VOA

Prep Batch: 31323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-31323/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 31337

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2657-1	SS06	Total/NA	Solid	5035	
MB 880-31337/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31337/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31337/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2656-A-1-F MS	Matrix Spike	Total/NA	Solid	5035	
890-2656-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 31375

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2657-1	SS06	Total/NA	Solid	8021B	31337
MB 880-31323/5-A	Method Blank	Total/NA	Solid	8021B	31323
MB 880-31337/5-A	Method Blank	Total/NA	Solid	8021B	31337
LCS 880-31337/1-A	Lab Control Sample	Total/NA	Solid	8021B	31337
LCSD 880-31337/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31337
890-2656-A-1-F MS	Matrix Spike	Total/NA	Solid	8021B	31337
890-2656-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	31337

Analysis Batch: 31479

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2657-1	SS06	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 30966

Lab Sample ID 890-2657-1	Client Sample ID SS06	Prep Type Total/NA	Matrix Solid	Method 8015NM Prep	Prep Batch
MB 880-30966/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30966/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30966/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2654-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2654-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 31081

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2657-1	SS06	Total/NA	Solid	8015B NM	30966
MB 880-30966/1-A	Method Blank	Total/NA	Solid	8015B NM	30966
LCS 880-30966/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30966
LCSD 880-30966/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30966
890-2654-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	30966
890-2654-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30966

Analysis Batch: 31204

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2657-1	SS06	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: JRU 108H
Job ID: 890-2657-1
SDG: Eddy County NM

HPLC/IC

Leach Batch: 30913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2657-1	SS06	Soluble	Solid	DI Leach	
MB 880-30913/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-30913/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-30913/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2653-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2653-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
890-2659-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2659-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 31002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2657-1	SS06	Soluble	Solid	300.0	30913
MB 880-30913/1-A	Method Blank	Soluble	Solid	300.0	30913
LCS 880-30913/2-A	Lab Control Sample	Soluble	Solid	300.0	30913
LCSD 880-30913/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30913
890-2653-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30913
890-2653-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30913
890-2659-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30913
890-2659-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30913

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Lab Chronicle

Client: Ensolum

Job ID: 890-2657-1

Project/Site: JRU 108H

SDG: Eddy County NM

Client Sample ID: SS06

Date Collected: 07/26/22 09:32

Lab Sample ID: 890-2657-1

Matrix: Solid

Date Received: 07/26/22 16:02

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	31337	08/02/22 14:44	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31375	08/03/22 22:56	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			31479	08/04/22 09:41	SM	XEN MID
Total/NA	Analysis	8015 NM		1			31204	08/01/22 15:09	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	30966	07/29/22 08:55	DM	XEN MID
Total/NA	Analysis	8015B NM		1			31081	07/31/22 13:44	SM	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	30913	07/28/22 10:42	CH	XEN MID
Soluble	Analysis	300.0		1			31002	07/30/22 23:59	SMC	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum Job ID: 890-2657-1
Project/Site: JRU 108H SDG: Eddy County NM

Laboratory: Eurofins Midland

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

Authority	Pr	ogram	Identification Number	Expiration Date	
Texas		ELAP	T104704400-22-24	06-30-23	
The following analytes	are included in this report, bu	it the laboratory is not certifi	ed by the governing authority. This list ma	av include analytes for w	
the agency does not of	fer certification.	,	ou s, and governming dualismy.	ay molado analytoo for v	
the agency does not of Analysis Method	fer certification . Prep Method	Matrix	Analyte	ay morado anarytoo tor v	
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Method Summary

Client: Ensolum Job ID: 890-2657-1
Project/Site: JRU 108H SDG: Eddy County NM

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

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Sample Summary

Client: Ensolum

Job ID: 890-2657-1 Project/Site: JRU 108H SDG: Eddy County NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2657-1	SS06	Solid	07/26/22 09:32	07/26/22 16:02	0.5

Relinguiett

Signature)

Received by: (Signature)

2001 CE 0C. Date/Time Circle Method(s) and Metal(s) to be analyzed

Total 200.7 / 6010

200.8 / 6020:

8RCRA 13PPM Texas 11 Al Sb As Ba

TCLP / SPLP 6010: 8RCRA Sb As Ba

of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expo 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 Eu

votice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurof

eurofins

Environment Testing

Phone:

Samples Received Intact: SAMPLE RECEIPT

> emp Blank: (es) No

> > Yes No

Wet Ice:

Yes No

Parameters

127.8

0

CHLORIDES (EPA: 300.0)

the lab, if received by 4:30pm TAT starts the day received by

Sample Custody Seals: Cooler Custody Seals:

Yes No Yes No WA

Z

Correction Factor: летрегаture Reading:

Thermometer ID:

Corrected Temperature:

Sample Identification **SS06**

Matrix

Date

Time

Depth

Comp Cont Grab/

of

TPH (8015)

Sampled

S

7/26/2022 Sampled

932

0.5 Comp

×

Sampler's Name:

Project Location:

Eddy County, NM

Liz Cheli

N N

03E1558090 **JRU 108H**

☑ Routine Due Date:

☐ Rush

Code

5 day TAT

Turn Around

Project Number:

Project Name:

Address:

City, State ZIP:

Carlsbad, NM 88220 3122 National Parks Hwy

9898540852

Email: bbelill@ensolum.com

City, State ZIP:

Carlsbad, NM 3104 E. Gree XTO Energy, Garrett Green

Address: Company Name: Project Manager:

Ben Belill

Bill to: (if different)

Company Name:

Ensolum

Chain of Custody

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, Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300

Work Order No:

Carlsbad, NM (575) 988-3199		Page 1 of 1	
	Con		
nc.	Program: UST/PST ☐ PRP☐ Brownfields ☐ RRC ☐	lds 🗌 RRC 📗 Superfund 🗎	
n Street	State of Project:		
88220	Reporting: Level II	ST TRRP Level IV	
	Deliverables: EDD	Other:	
ANALYSIS REQUEST	UEST	Preservative Codes	
		None: NO DI Water: H ₂ O	
	Со	Cool: Cool MeOH: Me	
	HC	HCL: HC HNO ₃ : HN	
	H ₂ :	H ₂ S0 ₄ : H ₂ NaOH: Na	
	H ₃	H ₃ PO ₄ : HP	
	Na	NaHSO4: NABIS)
	Na Na	Na ₂ S ₂ O ₃ : NaSO ₃	20
890-2657 Chain of Custody		Zn Acetate+NaOH: Zn	of
8021	Na	NaOH+Ascorbic Acid: SAPC	18
BTEX (Sample Comments	Page
×	Inc	Incident ID: nAPP2217931599	1
	Co	Cost Center: 1139071001	
			ſ
			AM
			:46
			:49
			3 8.
e B Cd Ca Cr Co Cu Fe Pb	Mg Mn Mo Ni K Se Ag SiO ₂ Na S	Sr TI Sn U V Zn	202
Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U	li Se Ag TI U Hg: 1631 / 245.1 / 7470	5.1 / 7470 / 7471	28/2
ins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions inses incurred by the client if such losses are due to circumstances beyond the control of the cont	Ins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions insest incurred by the client if such losses are due to circumstances beyond the control control in the property of the property of the control in the property of the control in the property of the p		g: 4/2
Relinquished by: (Signature)	re) Received by: (Signature)	Date/Time	agi
. C			24

Revised Date 08/25/2020 Rev 2020 2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2657-1

SDG Number: Eddy County NM

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Login Number: 2657 List Number: 1 List Source: Eurofins Carlsbad

List Number: 1 Creator: Clifton, Cloe

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 ampered 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	
s 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	
here 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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Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-2657-1 SDG Number: Eddy County NM

List Source: Eurofins Midland

List Creation: 07/28/22 10:13 AM

List Number: 2 Creator: Rodriguez, Leticia

Login Number: 2657

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	N/A	

<6mm (1/4").



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Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-2658-1

Laboratory Sample Delivery Group: Eddy County NM

Client Project/Site: JRU 108H

For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

RAMER

Authorized for release by: 8/4/2022 11:03:25 AM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

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

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

Client: Ensolum
Project/Site: JRU 108H

Laboratory Job ID: 890-2658-1
SDG: Eddy County NM

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Definitions/Glossary

Client: Ensolum Job ID: 890-2658-1
Project/Site: JRU 108H SDG: Eddy County NM

Qualifiers

GC VOA
Qualifier

*_	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD RPD exceeds control limits.

U Indicates the analyte was analyzed for but not detected.

Qualifier Description

GC Semi VOA

 Qualifier
 Qualifier Description

 S1+
 Surrogate recovery exceeds control limits, high biased.

 U
 Indicates the analyte was analyzed for but not detected.

HPLC/IC

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.

Eisted 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

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Case Narrative

Client: Ensolum Job ID: 890-2658-1
Project/Site: JRU 108H SDG: Eddy County NM

Job ID: 890-2658-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-2658-1

Receipt

The sample was received on 7/26/2022 4:02 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 4.2° C

GC VOA

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-31337 and analytical batch 880-31375 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.

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

GC Semi VOA

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-30966 and analytical batch 880-31081 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (LCS 880-30966/2-A). Evidence of matrix interferences is not obvious.

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

HPLC/IC

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

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Matrix: Solid

Lab Sample ID: 890-2658-1

Client Sample Results

Client: Ensolum Job ID: 890-2658-1
Project/Site: JRU 108H SDG: Eddy County NM

Client Sample ID: SS07

Date Collected: 07/26/22 09:35 Date Received: 07/26/22 16:02

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *- *1	0.00200	mg/Kg		08/02/22 14:44	08/03/22 23:16	1
Toluene	<0.00200	U *- *1	0.00200	mg/Kg		08/02/22 14:44	08/03/22 23:16	1
Ethylbenzene	<0.00200	U *- *1	0.00200	mg/Kg		08/02/22 14:44	08/03/22 23:16	1
m-Xylene & p-Xylene	<0.00401	U *- *1	0.00401	mg/Kg		08/02/22 14:44	08/03/22 23:16	1
o-Xylene	<0.00200	U *+ *1	0.00200	mg/Kg		08/02/22 14:44	08/03/22 23:16	1
Xylenes, Total	<0.00401	U *1	0.00401	mg/Kg		08/02/22 14:44	08/03/22 23:16	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130			08/02/22 14:44	08/03/22 23:16	1
1,4-Difluorobenzene (Surr)	96		70 - 130			08/02/22 14:44	08/03/22 23:16	1
Method: Total BTEX - Total BTEX	(Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			08/04/22 09:41	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			08/01/22 15:09	1
Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		07/29/22 08:55	07/31/22 19:22	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		07/29/22 08:55	07/31/22 19:22	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/29/22 08:55	07/31/22 19:22	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	85		70 - 130			07/29/22 08:55	07/31/22 19:22	1
o-Terphenyl	108		70 - 130			07/29/22 08:55	07/31/22 19:22	1
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.70		5.00	mg/Kg			07/31/22 00:07	1

Surrogate Summary

Client: Ensolum Job ID: 890-2658-1 Project/Site: JRU 108H SDG: Eddy County NM

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)	
890-2656-A-1-F MS	Matrix Spike	104	96	
890-2656-A-1-G MSD	Matrix Spike Duplicate	106	93	
890-2658-1	SS07	110	96	
LCS 880-31337/1-A	Lab Control Sample	113	93	
LCSD 880-31337/2-A	Lab Control Sample Dup	90	87	
MB 880-31323/5-A	Method Blank	106	87	
MB 880-31337/5-A	Method Blank	99	87	

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid Prep Type: Total/NA

_				Percent Surroga
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2654-A-1-C MS	Matrix Spike	102	110	
890-2654-A-1-D MSD	Matrix Spike Duplicate	99	106	
890-2658-1	SS07	85	108	
LCS 880-30966/2-A	Lab Control Sample	123	137 S1+	
LCSD 880-30966/3-A	Lab Control Sample Dup	107	121	
MB 880-30966/1-A	Method Blank	106	138 S1+	
Surrogate Legend				
1CO = 1-Chlorooctane				

OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-2658-1 Project/Site: JRU 108H SDG: Eddy County NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-31323/5-A

Matrix: Solid

Analysis Batch: 31375

Client Sample ID: Method Blank

	Prep Type: Total/NA
	Prep Batch: 31323
IB	

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/02/22 13:15	08/03/22 10:46	1

	MB	MB				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130	08/02/22 13:15	08/03/22 10:46	1
1,4-Difluorobenzene (Surr)	87		70 - 130	08/02/22 13:15	08/03/22 10:46	1

Lab Sample ID: MB 880-31337/5-A

Client Sample ID: Method Blank

Lab Cample ID. MiD 000-3133773-A	Olient Gample ID. Method Blank
Matrix: Solid	Prep Type: Total/NA
Analysis Batch: 31375	Prep Batch: 31337
MB MB	

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200		0.00200	mg/Kg	_ =	08/02/22 14:44	08/03/22 21:53	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/02/22 14:44	08/03/22 21:53	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/02/22 14:44	08/03/22 21:53	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/02/22 14:44	08/03/22 21:53	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/02/22 14:44	08/03/22 21:53	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/02/22 14:44	08/03/22 21:53	1

мв мв

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130	08/02/22 14:44	08/03/22 21:53	1
1,4-Difluorobenzene (Surr)	87		70 - 130	08/02/22 14:44	08/03/22 21:53	1

Lab Sample ID: LCS 880-31337/1-A

Matrix: Solid

Analysis Batch: 31375

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 31337

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09999		mg/Kg		100	70 - 130	
Toluene	0.100	0.1031		mg/Kg		103	70 - 130	
Ethylbenzene	0.100	0.1082		mg/Kg		108	70 - 130	
m-Xylene & p-Xylene	0.200	0.2220		mg/Kg		111	70 - 130	
o-Xylene	0.100	0.1387	*+	mg/Kg		139	70 - 130	

	LCS I	LCS	
Surrogate	%Recovery (Qualifier	Limits
4-Bromofluorobenzene (Surr)	113		70 - 130
1 4-Difluorohenzene (Surr)	93		70 130

Lab Sample ID: LCSD 880-31337/2-A

Matrix: Solid

Analysis Batch: 31375

Client Sample	ID: Lab	Control	Sample	Dup
		Dunn Ti	Tata	I/NI A

Prep Type: Total/NA

Prep Batch: 31337

	Spike	LCSD LCSD				%Rec		RPD
Analyte	Added	Result Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.0998	0.05262 *- *1	mg/Kg		53	70 - 130	62	35

QC Sample Results

Client: Ensolum Job ID: 890-2658-1 Project/Site: JRU 108H SDG: Eddy County NM

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

Lab Sample ID: LCSD 880-31337/2-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid** Prep Type: Total/NA **Analysis Batch: 31375**

Prep Batch: 31337 Spike LCSD LCSD %Rec **RPD** Analyte Added Result Qualifier Unit %Rec Limits **RPD** Limit D 0.06071 *- *1 Toluene 0.0998 61 70 - 130 35 mg/Kg 52 Ethylbenzene 0.0998 0.06794 *- *1 mg/Kg 68 70 - 130 46 35 0.200 m-Xylene & p-Xylene 0.1297 *- *1 65 70 - 130 35 mg/Kg 52

0.09111 *1

mg/Kg

91

70 - 130

41

0.0998

LCSD LCSD %Recovery Qualifier Limits Surrogate 70 - 130 4-Bromofluorobenzene (Surr) 90 1,4-Difluorobenzene (Surr) 87 70 - 130

Lab Sample ID: 890-2656-A-1-F MS Client Sample ID: Matrix Spike

Matrix: Solid

o-Xylene

Prep Type: Total/NA **Analysis Batch: 31375** Prep Batch: 31337

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00199	U *- *1	0.101	0.08722		mg/Kg	_	87	70 - 130	
Toluene	<0.00199	U *- *1	0.101	0.08202		mg/Kg		82	70 - 130	
Ethylbenzene	<0.00199	U *- *1	0.101	0.08158		mg/Kg		81	70 - 130	
m-Xylene & p-Xylene	<0.00398	U *- *1	0.201	0.1625		mg/Kg		81	70 - 130	
o-Xylene	<0.00199	U *+ *1	0.101	0.09304		mg/Kg		92	70 - 130	

MS MS %Recovery Qualifier Surrogate Limits 70 - 130 4-Bromofluorobenzene (Surr) 104 70 - 130 1,4-Difluorobenzene (Surr) 96

Lab Sample ID: 890-2656-A-1-G MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid Prep Type: Total/NA **Analysis Batch: 31375** Prep Batch: 31337

-	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00199	U *- *1	0.0998	0.09326		mg/Kg		93	70 - 130	7	35
Toluene	<0.00199	U *- *1	0.0998	0.08591		mg/Kg		86	70 - 130	5	35
Ethylbenzene	<0.00199	U *- *1	0.0998	0.08696		mg/Kg		87	70 - 130	6	35
m-Xylene & p-Xylene	<0.00398	U *- *1	0.200	0.1684		mg/Kg		84	70 - 130	4	35
o-Xylene	<0.00199	U *+ *1	0.0998	0.09635		mg/Kg		97	70 - 130	3	35

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

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

Lab Sample ID: MB 880-30966/1-A Client Sample ID: Method Blank **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 31081 Prep Batch: 30966 MB MB

Result Qualifier RL Unit Prepared <50.0 U 50.0 mg/Kg 07/29/22 08:55 07/31/22 10:35 Gasoline Range Organics (GRO)-C6-C10

Eurofins Carlsbad

Analysis Batch: 31081

Client: Ensolum Job ID: 890-2658-1 Project/Site: JRU 108H SDG: Eddy County NM

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

Lab Sample ID: MB 880-30966/1-A **Matrix: Solid**

MB MB

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

Prep Batch: 30966

ı									
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		07/29/22 08:55	07/31/22 10:35	1
	C10-C28)								
	OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/29/22 08:55	07/31/22 10:35	1
		440	440						
ı		IVIB	MB						

Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 1-Chlorooctane 106 70 - 130 07/29/22 08:55 07/31/22 10:35 138 S1+ 70 - 130 07/29/22 08:55 07/31/22 10:35 o-Terphenyl

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 880-30966/2-A Prep Type: Total/NA **Matrix: Solid Analysis Batch: 31081** Prep Batch: 30966 LCS LCS

Spike Analyte Added Result Qualifier Unit %Rec Limits Gasoline Range Organics 1000 1127 113 70 - 130 mg/Kg (GRO)-C6-C10 1000 Diesel Range Organics (Over 1195 mg/Kg 120 70 - 130C10-C28)

LCS LCS Qualifier Limits Surrogate %Recovery 1-Chlorooctane 70 - 130 123 o-Terphenyl 137 S1+ 70 - 130

Lab Sample ID: LCSD 880-30966/3-A Client Sample ID: Lab Control Sample Dup Matrix: Solid

Analysis Batch: 31081

Prep Type: Total/NA Prep Batch: 30966

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	1048		mg/Kg		105	70 - 130	7	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	1111		mg/Kg		111	70 - 130	7	20
C10-C28)									

LCSD LCSD Surrogate %Recovery Qualifier Limits 1-Chlorooctane 107 70 - 130 o-Terphenyl 121 70 - 130

Lab Sample ID: 890-2654-A-1-C MS Client Sample ID: Matrix Spike

Matrix: Solid

Analysis Batch: 31081

Prep Type: Total/NA Prep Batch: 30966

Spike MS MS %Rec Sample Sample Result Qualifier Added Result Qualifier %Rec Analyte Unit Limits <49.9 U 999 70 - 130 Gasoline Range Organics 1120 108 mg/Kg (GRO)-C6-C10 999 993.9 Diesel Range Organics (Over <49.9 U mg/Kg 96 70 - 130 C10-C28)

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	102		70 - 130
o-Terphenyl	110		70 - 130

Lab Sample ID: 890-2654-A-1-D MSD

Job ID: 890-2658-1 SDG: Eddy County NM

Project/Site: JRU 108H

Client: Ensolum

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

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Matrix: Solid Analysis Batch: 31081 Prep Batch: 30966 Sample Sample Spike MSD MSD RPD Result Qualifier Added RPD Limit Result Qualifier Unit %Rec Limits

Analyte Gasoline Range Organics <49.9 U 999 1143 mg/Kg 111 70 - 130 2 20 (GRO)-C6-C10 999 Diesel Range Organics (Over <49.9 U 989 3 mg/Kg 96 70 - 130n 20 C10-C28)

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	99		70 - 130
o-Terphenyl	106		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-30913/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 31002

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Analyte	Result C	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00 L	J	5.00	mg/Kg			07/30/22 22:01	1

Lab Sample ID: LCS 880-30913/2-A **Client Sample ID: Lab Control Sample Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 31002

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	261.9	-	mg/Kg		105	90 - 110	

Lab Sample ID: LCSD 880-30913/3-A Client Sample ID: Lab Control Sample Dup

Matrix: Solid

Analysis Batch: 31002

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	250	267.7		mg/Kg		107	90 - 110	2	20	

Lab Sample ID: 890-2653-A-1-B MS

Client Sample ID: Matrix Spike **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 31002

Sample Sample Spike MS MS %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Chloride 90 - 110 2500 109 4930 7650 mg/Kg

Lab Sample ID: 890-2653-A-1-C MSD

Client Sample ID: Matrix Spike Duplicate **Matrix: Solid**

Prep Type: Soluble

Analysis Batch: 31002

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	4930		2500	7677		mg/Kg		110	90 - 110		20

Eurofins Carlsbad

Prep Type: Soluble

Prep Type: Soluble

QC Sample Results

Client: Ensolum Job ID: 890-2658-1 Project/Site: JRU 108H SDG: Eddy County NM

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-2659-A-1-B MS Client Sample ID: Matrix Spike

Matrix: Solid Analysis Batch: 31002

Sample Sample Spike MS MS %Rec Result Qualifier Result Qualifier Added Analyte Unit %Rec Limits Chloride 149 250 378.1 mg/Kg 92 90 - 110

Lab Sample ID: 890-2659-A-1-C MSD Client Sample ID: Matrix Spike Duplicate **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 31002

Sample Sample Spike MSD MSD %Rec RPD Result Qualifier Added Result Qualifier Limits RPD Limit Analyte Unit D %Rec Chloride 149 250 378.6 mg/Kg 92 90 - 110 0 20

QC Association Summary

Client: Ensolum Job ID: 890-2658-1
Project/Site: JRU 108H SDG: Eddy County NM

GC VOA

Prep Batch: 31323

	Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
1	MB 880-31323/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 31337

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2658-1	SS07	Total/NA	Solid	5035	
MB 880-31337/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31337/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31337/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2656-A-1-F MS	Matrix Spike	Total/NA	Solid	5035	
890-2656-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 31375

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2658-1	SS07	Total/NA	Solid	8021B	31337
MB 880-31323/5-A	Method Blank	Total/NA	Solid	8021B	31323
MB 880-31337/5-A	Method Blank	Total/NA	Solid	8021B	31337
LCS 880-31337/1-A	Lab Control Sample	Total/NA	Solid	8021B	31337
LCSD 880-31337/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31337
890-2656-A-1-F MS	Matrix Spike	Total/NA	Solid	8021B	31337
890-2656-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	31337

Analysis Batch: 31480

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2658-1	SS07	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 30966

Lab Sample ID 890-2658-1	Client Sample ID SS07	Prep Type Total/NA	Matrix Solid	Method 8015NM Prep	Prep Batch
MB 880-30966/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30966/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30966/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2654-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2654-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 31081

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2658-1	SS07	Total/NA	Solid	8015B NM	30966
MB 880-30966/1-A	Method Blank	Total/NA	Solid	8015B NM	30966
LCS 880-30966/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30966
LCSD 880-30966/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30966
890-2654-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	30966
890-2654-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30966

Analysis Batch: 31206

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2658-1	SS07	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: JRU 108H
Job ID: 890-2658-1
SDG: Eddy County NM

HPLC/IC

Leach Batch: 30913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2658-1	SS07	Soluble	Solid	DI Leach	
MB 880-30913/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-30913/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-30913/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2653-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2653-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
890-2659-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2659-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 31002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2658-1	SS07	Soluble	Solid	300.0	30913
MB 880-30913/1-A	Method Blank	Soluble	Solid	300.0	30913
LCS 880-30913/2-A	Lab Control Sample	Soluble	Solid	300.0	30913
LCSD 880-30913/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30913
890-2653-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30913
890-2653-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30913
890-2659-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30913
890-2659-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30913

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Lab Chronicle

Client: Ensolum Job ID: 890-2658-1 Project/Site: JRU 108H SDG: Eddy County NM

Client Sample ID: SS07

Lab Sample ID: 890-2658-1 Date Collected: 07/26/22 09:35

Matrix: Solid

Date Received: 07/26/22 16:02

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	31337	08/02/22 14:44	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31375	08/03/22 23:16	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			31480	08/04/22 09:41	SM	XEN MID
Total/NA	Analysis	8015 NM		1			31206	08/01/22 15:09	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	30966	07/29/22 08:55	DM	XEN MID
Total/NA	Analysis	8015B NM		1			31081	07/31/22 19:22	SM	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	30913	07/28/22 10:42	СН	XEN MID
Soluble	Analysis	300.0		1			31002	07/31/22 00:07	SMC	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 108H
Job ID: 890-2658-1
SDG: Eddy County NM

Laboratory: Eurofins Midland

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

Authority	Pr	ogram	Identification Number	Expiration Date
Texas	NE	ELAP	T104704400-22-24	06-30-23
The following analytes	are included in this report, bu	it the laboratory is not certifi	ed by the governing authority. This list ma	av include analytes for w
the agency does not of	fer certification.	,	ou s, and governming dualismy.	ay molado analytoo for v
the agency does not of Analysis Method	fer certification . Prep Method	Matrix	Analyte	ay morado anarytoo tor v
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Method Summary

Client: Ensolum Job ID: 890-2658-1
Project/Site: JRU 108H SDG: Eddy County NM

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

Eurofins Carlsbad

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Sample Summary

Client: Ensolum

Job ID: 890-2658-1 Project/Site: JRU 108H SDG: Eddy County NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2658-1	SS07	Solid	07/26/22 09:35	07/26/22 16:02	0.5

Relinquisbertop (Signature)

Received by (Signature)

ODI CC DB.

Date/Time

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Revised Date 08/25/2020 Rev 2020 2

eurofins

Environment Testing

Chain of Custody

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 Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300

Work Order No:

														_)			
roject Manager: Ben	Ben Belill			Bill to: (if different)		Garrett Green	1 Gree	Š											IOAA	9	G	MOIN Cides Collisions	
	Ensolum			Company Name		XTO Energy, Inc.	nergy	, Inc.							Prog	am:	JST/]18	PRI	ļ	row	Program: UST/PST ☐ PRP☐ Brownfields ☐ RRC ☐	C Superfund
	3122 National Parks Hwy	Hwy.		Address:		3104 E. Green Street	Gre	en Str	et						State	of Pr	State of Project:	••		ı		I	
le ZIP:	Carlsbad, NM 88220			City, State ZIP:		Carlsbad, NM 88220	ad, N	M 882	20						Repo	ting:	evel		Level	≡] PS	Reporting: Level III Dest/UST TRRP D	RP ☐ Level IV☐
	9898540852		Email:	Email: bbelill@ensolum.com	m.con	13									Delive	rable	Deliverables: EDD	Ä	-	>	ADaPT LJ	T L Other:	er:
roiect Name:	JRU 108H		Turn	Turn Around							Ą	ANALYSIS REC	SISF	REQL	UEST							Preserv	Preservative Codes
roject Number:	03E1558090	90	☑ Routine	☐ Rush	Pres.							_	_				\vdash	\vdash	+	1		None: NO	DI Water: H ₂ O
roject Location:	Eddy County, NM		Due Date:	5 day TAT																		Cool: Cool	MeOH: Me
ampler's Name:	Liz Cheli		TAT starts the	TAT starts the day received by								_						_		_		HCL: HC	HNO3: HN
Ŏ #	N/A		the lab, if rece	the lab, if received by 4:30pm	rs						=							=				H ₂ SO ₄ : H ₂	NaCH: Na
AMPLE RECEIPT	Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	nete	(0.0									=							H ₃ PO ₄ : HP	
amples Received Intact:	7	Thermometer ID:	r ID:	WM-007	ran	300												Ŧ				NaHSO ₄ : NABIS	SIS
ooler Custody Seals:	~	Correction Factor:	actor:	30.0	Pa	PA:				_								=				Na ₂ S ₂ O ₃ ; NaSO ₃	, Ç
ample Custody Seals:	Yes No NA	Temperature Reading:	Reading:	4.4		S (E		1	Ī	T	89	890-2658 Chain	8 Ch		of Custody	tody	-			•		Zn Acetate+NaUH: Zn	aOH: Zn
otal Containers:		Corrected Temperature:	emperature:	4 . 2		RIDE	015	802			-	-	_	_		-	-		_	_		NaCi i+Ascoi	Addition Color Color
Sample Identification	ation Matrix	Date	Time Sampled	Depth Grab/ # of Comp Cont	cont cont	CHLO	TPH (8	BTEX														Sample	Sample Comments
SS07	S	7/26/2022	935	0.5 Comp		×	×	×			+	+	4				T	+	+			Incident ID: I	Incident ID: nAPP2217931599
									T	+	+	+	_				1	+	+			Cost Center	Cost Center: 1139071001
										+	-	-	4										
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Total 200.7 / 6010	200.8 / 6020:	8	8RCRA 13PPM	PM Texas 11		Al Sb As	Ва	Ве В	СССС		Cr C	Co Cu Fe	Fe	Pb N	Mg N	Mn Mo	Z	지	Se Ag	SiO2	O ₂ Na	TI Sn	U V Zn
ircle Method(s) and Metal(s) to be analyzed	letal(s) to be anal		TCLP / SF		RA A	Sb A	s Ba	Ве	S PC	ဂ္ဂ	Cu	Pb	An N		Ni Se Ag	B	<u> </u>		_	1	531,	Hg: 1631 / 245.1 / 7470	/7471
otice: 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	nent and relinquishmer	a of earnies con	all the same and	,				,							is assisted and terms and conditions					List			

SAMPLE RECEIPT

Sampler's Name:

Project Location: Project Number: Project Name:

City, State ZIP:

Address: Company Name: Project Manager:

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2658-1

SDG Number: Eddy County NM

List Source: Eurofins Carlsbad

Login Number: 2658 List Number: 1 Creator: Clifton, Cloe

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	

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Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-2658-1 SDG Number: Eddy County NM

List Source: Eurofins Midland

Login Number: 2658 List Number: 2 List Creation: 07/28/22 10:13 AM

Creator: Rodriguez, Leticia

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").	True	



Have a Question?

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Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-2917-1

Laboratory Sample Delivery Group: 03E1558090

Client Project/Site: JRU 108H

For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Tacoma Morrissey

RAMER

Authorized for release by: 9/22/2022 9:09:12 AM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

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

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

Client: Ensolum
Project/Site: JRU 108H
Laboratory Job ID: 890-2917-1
SDG: 03E1558090

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Definitions/Glossary

 Client: Ensolum
 Job ID: 890-2917-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Qualifiers

GC VOA

 Qualifier
 Qualifier Description

 S1+
 Surrogate recovery exceeds control limits, high biased.

 U
 Indicates the analyte was analyzed for but not detected.

GC Semi VOA

 Qualifier
 Qualifier Description

 *1
 LCS/LCSD RPD exceeds control limits.

 F1
 MS and/or MSD recovery exceeds control limits.

 S1+
 Surrogate recovery exceeds control limits, high biased.

 U
 Indicates the analyte was analyzed for but not detected.

HPLC/IC

 Qualifier
 Qualifier Description

 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.

Example 2 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

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Case Narrative

 Client: Ensolum
 Job ID: 890-2917-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Job ID: 890-2917-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-2917-1

Receipt

The samples were received on 9/9/2022 9:22 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.2°C

GC VOA

Method 8021B: Surrogate recovery for the following samples were outside control limits: BH01 (890-2917-1), BH01A (890-2917-2) and BH02 (890-2917-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (LCS 880-34181/2-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-34181 and analytical batch 880-34171 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-34181 and analytical batch 880-34171 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.

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-34288 and analytical batch 880-34499 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.

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Matrix: Solid

Lab Sample ID: 890-2917-1

 Client: Ensolum
 Job ID: 890-2917-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Client Sample ID: BH01

Date Collected: 09/08/22 10:45 Date Received: 09/09/22 09:22

Sample Depth: 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/22/22 01:28	
Toluene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/22/22 01:28	
Ethylbenzene	0.0140		0.00200		mg/Kg		09/19/22 14:33	09/22/22 01:28	
m-Xylene & p-Xylene	0.0377		0.00399		mg/Kg		09/19/22 14:33	09/22/22 01:28	
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/22/22 01:28	
Xylenes, Total	0.0377		0.00399		mg/Kg		09/19/22 14:33	09/22/22 01:28	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	228	S1+	70 - 130				09/19/22 14:33	09/22/22 01:28	
1,4-Difluorobenzene (Surr)	99		70 - 130				09/19/22 14:33	09/22/22 01:28	
Method: Total BTEX - Total BTE	X Calculation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	0.0517		0.00399		mg/Kg			09/22/22 09:55	
Method: 8015 NM - Diesel Rang	e Organics (DR	O) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	6870		250		mg/Kg			09/13/22 10:25	
Method: 8015B NM - Diesel Ran	ge Organics (D	RO) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	267	*1	250		mg/Kg		09/12/22 08:48	09/12/22 18:54	
Diesel Range Organics (Over C10-C28)	5760		250		mg/Kg		09/12/22 08:48	09/12/22 18:54	
Oll Range Organics (Over C28-C36)	841		250		mg/Kg		09/12/22 08:48	09/12/22 18:54	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1-Chlorooctane	93		70 - 130				09/12/22 08:48	09/12/22 18:54	
o-Terphenyl	107		70 - 130				09/12/22 08:48	09/12/22 18:54	
Method: 300.0 - Anions, Ion Chr	omatography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	2130		25.2		mg/Kg			09/15/22 11:18	

Client Sample ID: BH01A

Date Collected: 09/08/22 10:55

Lab Sample ID: 890-2917-2

Matrix: Solid

Date Collected: 09/08/22 10:55 Date Received: 09/09/22 09:22

Sample Depth: 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198		0.00198		mg/Kg	_ =	09/19/22 14:33	09/22/22 01:48	1
Toluene	<0.00198	U	0.00198		mg/Kg		09/19/22 14:33	09/22/22 01:48	1
Ethylbenzene	0.00502		0.00198		mg/Kg		09/19/22 14:33	09/22/22 01:48	1
m-Xylene & p-Xylene	0.0113		0.00397		mg/Kg		09/19/22 14:33	09/22/22 01:48	1
o-Xylene	0.0114		0.00198		mg/Kg		09/19/22 14:33	09/22/22 01:48	1
Xylenes, Total	0.0227		0.00397		mg/Kg		09/19/22 14:33	09/22/22 01:48	1

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Matrix: Solid

Lab Sample ID: 890-2917-2

Job ID: 890-2917-1 SDG: 03E1558090

Client Sample ID: BH01A

Date Collected: 09/08/22 10:55 Date Received: 09/09/22 09:22

Sample Depth: 4

Client: Ensolum

Project/Site: JRU 108H

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	154	S1+	70 - 130	09/19/22 14:33	09/22/22 01:48	1
1,4-Difluorobenzene (Surr)	88		70 - 130	09/19/22 14:33	09/22/22 01:48	1

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.0277	0.00397	mg/Kg			09/22/22 09:55	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)										
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Total TPH	2550		49.9		mg/Kg			09/13/22 10:25	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	75.9	*1	49.9		mg/Kg		09/12/22 08:48	09/12/22 19:37	1
Diesel Range Organics (Over C10-C28)	2140		49.9		mg/Kg		09/12/22 08:48	09/12/22 19:37	1
Oll Range Organics (Over C28-C36)	331		49.9		mg/Kg		09/12/22 08:48	09/12/22 19:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130	09/12/22 08:48	09/12/22 19:37	1
o-Terphenyl	89		70 - 130	09/12/22 08:48	09/12/22 19:37	1

Method: 300.0 - Anions, Ion Chromatography - Soluble										
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Chloride	3980		25.0		mg/Kg			09/15/22 11:23	5

Client Sample ID: BH02

Date Collected: 09/08/22 12:20

Lab Sample ID: 890-2917-3

Matrix: Solid

Date Received: 09/09/22 09:22

Sample Depth: 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/19/22 14:33	09/22/22 02:09	1
Toluene	0.00433		0.00201		mg/Kg		09/19/22 14:33	09/22/22 02:09	1
Ethylbenzene	0.0947		0.00201		mg/Kg		09/19/22 14:33	09/22/22 02:09	1
m-Xylene & p-Xylene	0.353		0.00402		mg/Kg		09/19/22 14:33	09/22/22 02:09	1
o-Xylene	0.379		0.00201		mg/Kg		09/19/22 14:33	09/22/22 02:09	1
Xylenes, Total	0.732		0.00402		mg/Kg		09/19/22 14:33	09/22/22 02:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	162	S1+	70 - 130				09/19/22 14:33	09/22/22 02:09	1
1,4-Difluorobenzene (Surr)	97		70 - 130				09/19/22 14:33	09/22/22 02:09	1

Method: Total BTEX - Total BTEX Calculation										
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Total BTEX	0.831		0.00402		mg/Kg			09/22/22 09:55	1

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Job ID: 890-2917-1 SDG: 03E1558090

Client Sample ID: BH02

Date Received: 09/09/22 09:22

Sample Depth: 2

Client: Ensolum

Project/Site: JRU 108H

Lab Sample ID: 890-2917-3 Date Collected: 09/08/22 12:20 **Matrix: Solid**

Method: 8015 NM - Diesel Range Organics (DRO) (GC) Analyte Result Qualifier RL MDL D Analyzed Dil Fac Unit Prepared 49.8 09/13/22 10:25 **Total TPH** 3990 mg/Kg Method: 8015B NM - Diesel Range Organics (DRO) (GC) Analyte Result Qualifier RL MDL Unit Analyzed Dil Fac D Prepared Gasoline Range Organics 406 49.8 09/12/22 08:48 09/12/22 19:15 mg/Kg (GRO)-C6-C10 **Diesel Range Organics (Over** 49.8 mg/Kg 09/12/22 08:48 09/12/22 19:15 3090 C10-C28) **Oll Range Organics (Over** 497 49.8 mg/Kg 09/12/22 08:48 09/12/22 19:15 C28-C36) Qualifier Limits Prepared Dil Fac Surrogate %Recovery Analyzed 1-Chlorooctane 70 - 130 09/12/22 08:48 09/12/22 19:15 100 o-Terphenyl 84 70 - 130 09/12/22 08:48 09/12/22 19:15 Method: 300.0 - Anions, Ion Chromatography - Soluble RL MDL Unit Analyte Result Qualifier D Prepared Dil Fac Analyzed 7530 Chloride 49.9 mg/Kg 09/15/22 11:27 10

Client Sample ID: BH03 Lab Sample ID: 890-2917-4

Date Collected: 09/08/22 13:00 Date Received: 09/09/22 09:22

Sample Depth: 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/19/22 14:33	09/22/22 02:29	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/19/22 14:33	09/22/22 02:29	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/19/22 14:33	09/22/22 02:29	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/19/22 14:33	09/22/22 02:29	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/19/22 14:33	09/22/22 02:29	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/19/22 14:33	09/22/22 02:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	118		70 - 130				09/19/22 14:33	09/22/22 02:29	1
1,4-Difluorobenzene (Surr) Method: Total BTEX - Total BT Analyte		Qualifier	70 - 130 RL	MDL	Unit	D	09/19/22 14:33 Prepared	09/22/22 02:29 Analyzed	
Method: Total BTEX - Total BT	TEX Calculation								1
·	TEX Calculation	Qualifier U	70 - 130 RL 0.00398	MDL	Unit mg/Kg	<u>D</u>	09/19/22 14:33 Prepared	Analyzed 09/22/22 09:55	Dil Fac
Method: Total BTEX - Total BT Analyte Total BTEX	TEX Calculation Result <0.00398	U	RL	MDL		<u>D</u>		Analyzed	
Method: Total BTEX - Total BT Analyte	TEX Calculation Result <0.00398 age Organics (DR	U	RL			<u>D</u>		Analyzed	
Method: Total BTEX - Total BT Analyte Total BTEX Method: 8015 NM - Diesel Ran	TEX Calculation Result <0.00398 age Organics (DR	U (GC)	RL		mg/Kg		Prepared	Analyzed 09/22/22 09:55	Dil Fac
Method: Total BTEX - Total BT Analyte Total BTEX Method: 8015 NM - Diesel Ran Analyte Total TPH	TEX Calculation Result <0.00398 rige Organics (DR) Result 75.6	U O) (GC) Qualifier	RL 0.00398		mg/Kg		Prepared	Analyzed 09/22/22 09:55	Dil Fac
Method: Total BTEX - Total BT Analyte Total BTEX Method: 8015 NM - Diesel Ran Analyte	TEX Calculation Result <0.00398 age Organics (DR) Result 75.6 ange Organics (D	U O) (GC) Qualifier	RL 0.00398		mg/Kg Unit mg/Kg		Prepared	Analyzed 09/22/22 09:55	Dil Fac
Method: Total BTEX - Total BT Analyte Total BTEX Method: 8015 NM - Diesel Ran Analyte Total TPH Method: 8015B NM - Diesel Ran Analyte	TEX Calculation Result <0.00398 age Organics (DR) Result 75.6 ange Organics (D	O) (GC) Qualifier RO) (GC) Qualifier	RL 0.00398 RL 49.9	MDL	mg/Kg Unit mg/Kg	<u>D</u>	Prepared Prepared	Analyzed 09/22/22 09:55 Analyzed 09/13/22 10:25	Dil Fac
Method: Total BTEX - Total BT Analyte Total BTEX Method: 8015 NM - Diesel Ran Analyte Total TPH Method: 8015B NM - Diesel Ran	rex Calculation Result <0.00398 rege Organics (DR) Result 75.6 rege Organics (D) Result Result Result	O) (GC) Qualifier RO) (GC) Qualifier	RL 0.00398 RL 49.9	MDL	mg/Kg Unit mg/Kg Unit	<u>D</u>	Prepared Prepared	Analyzed 09/22/22 09:55 Analyzed 09/13/22 10:25 Analyzed	Dil Fac

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Matrix: Solid

Matrix: Solid

Lab Sample ID: 890-2917-4

Client Sample Results

 Client: Ensolum
 Job ID: 890-2917-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Client Sample ID: BH03

Date Collected: 09/08/22 13:00 Date Received: 09/09/22 09:22

Sample Depth: 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oll Range Organics (Over	75.6		49.9		mg/Kg		09/12/22 08:48	09/12/22 19:58	1
C28-C36)									
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	95		70 - 130				09/12/22 08:48	09/12/22 19:58	1
o-Terphenyl	95		70 - 130				09/12/22 08:48	09/12/22 19:58	1

Method: 300.0 - Anions, Ion Chron	natography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	54.1		5.00		mg/Kg			09/14/22 23:30	1

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Surrogate Summary

Job ID: 890-2917-1 Client: Ensolum Project/Site: JRU 108H SDG: 03E1558090

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits
		BFB1	DFBZ1	
b Sample ID	Client Sample ID	(70-130)	(70-130)	
2915-A-1-C MS	Matrix Spike	115	109	
-2915-A-1-D MSD	Matrix Spike Duplicate	117	102	
-2917-1	BH01	228 S1+	99	
)-2917-2	BH01A	154 S1+	88	
0-2917-3	BH02	162 S1+	97	
)-2917-4	BH03	118	88	
8 880-34851/1-A	Lab Control Sample	114	106	
SD 880-34851/2-A	Lab Control Sample Dup	115	108	
3 880-34851/5-A	Method Blank	88	77	
3 880-34941/5-A	Method Blank	100	93	

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)	
890-2907-A-1-C MS	Matrix Spike	98	93	
890-2907-A-1-D MSD	Matrix Spike Duplicate	99	93	
890-2917-1	BH01	93	107	
890-2917-2	BH01A	93	89	
890-2917-3	BH02	100	84	
890-2917-4	BH03	95	95	
LCS 880-34181/2-A	Lab Control Sample	144 S1+	151 S1+	
LCSD 880-34181/3-A	Lab Control Sample Dup	122	130	
MB 880-34181/1-A	Method Blank	105	109	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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Client: Ensolum Job ID: 890-2917-1 Project/Site: JRU 108H SDG: 03E1558090

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-34851/5-A

Matrix: Solid Analysis Batch: 35013 Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 34851

	МВ	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/21/22 20:40	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/21/22 20:40	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/21/22 20:40	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/19/22 14:33	09/21/22 20:40	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/21/22 20:40	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/19/22 14:33	09/21/22 20:40	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		70 - 130	09/19/22 14:33	09/21/22 20:40	1
1,4-Difluorobenzene (Surr)	77		70 - 130	09/19/22 14:33	09/21/22 20:40	1

Lab Sample ID: LCS 880-34851/1-A **Client Sample ID: Lab Control Sample**

Matrix: Solid

Analysis Batch: 35013

Prep Type: Total/NA

Prep Batch: 34851

	Бріке	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09662		mg/Kg		97	70 - 130	
Toluene	0.100	0.08888		mg/Kg		89	70 - 130	
Ethylbenzene	0.100	0.09395		mg/Kg		94	70 - 130	
m-Xylene & p-Xylene	0.200	0.1964		mg/Kg		98	70 - 130	
o-Xylene	0.100	0.1106		mg/Kg		111	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	114	70 - 130
1,4-Difluorobenzene (Surr)	106	70 - 130

Lab Sample ID: LCSD 880-34851/2-A

Matrix: Solid

Analysis Batch: 35013

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 34851

LCSD LCSD RPD Spike %Rec Analyte Added Result Qualifier Unit %Rec Limits Limit Benzene 0.100 0.09096 mg/Kg 91 70 - 130 6 35 Toluene 0.100 0.08531 mg/Kg 85 70 - 130 35 Ethylbenzene 0.100 0.08835 mg/Kg 88 70 - 130 6 35 0.200 m-Xylene & p-Xylene 0.1845 mg/Kg 92 70 - 130 35 0.100 0.1080 o-Xylene mg/Kg 108 70 - 130 35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	115		70 - 130
1.4-Difluorobenzene (Surr)	108		70 - 130

Lab Sample ID: 890-2915-A-1-C MS

Matrix: Solid

Analysis Batch: 35013

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

Prep Batch: 34851

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00202	U	0.101	0.09155		mg/Kg		91	70 - 130	
Toluene	<0.00202	U	0.101	0.08263		mg/Kg		82	70 - 130	

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Prep Type: Total/NA

Prep Batch: 34851

QC Sample Results

Client: Ensolum Job ID: 890-2917-1 Project/Site: JRU 108H SDG: 03E1558090

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

Lab Sample ID: 890-2915-A-1-C MS Client Sample ID: Matrix Spike

Matrix: Solid

Analysis Batch: 35013

Analyte	Result	0 110							
	. toouit	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Ethylbenzene	<0.00202	U	0.101	0.08658		mg/Kg		86	70 - 130
m-Xylene & p-Xylene	<0.00403	U	0.202	0.1775		mg/Kg		88	70 - 130
o-Xylene	<0.00202	U	0.101	0.1042		mg/Kg		103	70 - 130

MS MS

Surrogate	%Recovery Qu	ıalifier	Limits
4-Bromofluorobenzene (Surr)	115		70 - 130
1,4-Difluorobenzene (Surr)	109		70 - 130

Lab Sample ID: 890-2915-A-1-D MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Prep Type: Total/NA **Analysis Batch: 35013** Prep Batch: 34851 Sample Sample Spike MSD MSD RPD Result Qualifier Added Result Qualifier RPD Limit Analyte Unit %Rec Limits 4 35

0.0996 Benzene <0.00202 U 0.08776 mg/Kg 88 70 - 130 0.0996 82 Toluene <0.00202 U 0.08175 mg/Kg 70 - 130 35 Ethylbenzene <0.00202 U 0.0996 0.08872 mg/Kg 89 70 - 130 2 35 <0.00403 U 0.199 89 70 - 130 35 m-Xylene & p-Xylene 0.1777 mg/Kg 0 0.0996 <0.00202 U 0.1037 104 70 - 130 o-Xylene mg/Kg

MSD MSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	117	70 - 130
1,4-Difluorobenzene (Surr)	102	70 - 130

Lab Sample ID: MB 880-34941/5-A

Matrix: Solid

Analysis Batch: 35013

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

Prep Batch: 34941

MB MB

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/20/22 12:51	09/21/22 10:04	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/20/22 12:51	09/21/22 10:04	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/20/22 12:51	09/21/22 10:04	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/20/22 12:51	09/21/22 10:04	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/20/22 12:51	09/21/22 10:04	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/20/22 12:51	09/21/22 10:04	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130	09/20/22 12:51	09/21/22 10:04	1
1,4-Difluorobenzene (Surr)	93		70 - 130	09/20/22 12:51	09/21/22 10:04	1

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

Lab Sample ID: MB 880-34181/1-A

Matrix: Solid

Analysis Batch: 34171

Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 34181

MB MB

Analyte Result Qualifier RL MDL Unit Prepared Gasoline Range Organics <50.0 U 50.0 09/12/22 08:48 09/12/22 10:56 mg/Kg (GRO)-C6-C10

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Analysis Batch: 34171

QC Sample Results

Job ID: 890-2917-1 Client: Ensolum Project/Site: JRU 108H SDG: 03E1558090

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

Lab Sample ID: MB 880-34181/1-A **Matrix: Solid**

MB MB

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

Prep Batch: 34181

Analyte	Result	Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		09/12/22 08:48	09/12/22 10:56	1
C10-C28) Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		09/12/22 08:48	09/12/22 10:56	1

MB MB

Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 1-Chlorooctane 105 70 - 130 09/12/22 08:48 09/12/22 10:56 109 70 - 130 09/12/22 08:48 09/12/22 10:56 o-Terphenyl

Lab Sample ID: LCS 880-34181/2-A **Client Sample ID: Lab Control Sample**

Matrix: Solid Prep Type: Total/NA Analysis Batch: 34171 Prep Batch: 34181

LCS LCS Spike Analyte Added Result Qualifier Unit D %Rec Limits Gasoline Range Organics 1000 984.6 98 70 - 130 mg/Kg (GRO)-C6-C10 mg/Kg 1000 1000 Diesel Range Organics (Over 100 70 - 130C10-C28)

LCS LCS Qualifier Limits Surrogate %Recovery 1-Chlorooctane S1+ 70 - 130 144 o-Terphenyl 151 S1+ 70 - 130

Lab Sample ID: LCSD 880-34181/3-A

Matrix: Solid **Analysis Batch: 34171**

Client Sample ID: Lab Control Sample Dup Prep Type: Total/NA Prep Batch: 34181

Spike LCSD LCSD %Rec **RPD** Added Result Qualifier Limits RPD Limit Analyte Unit D %Rec Gasoline Range Organics 1000 765.3 *1 77 70 - 130 20 mg/Kg 25 (GRO)-C6-C10 Diesel Range Organics (Over 1000 859.3 mg/Kg 86 70 - 130 15 20 C10-C28)

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

Lab Sample ID: 890-2907-A-1-C MS Client Sample ID: Matrix Spike Prep Type: Total/NA

Matrix: Solid

Analysis Batch: 34171

Spike MS MS %Rec Sample Sample Result Qualifier Added Result Qualifier %Rec Analyte Unit Limits <49.8 U F1 *1 998 611.1 F1 59 Gasoline Range Organics 70 - 130mg/Kg (GRO)-C6-C10 998 859.4 Diesel Range Organics (Over <49.8 U mg/Kg 83 70 - 130

C10-C28)

	IVIS	IVIS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	98		70 - 130
o-Terphenyl	93		70 - 130

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Prep Batch: 34181

84

70 - 130

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Prep Type: Soluble

Prep Type: Soluble

Client Sample ID: Matrix Spike

Client Sample ID: Matrix Spike Duplicate

Job ID: 890-2917-1 Client: Ensolum Project/Site: JRU 108H SDG: 03E1558090

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

<49.8 U

Lab Sample ID: 890-2907-A-1-D MSD Client Sample ID: Matrix Spike Duplicate **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 34171

Diesel Range Organics (Over

Prep Batch: 34181 Sample Sample MSD MSD RPD Spike Result Qualifier Analyte Result Qualifier Added %Rec Limits RPD Limit Unit D Gasoline Range Organics <49.8 U F1 *1 995 585.4 F1 mg/Kg 57 70 - 130 4 20 (GRO)-C6-C10

865.7

mg/Kg

995

C10-C28)

MSD MSD %Recovery Qualifier Limits Surrogate 1-Chlorooctane 70 - 130 99 o-Terphenyl 93 70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-34288/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 34499

MB MB

Result Qualifier MDL Analyte RL Unit Prepared Analyzed Dil Fac Chloride <5.00 5.00 09/14/22 22:32 mg/Kg

Lab Sample ID: LCS 880-34288/2-A **Client Sample ID: Lab Control Sample Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 34499

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit D %Rec Limits Chloride 250 90 - 110 241.4 mg/Kg 97

Lab Sample ID: LCSD 880-34288/3-A

Matrix: Solid

Analysis Batch: 34499

LCSD LCSD RPD Spike %Rec Analyte Added Result Qualifier Unit %Rec RPD Limits Limit Chloride 250 242.0 97 90 - 110 mg/Kg 0

Lab Sample ID: 880-19037-A-2-D MS

Matrix: Solid

Analysis Batch: 34499

Sample Sample Spike MS MS %Rec Qualifier Added Qualifier Analyte Result Result Unit %Rec Limits Chloride F1 12600 54900 F1 200 90 - 110 29800 mg/Kg

Lab Sample ID: 880-19037-A-2-E MSD

Matrix: Solid

Analysis Batch: 34499

Alialysis Datell. 34433											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	29800	F1	12600	53580	F1	mg/Kg		190	90 - 110	2	20

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QC Sample Results

 Client: Ensolum
 Job ID: 890-2917-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-2913-A-1-C MS

Client Sample ID: Matrix Spike
Matrix: Solid

Prep Type: Soluble

Matrix: Solid Analysis Batch: 34499

Sample Sample Spike MS MS %Rec Result Qualifier Added Result Qualifier Analyte Unit %Rec Limits Chloride 22.1 250 276.5 mg/Kg 102 90 - 110

Lab Sample ID: 890-2913-A-1-D MSD

Matrix: Solid

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analysis Batch: 34499

Sample Sample Spike MSD MSD %Rec RPD

Result Qualifier Added Result Qualifier Limits RPD Limit Analyte Unit D %Rec Chloride 22.1 250 277.5 mg/Kg 102 90 - 110 0 20

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QC Association Summary

 Client: Ensolum
 Job ID: 890-2917-1

 Project/Site: JRU 108H
 SDG: 03E1558090

GC VOA

Prep Batch: 34851

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2917-1	BH01	Total/NA	Solid	5035	
890-2917-2	BH01A	Total/NA	Solid	5035	
890-2917-3	BH02	Total/NA	Solid	5035	
890-2917-4	BH03	Total/NA	Solid	5035	
MB 880-34851/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-34851/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-34851/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2915-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-2915-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 34941

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-34941/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 35013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2917-1	BH01	Total/NA	Solid	8021B	34851
890-2917-2	BH01A	Total/NA	Solid	8021B	34851
890-2917-3	BH02	Total/NA	Solid	8021B	34851
890-2917-4	BH03	Total/NA	Solid	8021B	34851
MB 880-34851/5-A	Method Blank	Total/NA	Solid	8021B	34851
MB 880-34941/5-A	Method Blank	Total/NA	Solid	8021B	34941
LCS 880-34851/1-A	Lab Control Sample	Total/NA	Solid	8021B	34851
LCSD 880-34851/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	34851
890-2915-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	34851
890-2915-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	34851

Analysis Batch: 35144

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2917-1 890-2917-2	BH01 BH01A	Total/NA Total/NA	Solid Solid	Total BTEX Total BTEX	
890-2917-3	BH02	Total/NA	Solid	Total BTEX	
890-2917-4	BH03	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 34171

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2917-1	BH01	Total/NA	Solid	8015B NM	34181
890-2917-2	BH01A	Total/NA	Solid	8015B NM	34181
890-2917-3	BH02	Total/NA	Solid	8015B NM	34181
890-2917-4	BH03	Total/NA	Solid	8015B NM	34181
MB 880-34181/1-A	Method Blank	Total/NA	Solid	8015B NM	34181
LCS 880-34181/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	34181
LCSD 880-34181/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	34181
890-2907-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	34181
890-2907-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	34181

Prep Batch: 34181

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2917-1	BH01	Total/NA	Solid	8015NM Prep	

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QC Association Summary

 Client: Ensolum
 Job ID: 890-2917-1

 Project/Site: JRU 108H
 SDG: 03E1558090

GC Semi VOA (Continued)

Prep Batch: 34181 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2917-2	BH01A	Total/NA	Solid	8015NM Prep	
890-2917-3	BH02	Total/NA	Solid	8015NM Prep	
890-2917-4	BH03	Total/NA	Solid	8015NM Prep	
MB 880-34181/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-34181/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-34181/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2907-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2907-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 34383

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2917-1	BH01	Total/NA	Solid	8015 NM	
890-2917-2	BH01A	Total/NA	Solid	8015 NM	
890-2917-3	BH02	Total/NA	Solid	8015 NM	
890-2917-4	BH03	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 34288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2917-1	BH01	Soluble	Solid	DI Leach	
890-2917-2	BH01A	Soluble	Solid	DI Leach	
890-2917-3	BH02	Soluble	Solid	DI Leach	
890-2917-4	BH03	Soluble	Solid	DI Leach	
MB 880-34288/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-34288/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-34288/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-19037-A-2-D MS	Matrix Spike	Soluble	Solid	DI Leach	
880-19037-A-2-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
890-2913-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2913-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 34499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2917-1	BH01	Soluble	Solid	300.0	34288
890-2917-2	BH01A	Soluble	Solid	300.0	34288
890-2917-3	BH02	Soluble	Solid	300.0	34288
890-2917-4	BH03	Soluble	Solid	300.0	34288
MB 880-34288/1-A	Method Blank	Soluble	Solid	300.0	34288
LCS 880-34288/2-A	Lab Control Sample	Soluble	Solid	300.0	34288
LCSD 880-34288/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	34288
880-19037-A-2-D MS	Matrix Spike	Soluble	Solid	300.0	34288
880-19037-A-2-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	34288
890-2913-A-1-C MS	Matrix Spike	Soluble	Solid	300.0	34288
890-2913-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	34288

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Client: Ensolum Job ID: 890-2917-1 Project/Site: JRU 108H SDG: 03E1558090

Client Sample ID: BH01 Lab Sample ID: 890-2917-1

Date Collected: 09/08/22 10:45 Matrix: Solid Date Received: 09/09/22 09:22

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	34851	09/19/22 14:33	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35013	09/22/22 01:28	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35144	09/22/22 09:55	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34383	09/13/22 10:25	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	34181	09/12/22 08:48	AM	EET MID
Total/NA	Analysis	8015B NM		5	1 uL	1 uL	34171	09/12/22 18:54	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	34288	09/12/22 11:50	KS	EET MID
Soluble	Analysis	300.0		5			34499	09/15/22 11:18	CH	EET MID

Client Sample ID: BH01A Lab Sample ID: 890-2917-2

Date Collected: 09/08/22 10:55 Matrix: Solid Date Received: 09/09/22 09:22

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	34851	09/19/22 14:33	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35013	09/22/22 01:48	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35144	09/22/22 09:55	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34383	09/13/22 10:25	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	34181	09/12/22 08:48	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34171	09/12/22 19:37	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	34288	09/12/22 11:50	KS	EET MID
Soluble	Analysis	300.0		5			34499	09/15/22 11:23	CH	EET MID

Client Sample ID: BH02 Lab Sample ID: 890-2917-3 Date Collected: 09/08/22 12:20 **Matrix: Solid**

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	34851	09/19/22 14:33	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35013	09/22/22 02:09	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35144	09/22/22 09:55	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34383	09/13/22 10:25	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	34181	09/12/22 08:48	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34171	09/12/22 19:15	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	34288	09/12/22 11:50	KS	EET MID
Soluble	Analysis	300.0		10			34499	09/15/22 11:27	CH	EET MID

Client Sample ID: BH03 Lab Sample ID: 890-2917-4

Date Collected: 09/08/22 13:00 **Matrix: Solid** Date Received: 09/09/22 09:22

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	34851	09/19/22 14:33	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35013	09/22/22 02:29	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35144	09/22/22 09:55	AJ	EET MID

Eurofins Carlsbad

Date Received: 09/09/22 09:22

Lab Chronicle

 Client: Ensolum
 Job ID: 890-2917-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Client Sample ID: BH03

Lab Sample ID: 890-2917-4

Matrix: Solid

Date Collected: 09/08/22 13:00 Date Received: 09/09/22 09:22

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			34383	09/13/22 10:25	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	34181	09/12/22 08:48	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34171	09/12/22 19:58	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	34288	09/12/22 11:50	KS	EET MID
Soluble	Analysis	300.0		1			34499	09/14/22 23:30	CH	EET MID

Laboratory References:

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

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Accreditation/Certification Summary

 Client: Ensolum
 Job ID: 890-2917-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Laboratory: Eurofins Midland

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

Authority	Pr	ogram	Identification Number	Expiration Date	
exas		ELAP	T104704400-22-24	06-30-23	
The following analytes	are included in this report by	it the leberatory is not contiffi	iad butba gaugeming authority. This list ma		
the agency does not of	' '	it the laboratory is not certifi	ied by the governing authority. This list ma	ay include analytes for v	
,	' '	Matrix	Analyte	ay include analytes for v	
the agency does not of	fer certification.	•	, , ,	ay include analytes for v	

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EET MID

ASTM

Method Summary

 Client: Ensolum
 Job ID: 890-2917-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Method **Method Description** Protocol Laboratory 8021B Volatile Organic Compounds (GC) SW846 EET MID **Total BTEX Calculation** Total BTEX TAL SOP EET MID 8015 NM Diesel Range Organics (DRO) (GC) SW846 **EET MID** 8015B NM Diesel Range Organics (DRO) (GC) SW846 **EET MID** 300.0 Anions, Ion Chromatography MCAWW **EET MID** 5035 SW846 **EET MID** Closed System Purge and Trap 8015NM Prep Microextraction SW846 EET MID

Protocol References:

DI Leach

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

Deionized Water Leaching Procedure

Laboratory References:

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

Eurofins Carlsbad

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Sample Summary

Client: Ensolum

Project/Site: JRU 108H

Job ID: 890-2917-1

SDG: 03E1558090

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2917-1	BH01	Solid	09/08/22 10:45	09/09/22 09:22	2
890-2917-2	BH01A	Solid	09/08/22 10:55	09/09/22 09:22	4
890-2917-3	BH02	Solid	09/08/22 12:20	09/09/22 09:22	2
890-2917-4	BH03	Solid	09/08/22 13:00	09/09/22 09:22	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.		

						Hobb	s, NM (575) 39	92-755	i0, Carls	bad, NM	(575) 98	38-3199)				v	ww.xer	nco.cor	n Page		of _/	
Project Manager:	Tacoma Mo	orrissey			Bill to: (if	f differen	nt)	Garre	ett Gre	een					Work Order Comments									
Company Name:	Ensolum				Compar	ny Nam	e:	хто	Energ	зу					Program: UST/PST PRP Brownfields RRC Superfun					ind [
Address:	3122 Natio	nal Parks I	Hwy		Address	S:		3104	E. Gr	reen St					State of Project:									
City, State ZIP:	Carlsbad, N	NM 88220			City, Sta	te ZIP:		Caris	sbad, I	NM 88	220				F	Reporti	ng: Lev	vel II	Level I	II D PS	ST/UST _	TRRP	Level	W
Phone:	303-887-29	946		Email	Garret.	Green	@Exx	onMo	bil.co	m						Deliver	ables:	EDD		ADaF	т 🗆	Other:		
Project Name:	JR	RU 108H		Tun	n Around		ANALYSIS REC					IS REQUEST Pr					reservative Codes							
Project Number:	0	3E155809	00	Routine	Rus		Pres.														None: N		DI Water:	
Project Location:				Due Date:			1								T					1	Cool: Co	ol	MeOH: Me	e
Sampler's Name:	Co	nnor Whitr	nan	TAT starts the			9					11	1 1416 (141	(4)	1989 1		l Hangaria	 -{H1181		1	HCL: HC		HNO ₃ : HN NaOH: Na	1
SAMPLE RECE	IPT Ter	np Blank:	Yes No	Wet Ice:	(Yes	No	Parameters	_				11									H₃PO₄: F			
Samples Received I	-	es) No	Thermomete	er ID:	NAO	Fa	ram	(EPA: 300.0)				11						1111			NaHSO ₄	NABIS		
Cooler Custody Sea			s: Yes No MA Correction Factor		-0.6		2	A:3	1		1 1	111			HAMA						Na ₂ S ₂ O ₃ : NaSO ₃			
Sample Custody Sea	als: Yes	No N/A	Temperature	e Reading:	1.5							-89	0-291	/ Cha	in of	Custo	dy				Zn Aceta	te+NaO	H: Zn	
Total Containers:			Corrected To	emperature:	1.	2		SE SE	15)	(8021	1 1	- 1	1	-1	- 1	1	1	1	î	i	NaOH+A	scorbic	Acid: SAPC)
Sample Ider	ntification	Matrix	Date Sampled	Time Sampled	Depth		# of Cont	CHLORIDES	TPH (8015)	BTEX (Sai	nple C	omments	
BHO	01	S	9/8/2022	10:45	2	G	1	х	х	x											Incident	ID:		
BH0	1A	S	9/8/2022	10:55	4	G	1	х	x	x											nAPP22179	31599		
BHO)2	S	9/8/2022	12:20	2	G	1	x	x	×											Cost Ce	nter:		
BHO	03	S	9/8/2022	13:00	1	G	1	x	x	×												11390	71001	
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			may.	Thea.	3.53										-			_	340		-			
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					0																			
Total 200.7 / 6 Circle Method(s) a		3 / 6020 : to be analy		RCRA 13P												-			_	_	Na Sr TI / 245.1 / 7			
Notice: Signature of this of service. Eurofins Xen of Eurofins Xenco. A min	co will be liable o	only for the co	st of samples an	d shall not assi	ume any res	sponsibili	ty for ar	ny losse	s or ex	penses	incurred t	y the cli	ent if su	ch loss	es are c	lue to ci	rcumsta	nces be	yond the	control	d.			
Relinquished by	y: (Signature)	Receive	d by: (Signa	ature)			Date	/Time	•	Reli	inquish	ed by	: (Sig	nature)	R	eceive	ed by: (S	Signatu	ire)	D	ate/Time	
1 4	***	1		1 /	-	-	9.0	2.5	2	90	2													

Page 22 of 24

Revised Date 08/25/2020 Rev. 2020 2

Login Sample Receipt Checklist

 Client: Ensolum
 Job Number: 890-2917-1

 SDG Number: 03E1558090

Login Number: 2917 List Source: Eurofins Carlsbad

List Number: 1 Creator: Clifton, Cloe

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	

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Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2917-1

SDG Number: 03E1559000

SDG Number: 03E1558090

List Source: Eurofins Midland
List Number: 2
List Creation: 09/12/22 09:08 AM

Creator: Rodriguez, Leticia

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	N/A	

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<6mm (1/4").



ANALYTICAL REPORT

Environment Testing

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

Laboratory Job ID: 890-3258-1

Laboratory Sample Delivery Group: 03E1558090

Client Project/Site: JRU 108H

Revision: 1

For:

🗱 eurofins

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

RAMPR

Authorized for release by: 11/2/2022 4:35:09 PM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

..... LINKS

Review your project results through EOL

Have a Question?



Visit us at:

www.eurofinsus.com/Env Released to Imaging: 4/28/2023 8:49:46 AM

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

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

Client: Ensolum
Project/Site: JRU 108H
Laboratory Job ID: 890-3258-1
SDG: 03E1558090

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Definitions/Glossary

Client: Ensolum Job ID: 890-3258-1 Project/Site: JRU 108H

SDG: 03E1558090

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier **Qualifier Description**

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

HPLC/IC

Qualifier **Qualifier Description**

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 Colony Forming Unit **CFU** Contains No Free Liquid CNF

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)

EPA recommended "Maximum Contaminant Level" MCL MDA Minimum Detectable Activity (Radiochemistry) MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit MI Minimum Level (Dioxin) MPN Most Probable Number Method Quantitation Limit MQL

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent POS Positive / Present

Practical Quantitation Limit PQL

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)

Too Numerous To Count **TNTC**

Eurofins Carlsbad

Case Narrative

 Client: Ensolum
 Job ID: 890-3258-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Job ID: 890-3258-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-3258-1

REVISION

The report being provided is a revision of the original report sent on 10/31/2022. The report (revision 1) is being revised due to Per client email, requesting TPH re run.

Report revision history

Receipt

The sample was received on 10/21/2022 10:55 AM. 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 1.2°C

Receipt Exceptions

The following sample was received and analyzed from an unpreserved bulk soil jar: BG01 (890-3258-1).

GC VOA

Method 8021B: The following samples were diluted due to the nature of the sample matrix: (880-20605-A-1-E MS) and (880-20605-A-1-F MSD). Because of this dilution, the surrogate spike and matrix spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-38021 and analytical batch 880-38089 was outside the upper control 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 matrix spike duplicate (MSD) recoveries for preparation batch 880-38417 and analytical batch 880-38323 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-37579 and analytical batch 880-37788 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.

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Matrix: Solid

Lab Sample ID: 890-3258-1

Client Sample Results

 Client: Ensolum
 Job ID: 890-3258-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Client Sample ID: BG01

Date Collected: 10/20/22 14:30 Date Received: 10/21/22 10:55

Sample Depth: 0.5'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		10/26/22 14:13	10/29/22 07:28	1
Toluene	< 0.00201	U	0.00201	mg/Kg		10/26/22 14:13	10/29/22 07:28	1
Ethylbenzene	< 0.00201	U	0.00201	mg/Kg		10/26/22 14:13	10/29/22 07:28	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		10/26/22 14:13	10/29/22 07:28	1
o-Xylene	< 0.00201	U	0.00201	mg/Kg		10/26/22 14:13	10/29/22 07:28	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		10/26/22 14:13	10/29/22 07:28	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	127		70 - 130			10/26/22 14:13	10/29/22 07:28	1
1,4-Difluorobenzene (Surr)	92		70 - 130			10/26/22 14:13	10/29/22 07:28	1
Method: TAL SOP Total BTEX	(- Total BTE	X Calculat	ion					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			10/30/22 21:36	1
Method: SW846 8015 NM - Di	esel Range (Organics (DRO) (GC)					
	_	•	, , , ,	Unit	D	Prepared	Analyzed	Dil Fac
Analyte	_	Qualifier	DRO) (GC) RL 49.9	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 10/25/22 11:30	Dil Fac
Analyte Total TPH	Result <49.9	Qualifier U	RL 49.9		<u>D</u>	Prepared		Dil Fac
Analyte Total TPH Method: SW846 8015B NM - E	Result <49.9	Qualifier U Organics	RL 49.9 (DRO) (GC)	mg/Kg	_ =	<u> </u>	10/25/22 11:30	1
Analyte Total TPH Method: SW846 8015B NM - D Analyte	Result <49.9 Diesel Range Result	Qualifier U Organics Qualifier	RL 49.9 (DRO) (GC) RL	mg/Kg Unit	<u>D</u>	Prepared	10/25/22 11:30 Analyzed	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - E Analyte Gasoline Range Organics	Result <49.9	Qualifier U Organics Qualifier	RL 49.9 (DRO) (GC)	mg/Kg	_ =	<u> </u>	10/25/22 11:30	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - E Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result <49.9 Diesel Range Result	Qualifier U Organics Qualifier U	RL 49.9 (DRO) (GC) RL	mg/Kg Unit	_ =	Prepared	10/25/22 11:30 Analyzed	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - E Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <49.9 Diesel Range Result <49.9	Qualifier U Organics Qualifier U	RL 49.9 (DRO) (GC) RL 49.9	mg/Kg Unit mg/Kg	_ =	Prepared 11/01/22 15:08 11/01/22 15:08	10/25/22 11:30 Analyzed 11/02/22 05:03	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Description of the superior of the	Result <49.9 Diesel Range Result <49.9 <49.9	Qualifier U Organics Qualifier U U	RL 49.9 (DRO) (GC) RL 49.9 49.9	mg/Kg Unit mg/Kg mg/Kg	_ =	Prepared 11/01/22 15:08 11/01/22 15:08	10/25/22 11:30 Analyzed 11/02/22 05:03 11/02/22 05:03	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - E Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result	Qualifier U Organics Qualifier U U	RL 49.9 (DRO) (GC) RL 49.9 49.9 49.9	mg/Kg Unit mg/Kg mg/Kg	_ =	Prepared 11/01/22 15:08 11/01/22 15:08 11/01/22 15:08	Analyzed 11/02/22 05:03 11/02/22 05:03	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - E Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result <49.9 Diesel Range Result <49.9 <49.9 <49.9 %Recovery	Qualifier U Organics Qualifier U U	RL 49.9 (DRO) (GC) RL 49.9 49.9 Limits	mg/Kg Unit mg/Kg mg/Kg	_ =	Prepared 11/01/22 15:08 11/01/22 15:08 11/01/22 15:08 Prepared 11/01/22 15:08	Analyzed 11/02/22 05:03 11/02/22 05:03 Analyzed	Dil Face
Analyte Total TPH Method: SW846 8015B NM - E Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result <49.9	Qualifier U Organics Qualifier U U U Qualifier	RL 49.9 (DRO) (GC) RL 49.9 49.9 49.9 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg	_ =	Prepared 11/01/22 15:08 11/01/22 15:08 11/01/22 15:08 Prepared 11/01/22 15:08	Analyzed 11/02/22 05:03 11/02/22 05:03 11/02/22 05:03 Analyzed 11/02/22 05:03	Dil Fac
Method: SW846 8015 NM - Did Analyte Total TPH Method: SW846 8015B NM - Did Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Method: MCAWW 300.0 - Anic Analyte	Result <49.9	Qualifier U Organics Qualifier U U U Qualifier	RL 49.9 (DRO) (GC) RL 49.9 49.9 49.9 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg	_ =	Prepared 11/01/22 15:08 11/01/22 15:08 11/01/22 15:08 Prepared 11/01/22 15:08	Analyzed 11/02/22 05:03 11/02/22 05:03 11/02/22 05:03 Analyzed 11/02/22 05:03	Dil Fac 1 Dil Fac 1 1 Dil Fac 1 Dil Fac

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Surrogate Summary

 Client: Ensolum
 Job ID: 890-3258-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

			Percent	Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-20605-A-1-E MS	Matrix Spike	101	92	
880-20605-A-1-F MSD	Matrix Spike Duplicate	102	90	
890-3258-1	BG01	127	92	
LCS 880-37911/1-A	Lab Control Sample	99	91	
LCSD 880-37911/2-A	Lab Control Sample Dup	101	91	
MB 880-37911/5-A	Method Blank	102	87	
MB 880-38021/5-A	Method Blank	72	60 S1-	

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

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

Matrix: Solid Prep Type: Total/NA

			Percen	t Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-3258-1	BG01	70	74	
890-3335-A-1-C MS	Matrix Spike	88	86	
890-3335-A-1-D MSD	Matrix Spike Duplicate	79	76	
LCS 880-38417/2-A	Lab Control Sample	101	106	
LCSD 880-38417/3-A	Lab Control Sample Dup	90	95	
MB 880-38417/1-A	Method Blank	92	99	
Surrogate Legend				

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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QC Sample Results

 Client: Ensolum
 Job ID: 890-3258-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-37911/5-A

Matrix: Solid

Analysis Batch: 38089

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 37911

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		10/26/22 14:13	10/29/22 01:12	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130	10/26/22 14:13	10/29/22 01:12	1
1,4-Difluorobenzene (Surr)	87		70 - 130	10/26/22 14:13	10/29/22 01:12	1

Lab Sample ID: LCS 880-37911/1-A

Matrix: Solid

Analysis Batch: 38089

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 37911

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.07484		mg/Kg		75	70 - 130	
Toluene	0.100	0.07671		mg/Kg		77	70 - 130	
Ethylbenzene	0.100	0.07425		mg/Kg		74	70 - 130	
m-Xylene & p-Xylene	0.200	0.1480		mg/Kg		74	70 - 130	
o-Xylene	0.100	0.08609		mg/Kg		86	70 - 130	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	91		70 - 130

Lab Sample ID: LCSD 880-37911/2-A

Matrix: Solid

Analysis Batch: 38089

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 37911

Prep Batch: 37911
%Rec RPD

	Spike	LCSD L	LCSD				%Rec		RPD
Analyte	Added	Result C	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.07938		mg/Kg	_	79	70 - 130	6	35
Toluene	0.100	0.08189		mg/Kg		82	70 - 130	7	35
Ethylbenzene	0.100	0.08032		mg/Kg		80	70 - 130	8	35
m-Xylene & p-Xylene	0.200	0.1556		mg/Kg		78	70 - 130	5	35
o-Xylene	0.100	0.08950		mg/Kg		89	70 - 130	4	35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	91		70 - 130

Lab Sample ID: 880-20605-A-1-E MS

Matrix: Solid

Analysis Batch: 38089

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

Prep Batch: 37911

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U F1	0.100	0.08080		mg/Kg		80	70 - 130	
Toluene	<0.00201	U F1	0.100	0.07923		mg/Kg		78	70 - 130	

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QC Sample Results

Client: Ensolum Job ID: 890-3258-1 Project/Site: JRU 108H SDG: 03E1558090

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

Lab Sample ID: 880-20605-A-1-E MS Client Sample ID: Matrix Spike **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 38089

_	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylbenzene	<0.00201	U F1	0.100	0.07637		mg/Kg		76	70 - 130	
m-Xylene & p-Xylene	<0.00402	U F1	0.200	0.1440		mg/Kg		72	70 - 130	
o-Xylene	<0.00201	U	0.100	0.08398		mg/Kg		84	70 - 130	

MS MS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

Lab Sample ID: 880-20605-A-1-F MSD

Matrix: Solid

Analysis Batch: 38089

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 37911

Prep Batch: 37911

Sample Sample Spike MSD MSD %Rec **RPD** Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits RPD Limit 0.0990 Benzene <0.00201 U F1 0.06610 F1 mg/Kg 66 70 - 130 20 35 Toluene <0.00201 UF1 0.0990 0.06481 F1 65 70 - 130 20 35 mg/Kg 0.0990 Ethylbenzene <0.00201 UF1 0.06337 F1 mg/Kg 64 70 - 130 19 35 m-Xylene & p-Xylene <0.00402 U F1 0.198 0.1224 F1 mg/Kg 62 70 - 130 16 35 o-Xylene <0.00201 U 0.0990 0.07052 71 70 - 130 mg/Kg 17

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	90		70 - 130

Lab Sample ID: MB 880-38021/5-A

Matrix: Solid

Analysis Batch: 38089

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

Prep Batch: 38021

	IVID	IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		10/27/22 13:34	10/28/22 13:48	1

MB MB

MR MR

Surrogate	%Recovery	Qualifier	Limits	Prepared Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	72		70 - 130	10/27/22 13:34 10/28/22 13:48	1
1,4-Difluorobenzene (Surr)	60	S1-	70 - 130	10/27/22 13:34 10/28/22 13:48	1

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

Lab Sample ID: MB 880-38417/1-A **Client Sample ID: Method Blank Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 38323

MB MB Result Qualifier RL Unit Analyte Prepared Analyzed Gasoline Range Organics <50.0 U 50.0 mg/Kg 11/01/22 15:08 11/01/22 21:10

(GRO)-C6-C10

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Prep Batch: 38417

 Client: Ensolum
 Job ID: 890-3258-1

 Project/Site: JRU 108H
 SDG: 03E1558090

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

Lab Sample ID: MB 880-38417/1-A

Matrix: Solid

Analysis Batch: 38323

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 38417

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		11/01/22 15:08	11/01/22 21:10	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/01/22 15:08	11/01/22 21:10	1
	МВ	MB						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	92		70 - 130			11/01/22 15:08	11/01/22 21:10	1
o-Terphenyl	99		70 - 130			11/01/22 15:08	11/01/22 21:10	1

Lab Sample ID: LCS 880- Matrix: Solid Analysis Batch: 38323	00411/2/X						· Ou	mpio ib	: Lab Control Sample Prep Type: Total/NA Prep Batch: 38417
			Spike	_	LCS				%Rec
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1076		mg/Kg		108	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1008		mg/Kg		101	70 - 130
	LCS	LCS							
Surrogate	%Recovery	Qualifier	Limits						
1-Chlorooctane	101		70 - 130						
o-Terphenyl	106		70 - 130						

70T1110-A		•	Jilelit Ja	IIIPIE	ID. Lak		Janipi	, Dup
						Prep Ty	pe: Tot	al/NA
						Prep E	atch:	38417
Spike	LCSD	LCSD				%Rec		RPD
Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1000	1087		mg/Kg		109	70 - 130	1	20
1000	910.4		mg/Kg		91	70 - 130	10	20
	Spike Added 1000	Spike LCSD Added Result 1000 1087	Spike LCSD LCSD Added Result 1000 1087	Spike LCSD LCSD Added Result Qualifier Unit mg/Kg	Spike LCSD LCSD Added Result Qualifier Unit D 1000 1087 mg/Kg	Spike LCSD LCSD Added Result Qualifier Unit D %Rec 1000 1087 mg/Kg 109	Spike LCSD LCSD WRec	Prep Type: Tot Prep Batch: 3

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	90		70 - 130
o-Terphenyl	95		70 - 130

Lab Sample ID: 890-3335 Matrix: Solid Analysis Batch: 38323		O mare la	0	•••	MO		CI	lient Sa	mple ID: Matrix Spike Prep Type: Total/NA Prep Batch: 38417
	•	Sample	Spike	MS	_				%Rec
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	_ D	%Rec	Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	Ū	997	812.4		mg/Kg		79	70 - 130
Diesel Range Organics (Over C10-C28)	77.7	F1	997	799.4		mg/Kg		72	70 - 130
	MS	MS							
Surrogate	%Recovery	Qualifier	Limits						
1-Chlorooctane	88		70 - 130						
o-Terphenyl	86		70 - 130						

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Client: Ensolum Job ID: 890-3258-1 Project/Site: JRU 108H SDG: 03E1558090

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

Lab Sample ID: 890-3335-A-1-D MSD **Client Sample ID: Matrix Spike Duplicate**

Matrix: Solid

Analysis Batch: 38323

Prep Type: Total/NA

Prep Batch: 38417

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	984.3		mg/Kg		96	70 - 130	19	20	
Diesel Range Organics (Over	77.7	F1	999	702.0	F1	mg/Kg		62	70 - 130	13	20	

C10-C28)

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	79		70 - 130
o-Terphenyl	76		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: Method Blank Lab Sample ID: MB 880-37579/1-A **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 37788

MB MB Analyte Result Qualifier RL Unit Prepared Analyzed Dil Fac 5.00 10/25/22 19:00 Chloride <5.00 U mg/Kg

Lab Sample ID: LCS 880-37579/2-A **Client Sample ID: Lab Control Sample Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 37788

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	242.4		mg/Kg		97	90 - 110	

Lab Sample ID: LCSD 880-37579/3-A **Client Sample ID: Lab Control Sample Dup Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 37788

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	250	243.5		mg/Kg	_	97	90 - 110	0	20

Lab Sample ID: 890-3252-A-43-B MS **Client Sample ID: Matrix Spike Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 37788

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	853	F1	250	1060	F1	ma/Ka		83	90 - 110	

Lab Sample ID: 890-3252-A-43-C MSD **Client Sample ID: Matrix Spike Duplicate Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 37788

Allalysis Datell. 01100											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	853	F1	250	1030	F1	mg/Kg		71	90 - 110	3	20

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QC Association Summary

 Client: Ensolum
 Job ID: 890-3258-1

 Project/Site: JRU 108H
 SDG: 03E1558090

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_		
Dron	Ratch	: 37911
I I CD	Daten	. 3/3/1

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3258-1	BG01	Total/NA	Solid	5035	
MB 880-37911/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-37911/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-37911/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-20605-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
880-20605-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 38021

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-38021/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 38089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3258-1	BG01	Total/NA	Solid	8021B	37911
MB 880-37911/5-A	Method Blank	Total/NA	Solid	8021B	37911
MB 880-38021/5-A	Method Blank	Total/NA	Solid	8021B	38021
LCS 880-37911/1-A	Lab Control Sample	Total/NA	Solid	8021B	37911
LCSD 880-37911/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	37911
880-20605-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	37911
880-20605-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	37911

Analysis Batch: 38194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3258-1	BG01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 37810

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3258-1	BG01	Total/NA	Solid	8015 NM	

Analysis Batch: 38323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3258-1	BG01	Total/NA	Solid	8015B NM	38417
MB 880-38417/1-A	Method Blank	Total/NA	Solid	8015B NM	38417
LCS 880-38417/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	38417
LCSD 880-38417/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	38417
890-3335-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	38417
890-3335-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	38417

Prep Batch: 38417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3258-1	BG01	Total/NA	Solid	8015NM Prep	
MB 880-38417/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-38417/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-38417/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3335-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3335-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

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QC Association Summary

 Client: Ensolum
 Job ID: 890-3258-1

 Project/Site: JRU 108H
 SDG: 03E1558090

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Leach Batch: 37579

Lab Sample ID 890-3258-1	Client Sample ID BG01	Prep Type Soluble	Matrix Solid	Method DI Leach	Prep Batch
MB 880-37579/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-37579/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-37579/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3252-A-43-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3252-A-43-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 37788

Lab Sample ID 890-3258-1	Client Sample ID BG01	Prep Type Soluble	Matrix Solid	Method 300.0	Prep Batch 37579
MB 880-37579/1-A	Method Blank	Soluble	Solid	300.0	37579
LCS 880-37579/2-A	Lab Control Sample	Soluble	Solid	300.0	37579
LCSD 880-37579/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	37579
890-3252-A-43-B MS	Matrix Spike	Soluble	Solid	300.0	37579
890-3252-A-43-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	37579

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Lab Chronicle

Client: Ensolum Job ID: 890-3258-1 Project/Site: JRU 108H SDG: 03E1558090

Client Sample ID: BG01 Lab Sample ID: 890-3258-1 Date Collected: 10/20/22 14:30

Matrix: Solid

Date Received: 10/21/22 10:55

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	37911	10/26/22 14:13	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	38089	10/29/22 07:28	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38194	10/30/22 21:36	SM	EET MID
Total/NA	Analysis	8015 NM		1			37810	10/25/22 11:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	38417	11/01/22 15:08	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	38323	11/02/22 05:03	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	37579	10/22/22 12:59	SMC	EET MID
Soluble	Analysis	300.0		1			37788	10/25/22 20:41	CH	EET MID

Laboratory References:

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

Eurofins Carlsbad

Accreditation/Certification Summary

 Client: Ensolum
 Job ID: 890-3258-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Laboratory: Eurofins Midland

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

Authority	Pro	ogram	Identification Number	Expiration Date
Texas	NE	ELAP	T104704400-22-24	06-30-23
The following analyte:	s are included in this rend	ort but the laboratory is r	not certified by the governing authority.	This list may include analytes for y
the agency does not o	•	ort, but the laboratory is i	lot certified by the governing authority.	This list may include analytes for v
,	•	Matrix	Analyte	This list may include analytes for v
the agency does not o	offer certification.	•		This list may include analytes for v

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Method Summary

Client: Ensolum

Project/Site: JRU 108H

Job ID: 890-3258-1

SDG: 03E1558090

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

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions. SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum

Project/Site: JRU 108H

Job ID: 890-3258-1 SDG: 03E1558090

 Lab Sample ID
 Client Sample ID
 Matrix
 Collected
 Received
 Depth

 890-3258-1
 BG01
 Solid
 10/20/22 14:30
 10/21/22 10:55
 0.5'

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121314

City, State ZIP: ddress: ompany Name: oject Manager:

3122 National parks Hwy Carlsbad, NM 88220

Ensolum, LLC Ben Belill

Bill to: (if different)

Garrett Green

XTO Energy, Inc.

City, State ZIP: Address: Company Name:

Carlsbad, NM 88220 3104 E. Green Street

Reporting: Level II | Level III | PST/UST | TRRP |

Level IV

Program: UST/PST 🗌 PRP 🗌 Brownfields 🗋 RRC 🗌 Superfund 🗍 **Work Order Comments**

State of Project:

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:

Project Number: Project Location: Sampler's Name: PO #: SAMPLE RECEIPT Samples Received Intact: Cooler Custody Seals: Your Total Containers: Sample Identification Sample Identification BG01 Total 200.7 / 6010 20 Circle Method(s) and Metal(Cooler Signature of this document a	Date Samples Constitutes a validation of samples constitutes of samples constitutes a validation of samples constitutes a constitute of sa	Routine Rush Code Due Date: TAT starts the day received by the lab, if received by 4:30pm Wet Ice: Cotor: Time Sampled Depth Sampled Depth Comp Comp Comp Comp Comp Comp Comp Comp	Clerit con CRA AI SI Parameters Code Parameter	SB AS B CHLORIDES (EPA: 300.0)	X TPH (8015) X BTEX (8021	Project Location: Color Color Col	n of Custody No Custody Pb Mg Mn Mo Ni K Se Ag TI U Ho No Ni Se Ag TI	31/22 G	None: NO DI Water: H ₂ O Cool: Cool MeOH: Me HCL: HC HNO ₃ : HN H ₂ SO ₄ : H ₂ NaOH: Na H ₃ PO ₄ : HP NaHSO ₄ : NABIS Na ₂ S ₂ O ₃ : NaSO ₃ Zn Acetatle+NaOH: Zn NaOH+Ascorbic Acid: SAPC Sample Comments Cost Center: 1139071001 Sr TI Sn U V Zn Sr TI Sn U V Zn Standing Stand
Sample Identific	Matrix Date Sampled	d Depth						Samı	ple Comments
BG01	10/20/2022	0.5'		×				Cost Ce	enter: 1139071001
				_					
				1	+				
				_					
					+			Inci	ident Number:
1				\perp	\mathbb{H}				
		13PPM	≥	As B	Be	Cd Ca Cr Co Cu Fe		SiO ₂ Na Sr TI Sn	U V Zn
Circle Method(s) and Metal(s) to be analyzed		CLP / SPLP 6010: 8F	11	Sb As	Ba	Cu Pb Mn I		g: 1631 / 245.1 / 74	70 / 7471
Votice: Signature of this docu of service. Eurofins Xenco will of Eurofins Xenco. A minimum	ment and relinquishment of samples constitutes II be liable only for the cost of samples and shal n charge of \$85.00 will be applied to each project	a valid purchase order from not assume any responsibil and a charge of \$5 for each	client con ty for any sample su	npany to I losses or ubmitted t	expense o Eurofir	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	andard terms and condi- umstances beyond the c ced unless previously ne	itlons ontrol ogotiated.	
Relinquished by: (Signature)	ignature) Received by: (Signature)	(Signature)		Date/Time	me	Relinquished by: (Signature)	Received by: (Signature)	(Signature)	Date/Time
exchi)	T Durand	Slat	10	व्याष्ट्र	2 10	1955			
		0				4			
						0		Revis	Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-3258-1 SDG Number: 03E1558090

Login Number: 3258 **List Source: Eurofins Carlsbad**

List Number: 1

Creator: Stutzman, Amanda

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

Login Sample Receipt Checklist

 Client: Ensolum
 Job Number: 890-3258-1

 SDG Number: 03E1558090

List Source: Eurofins Midland
List Number: 2
List Creation: 10/24/22 07:56 AM

Creator: Rodriguez, Leticia

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	N/A	

103 OJ 270

<6mm (1/4").

Environment Testing

ANALYTICAL REPORT

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

Laboratory Job ID: 890-3259-1

Laboratory Sample Delivery Group: 03E1558090

Client Project/Site: JRU 108H

Revision: 1

For:

🗱 eurofins

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill



Authorized for release by: 11/2/2022 4:37:12 PM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

Review your project results through EOL

..... LINKS

Have a Question?



Visit us at:

www.eurofinsus.com/Env Released to Imaging: 4/28/2023 8:49:46 AM

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

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

Client: Ensolum
Project/Site: JRU 108H
Laboratory Job ID: 890-3259-1
SDG: 03E1558090

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Definitions/Glossary

Client: Ensolum Job ID: 890-3259-1 Project/Site: JRU 108H

SDG: 03E1558090

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier **Qualifier Description**

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

HPLC/IC

Qualifier **Qualifier Description**

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 Colony Forming Unit **CFU** Contains No Free Liquid CNF

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)

EPA recommended "Maximum Contaminant Level" MCL MDA Minimum Detectable Activity (Radiochemistry) MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit MI Minimum Level (Dioxin) MPN Most Probable Number Method Quantitation Limit MQL

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent POS Positive / Present

Practical Quantitation Limit PQL

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
 Job ID: 890-3259-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Job ID: 890-3259-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-3259-1

REVISION

The report being provided is a revision of the original report sent on 10/31/2022. The report (revision 1) is being revised due to Per client email, requesting TPH re run.

Report revision history

Receipt

The sample was received on 10/21/2022 10:55 AM. 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 1.2°C

Receipt Exceptions

The following sample was received and analyzed from an unpreserved bulk soil jar: BG01 (890-3259-1).

GC VOA

Method 8021B: The following samples were diluted due to the nature of the sample matrix: (880-20605-A-1-E MS) and (880-20605-A-1-F MSD). Because of this dilution, the surrogate spike and matrix spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-38021 and analytical batch 880-38089 was outside the upper control 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 matrix spike duplicate (MSD) recoveries for preparation batch 880-38417 and analytical batch 880-38323 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-37579 and analytical batch 880-37788 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.

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Client Sample Results

Client: Ensolum Job ID: 890-3259-1 Project/Site: JRU 108H SDG: 03E1558090

Client Sample ID: BG01 Lab Sample ID: 890-3259-1

Date Collected: 10/20/22 14:35 Date Received: 10/21/22 10:55

Matrix: Solid

Sample Depth: 4'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		10/26/22 14:13	10/29/22 03:38	1
Toluene	< 0.00199	U	0.00199	mg/Kg		10/26/22 14:13	10/29/22 03:38	1
Ethylbenzene	< 0.00199	U	0.00199	mg/Kg		10/26/22 14:13	10/29/22 03:38	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		10/26/22 14:13	10/29/22 03:38	1
o-Xylene	< 0.00199	U	0.00199	mg/Kg		10/26/22 14:13	10/29/22 03:38	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		10/26/22 14:13	10/29/22 03:38	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	122		70 - 130			10/26/22 14:13	10/29/22 03:38	1
1,4-Difluorobenzene (Surr)	100		70 - 130			10/26/22 14:13	10/29/22 03:38	1
Method: TAL SOP Total BTEX	. Total BTE	X Calculat	ion					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			10/30/22 21:36	1
	_	•	, , ,					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte	_	Qualifier	, , ,	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 10/25/22 11:30	Dil Fac
Analyte Total TPH	Result	Qualifier U	RL 50.0		<u>D</u>	Prepared		Dil Fac
Analyte Total TPH Method: SW846 8015B NM - E Analyte	Result <50.0 Piesel Range Result	Qualifier U Organics Qualifier	RL 50.0		<u>D</u>	Prepared Prepared		1
Analyte Total TPH Method: SW846 8015B NM - Description Analyte Gasoline Range Organics	Result <50.0	Qualifier U Organics Qualifier	RL 50.0 (DRO) (GC)	mg/Kg	_ =	·	10/25/22 11:30	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - DA Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result <50.0 Piesel Range Result	Qualifier U Organics Qualifier U	RL 50.0 (DRO) (GC) RL	mg/Kg Unit	_ =	Prepared 11/01/22 15:08	10/25/22 11:30 Analyzed	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - December 2015 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <50.0 Diesel Range Result <50.0	Qualifier U Organics Qualifier U	RL	mg/Kg Unit mg/Kg	_ =	Prepared 11/01/22 15:08 11/01/22 15:08	10/25/22 11:30 Analyzed 11/02/22 05:25	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - E Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result <50.0 Ciesel Range Result <50.0 <50.0	Qualifier U Organics Qualifier U U	RL 50.0 (DRO) (GC) RL 50.0 50.0	mg/Kg Unit mg/Kg mg/Kg	_ =	Prepared 11/01/22 15:08 11/01/22 15:08	10/25/22 11:30 Analyzed 11/02/22 05:25 11/02/22 05:25	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - E Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result <50.0	Qualifier U Organics Qualifier U U	RL 50.0 (DRO) (GC) RL 50.0 50.0	mg/Kg Unit mg/Kg mg/Kg	_ =	Prepared 11/01/22 15:08 11/01/22 15:08 11/01/22 15:08	Analyzed 11/02/22 05:25 11/02/22 05:25 11/02/22 05:25	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - E Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result <50.0	Qualifier U Organics Qualifier U U	RL 50.0 (DRO) (GC) RL 50.0 50.0 Limits	mg/Kg Unit mg/Kg mg/Kg	_ =	Prepared 11/01/22 15:08 11/01/22 15:08 11/01/22 15:08 Prepared 11/01/22 15:08	Analyzed 11/02/22 05:25 11/02/22 05:25 Analyzed	Dil Fac
Method: SW846 8015 NM - Did Analyte Total TPH Method: SW846 8015B NM - Did Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Method: MCAWW 300.0 - Anid	Result <50.0	Qualifier U Organics Qualifier U U U Qualifier	RL 50.0 (DRO) (GC) RL 50.0 50.0 50.0 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg	_ =	Prepared 11/01/22 15:08 11/01/22 15:08 11/01/22 15:08 Prepared 11/01/22 15:08	Analyzed 11/02/22 05:25 11/02/22 05:25 11/02/22 05:25 Analyzed 11/02/22 05:25	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - E Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result <50.0	Qualifier U Organics Qualifier U U U Qualifier	RL 50.0 (DRO) (GC) RL 50.0 50.0 50.0 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg	_ =	Prepared 11/01/22 15:08 11/01/22 15:08 11/01/22 15:08 Prepared 11/01/22 15:08	Analyzed 11/02/22 05:25 11/02/22 05:25 11/02/22 05:25 Analyzed 11/02/22 05:25	Dil Fac 1 1 Dil Fac

Surrogate Summary

 Client: Ensolum
 Job ID: 890-3259-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

			Percent	Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-20605-A-1-E MS	Matrix Spike	101	92	
880-20605-A-1-F MSD	Matrix Spike Duplicate	102	90	
890-3259-1	BG01	122	100	
LCS 880-37911/1-A	Lab Control Sample	99	91	
LCSD 880-37911/2-A	Lab Control Sample Dup	101	91	
MB 880-37911/5-A	Method Blank	102	87	
MB 880-38021/5-A	Method Blank	72	60 S1-	

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

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

Matrix: Solid Prep Type: Total/NA

		1001	OTPH1	Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-3259-1	BG01	86	90	
890-3335-A-1-C MS	Matrix Spike	88	86	
890-3335-A-1-D MSD	Matrix Spike Duplicate	79	76	
LCS 880-38417/2-A	Lab Control Sample	101	106	
LCSD 880-38417/3-A	Lab Control Sample Dup	90	95	
MB 880-38417/1-A	Method Blank	92	99	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-3259-1 Project/Site: JRU 108H SDG: 03E1558090

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-37911/5-A

Matrix: Solid

Analysis Batch: 38089

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 37911

	IVID	IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
Xylenes, Total	< 0.00400	U	0.00400	mg/Kg		10/26/22 14:13	10/29/22 01:12	1

MB MB

MD MD

Surrogate	%Recovery	Qualifier	Limits	Prepared Analyze	d Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130	10/26/22 14:13 10/29/22 0	:12 1
1,4-Difluorobenzene (Surr)	87		70 - 130	10/26/22 14:13 10/29/22 0	:12 1

Lab Sample ID: LCS 880-37911/1-A

Matrix: Solid

Analysis Batch: 38089

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 37911

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.07484		mg/Kg		75	70 - 130	
Toluene	0.100	0.07671		mg/Kg		77	70 - 130	
Ethylbenzene	0.100	0.07425		mg/Kg		74	70 - 130	
m-Xylene & p-Xylene	0.200	0.1480		mg/Kg		74	70 - 130	
o-Xylene	0.100	0.08609		mg/Kg		86	70 - 130	

LCS LCS

Surrogate	%Recovery Q	ualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	91		70 - 130

Lab Sample ID: LCSD 880-37911/2-A

Matrix: Solid

Analysis Batch: 38089

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 37911

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.07938		mg/Kg		79	70 - 130	6	35
Toluene	0.100	0.08189		mg/Kg		82	70 - 130	7	35
Ethylbenzene	0.100	0.08032		mg/Kg		80	70 - 130	8	35
m-Xylene & p-Xylene	0.200	0.1556		mg/Kg		78	70 - 130	5	35
o-Xylene	0.100	0.08950		mg/Kg		89	70 - 130	4	35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	91		70 - 130

Lab Sample ID: 880-20605-A-1-E MS

Matrix: Solid

Analysis Batch: 38089

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

Prep Batch: 37911

MS MS Sample Sample Spike %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits mg/Kg Benzene <0.00201 U F1 0.100 0.08080 80 70 - 130 Toluene <0.00201 UF1 0.100 0.07923 mg/Kg 78 70 - 130

Prep Batch: 37911

QC Sample Results

Client: Ensolum Job ID: 890-3259-1 Project/Site: JRU 108H SDG: 03E1558090

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

Lab Sample ID: 880-20605-A-1-E MS Client Sample ID: Matrix Spike **Prep Type: Total/NA Matrix: Solid**

Analysis Batch: 38089

	Sample	Sample	Spike	MS	MS				%Rec
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Ethylbenzene	<0.00201	U F1	0.100	0.07637		mg/Kg		76	70 - 130
m-Xylene & p-Xylene	<0.00402	U F1	0.200	0.1440		mg/Kg		72	70 - 130
o-Xylene	< 0.00201	U	0.100	0.08398		mg/Kg		84	70 - 130

MS MS Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 101 70 - 130 1,4-Difluorobenzene (Surr) 70 - 130 92

Lab Sample ID: 880-20605-A-1-F MSD **Client Sample ID: Matrix Spike Duplicate** Prep Type: Total/NA

Matrix: Solid

Analysis Batch: 38089		Sample S		Spike MSD M					Prep E		37911
	Sample		Spike		MSD			%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00201	U F1	0.0990	0.06610	F1	mg/Kg		66	70 - 130	20	35
Toluene	<0.00201	U F1	0.0990	0.06481	F1	mg/Kg		65	70 - 130	20	35
Ethylbenzene	<0.00201	U F1	0.0990	0.06337	F1	mg/Kg		64	70 - 130	19	35
m-Xylene & p-Xylene	<0.00402	U F1	0.198	0.1224	F1	mg/Kg		62	70 - 130	16	35
o-Xylene	< 0.00201	U	0.0990	0.07052		mg/Kg		71	70 - 130	17	35

MSD MSD Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 102 70 - 130 1,4-Difluorobenzene (Surr) 90 70 - 130

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ab Sample ID: MB 880-38021/5-A	Client Sample ID: Method Blank
latrix: Solid	Prep Type: Total/NA
nalysis Batch: 38089	Prep Batch: 38021
MB MB	

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
	MB	МВ						

	1110 1110				
Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	72	70 - 130	10/27/22 13:34	10/28/22 13:48	1
1,4-Difluorobenzene (Surr)	60 S1-	70 - 130	10/27/22 13:34	10/28/22 13:48	1

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

Lab Sample ID: MB 880-38417/1-A **Client Sample ID: Method Blank Matrix: Solid** Prep Type: Total/NA Prep Batch: 38417

Analysis Batch: 38323

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		11/01/22 15:08	11/01/22 21:10	1
(CDO) CC C40								

(GRO)-C6-C10

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Released to Imaging: 4/28/2023 8:49:46 AM

QC Sample Results

 Client: Ensolum
 Job ID: 890-3259-1

 Project/Site: JRU 108H
 SDG: 03E1558090

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

Lab Sample ID: MB 880-38417/1-A
Matrix: Solid
Analysis Batch: 38323

MB MB

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 38417

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		11/01/22 15:08	11/01/22 21:10	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/01/22 15:08	11/01/22 21:10	1
	MB	MB						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	92		70 - 130			11/01/22 15:08	11/01/22 21:10	1
o-Terphenyl	99		70 - 130			11/01/22 15:08	11/01/22 21:10	1

- Terprierryi		99	70 - 130				11/0	1/22 15.0	6 11/01/22 21.10
Lab Sample ID: LCS 880- Matrix: Solid Analysis Batch: 38323	38417/2-A					Clier	nt Sai	nple ID	: Lab Control Sample Prep Type: Total/NA Prep Batch: 38417
			Spike	LCS	LCS				%Rec
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1076		mg/Kg		108	70 - 130
Diesel Range Organics (Over			1000	1008		mg/Kg		101	70 - 130
C10-C28)									
	LCS	LCS							
Surrogate	%Recovery	Qualifier	Limits						
1-Chlorooctane	101		70 - 130						
o-Terphenyl	106		70 - 130						

Lab Sample ID: LCSD 880-38417/3-A			•	Jilent Sa	mpie	ID: Lat	Control	Sampie	∌ Dup
Matrix: Solid							Prep Ty	pe: Tot	al/NA
Analysis Batch: 38323							Prep E	Batch: 3	38417
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1087		mg/Kg		109	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	1000	910.4		mg/Kg		91	70 - 130	10	20
ICSD ICSD									

	LCSD LCSD	
Surrogate	%Recovery Qualifie	er Limits
1-Chlorooctane	90	70 - 130
o-Terphenyl	95	70 - 130

Lab Sample ID: 890-3335 Matrix: Solid Analysis Batch: 38323		Commis	C mika	MC	MC		CI	ient Sa	mple ID: Matrix Spike Prep Type: Total/NA Prep Batch: 38417
Ameliate	•	Sample	Spike	_	MS	1114	_	0/ 🗖	%Rec
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	_ D	%Rec	Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	997	812.4		mg/Kg		79	70 - 130
Diesel Range Organics (Over C10-C28)	77.7	F1	997	799.4		mg/Kg		72	70 - 130
	MS	MS							
Surrogate	%Recovery	Qualifier	Limits						
1-Chlorooctane	88		70 - 130						
o-Terphenyl	86		70 - 130						

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Client: Ensolum Job ID: 890-3259-1 Project/Site: JRU 108H SDG: 03E1558090

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

Lab Sample ID: 890-3335-A-1-D MSD

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

Prep Batch: 38417

Analysis Batch: 38323 Sample Sample Spike MSD MSD %Rec **RPD** Result Qualifier Added Result Qualifier D %Rec Limits RPD Limit Analyte Unit Gasoline Range Organics <50.0 U 999 984.3 mg/Kg 96 70 - 130 19 20 (GRO)-C6-C10 Diesel Range Organics (Over 999 702.0 F1 62 70 - 130 77.7 F1 mg/Kg 13 20

C10-C28)

Matrix: Solid

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	79		70 - 130
o-Terphenyl	76		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-37579/1-A **Client Sample ID: Method Blank Matrix: Solid Prep Type: Soluble**

Analysis Batch: 37788

MB MB Result Qualifier RL Unit Analyte Prepared Analyzed Dil Fac 5.00 Chloride <5.00 U mg/Kg 10/25/22 19:00

Lab Sample ID: LCS 880-37579/2-A **Client Sample ID: Lab Control Sample Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 37788

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	242.4		mg/Kg		97	90 - 110	

Lab Sample ID: LCSD 880-37579/3-A **Client Sample ID: Lab Control Sample Dup Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 37788

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	250	243.5		mg/Kg	_	97	90 - 110	0	20

Lab Sample ID: 890-3252-A-43-B MS Client Sample ID: Matrix Spike **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 37788

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	853	F1	250	1060	F1	ma/Ka		83	90 - 110	

Lab Sample ID: 890-3252-A-43-C MSD **Client Sample ID: Matrix Spike Duplicate Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 37788

Allalysis Datcil. 31100												
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	853	F1	250	1030	F1	mg/Kg	_	71	90 - 110	3	20	

QC Association Summary

 Client: Ensolum
 Job ID: 890-3259-1

 Project/Site: JRU 108H
 SDG: 03E1558090

GC VOA

Pre	n B	atc	h:	37 9	911
	P -	uto		• • •	• • •

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3259-1	BG01	Total/NA	Solid	5035	
MB 880-37911/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-37911/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-37911/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-20605-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
880-20605-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 38021

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-38021/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 38089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3259-1	BG01	Total/NA	Solid	8021B	37911
MB 880-37911/5-A	Method Blank	Total/NA	Solid	8021B	37911
MB 880-38021/5-A	Method Blank	Total/NA	Solid	8021B	38021
LCS 880-37911/1-A	Lab Control Sample	Total/NA	Solid	8021B	37911
LCSD 880-37911/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	37911
880-20605-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	37911
880-20605-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	37911

Analysis Batch: 38190

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3259-1	BG01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 37811

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3259-1	BG01	Total/NA	Solid	8015 NM	

Analysis Batch: 38323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3259-1	BG01	Total/NA	Solid	8015B NM	38417
MB 880-38417/1-A	Method Blank	Total/NA	Solid	8015B NM	38417
LCS 880-38417/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	38417
LCSD 880-38417/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	38417
890-3335-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	38417
890-3335-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	38417

Prep Batch: 38417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3259-1	BG01	Total/NA	Solid	8015NM Prep	
MB 880-38417/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-38417/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-38417/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3335-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3335-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

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QC Association Summary

 Client: Ensolum
 Job ID: 890-3259-1

 Project/Site: JRU 108H
 SDG: 03E1558090

HPLC/IC

Leach Batch: 37579

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3259-1	BG01	Soluble	Solid	DI Leach	
MB 880-37579/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-37579/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-37579/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3252-A-43-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3252-A-43-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 37788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3259-1	BG01	Soluble	Solid	300.0	37579
MB 880-37579/1-A	Method Blank	Soluble	Solid	300.0	37579
LCS 880-37579/2-A	Lab Control Sample	Soluble	Solid	300.0	37579
LCSD 880-37579/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	37579
890-3252-A-43-B MS	Matrix Spike	Soluble	Solid	300.0	37579
890-3252-A-43-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	37579

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Lab Chronicle

Client: Ensolum Job ID: 890-3259-1 Project/Site: JRU 108H SDG: 03E1558090

Client Sample ID: BG01 Lab Sample ID: 890-3259-1 Date Collected: 10/20/22 14:35

Matrix: Solid

Date Received: 10/21/22 10:55

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	37911	10/26/22 14:13	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	38089	10/29/22 03:38	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38190	10/30/22 21:36	SM	EET MID
Total/NA	Analysis	8015 NM		1			37811	10/25/22 11:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	38417	11/01/22 15:08	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	38323	11/02/22 05:25	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	37579	10/22/22 12:59	SMC	EET MID
Soluble	Analysis	300.0		10			37788	10/25/22 20:49	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

 Client: Ensolum
 Job ID: 890-3259-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Laboratory: Eurofins Midland

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

Authority	Pr	ogram	Identification Number	Expiration Date
Texas	NE	ELAP	T104704400-22-24	06-30-23
The following analyte the agency does not		ort, but the laboratory is r	not certified by the governing authority.	This list may include analytes for which
and agency does not	oner certification.			
Analysis Method	Prep Method	Matrix	Analyte	
0 ,		Matrix Solid	Analyte Total TPH	

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Method Summary

Client: Ensolum

Project/Site: JRU 108H

Job ID: 890-3259-1

SDG: 03E1558090

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

Protocol References:

ASTM = ASTM International

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

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum

Project/Site: JRU 108H

Job ID: 890-3259-1

SDG: 03E1558090

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3259-1	BG01	Solid	10/20/22 14:35	10/21/22 10:55	4'

roject Manager: company Name: ddress:

Ben Belill

Ensolum, LLC

ty. State ZIP:

3122 National parks Hwy Carlsbad, NM 88220

Address: City, State ZIP:

Bill to: (if different)
Company Name:

Garrett Green XTO Energy, Inc.

3104 E. Green Street Carlsbad, NM 88220 2

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Chain of Custody TX (281) 240-4200, Dallas, TX (214) 90:

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

www.xenco.com Page1_ of1_
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:

	9898540852 JRU 108H 03E1558090	90	Turn /	Email: bbell@ensolum.com Turn Around Pres. utine	Pres.	+	+		ANALYSIS REQUEST		UEST EDD			None: NO	Preservative Codes NO DI Water: H ₂ O Cool MeOH: Me
Sampler's Name:	Ben Belill)	TAT starts the the lab, if rece	TAT starts the day received by the lab, if received by 4:30pm	rs					_				HCL: HC	
SAMPLE RECEIPT	Temp Blank:	Yes No	Wet Ice:	No (Sa)	nete	.0)	_							H ₃ PO, HP	ō
Samples Received Intact:	(es) No	Thermometer ID:	D.	Jan 20	гап	300.								NaHSO ₄ : NABIS	NABIS
Cooler Custody Seals:	0	Correction Factor:	ctor:	0.0	Pa	PA: :								Na ₂ S ₂ O ₃ : NaSO ₃	NaSO ₃
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	Reading:			\$ (EI		890-	890-3259 Chain of Custody	of Cust	odv			Zn Acetat	Zn Acetate+NaOH: Zn
Total Containers:		Corrected Temperature	mperature:	2-1				-	-				-	NaOH+As	NaOH+Ascorbic Acid: SAPC
Sample Identification	tion Matrix	Date Sampled	Time Sampled	Depth Grab/	# of Cont	CHLOR	TPH (80							San	Sample Comments
BG01	S	10/20/2022	1435	4' Grab/	1	×	×							Cost C	Cost Center: 1139071001
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				'		-	-		F	\vdash				<u></u>	Incident Number:
	1					-								NA	NAPP2217931599
						-	+	-	-				1		
Total 200.7 / 6010	200.8 / 6020:	8	8RCRA 13PPM	M Texas 11	Al Sb	As Ba	a Be B	Cd Ca Cr	Co Cu Fe	B	/ig Min Mo	Ni K Se	Ag SiO ₂	Mg Mn Mo Ni K Se Ag SiO₂ Na Sr Tl Sn ∪ V Zn	3n ∪ V Zn
Circle Method(s) and Metal(s) to be analyzed	etal(s) to be analy	zed	TCLP / SP	TCLP / SPLP 6010: 8RCRA	1	b As	Sb As Ba Be	Cd Cr Co	Cu Pb Mn	<u>₹</u>	Mo Ni Se Ag TI	TI U	Hg: 163	Hg: 1631 / 245.1 / 7470 / 7471	470 / 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 controp 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 negotias	ent and relinquishment be liable only for the co charge of \$85.00 will be	of samples const st of samples and applied to each p	itutes a valid pure shall not assume project and a char	chase order from any responsibili ge of \$5 for each	client com ty for any I	pany to E osses or bmitted to	expenses Eurofins	nco, its affiliates incurred by the Xenco, but not a	and subcontr client if such lo nalyzed. These		ectors. It assigns standard terms and conditions sees are due to circumstances beyond the control terms will be enforced unless previously negotiated	rd terms and c ances beyond nless previous	onditions the control ly negotiate	Ď.	
Relinquished by: (Signature	nature)	Received	Received by: (Signature)	ге)		Date/Time	me	Relinqu	Relinquished by: (Signature)	Signatu	re)	Received by: (Signature)	by: (Sign	ature)	Date/Time
Coro	y	لعريح	a Sy	est)	5	alles		D STR							
								4							
								0			-			R	Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

 Client: Ensolum
 Job Number: 890-3259-1

 SDG Number: 03E1558090

Login Number: 3259 List Source: Eurofins Carlsbad

List Number: 1

Creator: Stutzman, Amanda

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

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Login Sample Receipt Checklist

 Client: Ensolum
 Job Number: 890-3259-1

 SDG Number: 03E1558090

List Source: Eurofins Midland
List Number: 2
List Creation: 10/24/22 07:56 AM

Creator: Rodriguez, Leticia

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	N/A	

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<6mm (1/4").



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Environment Testing

ANALYTICAL REPORT

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

Laboratory Job ID: 890-3260-1

Laboratory Sample Delivery Group: 03E1558090

Client Project/Site: JRU 108H

For:

💸 eurofins

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

JURAMER

Authorized for release by: 10/31/2022 9:39:13 AM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

..... Links

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

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

Client: Ensolum
Project/Site: JRU 108H
Laboratory Job ID: 890-3260-1
SDG: 03E1558090

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Definitions/Glossary

 Client: Ensolum
 Job ID: 890-3260-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Qualifiers

GC VOA

 Qualifier
 Qualifier Description

 F1
 MS and/or MSD recovery exceeds control limits.

 S1 Surrogate recovery exceeds control limits, low biased.

 U
 Indicates the analyte was analyzed for but not detected.

GC Semi VOA

 Qualifier
 Qualifier Description

 F1
 MS and/or MSD recovery exceeds control limits.

 F2
 MS/MSD RPD exceeds control limits

U Indicates the analyte was analyzed for but not detected.

HPLC/IC

 Qualifier
 Qualifier Description

 F1
 MS and/or MSD recover

F1 MS and/or MSD recovery exceeds control limits.

U Indicates the analyte was analyzed for but not detected.

Glossary

%R

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

CFL Contains Free Liquid
CFU Colony Forming Unit
CNF Contains No Free Liquid

Percent Recovery

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac Dilution Factor

DL Detection Limit (DoD/DOE)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

EDL Estimated Detection Limit (Dioxin)

LOD Limit of Detection (DoD/DOE)

LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level"

MDA Minimum Detectable Activity (Radiochemistry)

MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit
ML Minimum Level (Dioxin)
MPN Most Probable Number
MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent
POS Positive / Present

PQL Practical Quantitation Limit

PRES Presumptive
QC Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

Eurofins Carlsbad

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Case Narrative

 Client: Ensolum
 Job ID: 890-3260-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Job ID: 890-3260-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-3260-1

Receipt

The sample was received on 10/21/2022 10:55 AM. 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 1.2°C

Receipt Exceptions

The following sample was received and analyzed from an unpreserved bulk soil jar: BG01 (890-3260-1).

GC VOA

Method 8021B: The following samples were diluted due to the nature of the sample matrix: (880-20605-A-1-E MS) and (880-20605-A-1-F MSD). Because of this dilution, the surrogate spike and matrix spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-38021 and analytical batch 880-38089 was outside the upper control 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 matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-37617 and analytical batch 880-37611 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.

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-37579 and analytical batch 880-37788 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.

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Matrix: Solid

Lab Sample ID: 890-3260-1

Client Sample Results

Client: Ensolum Job ID: 890-3260-1 Project/Site: JRU 108H SDG: 03E1558090

Client Sample ID: BG01

Date Collected: 10/20/22 14:40 Date Received: 10/21/22 10:55

Sample Depth: 6'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00216		0.00200	mg/Kg		10/26/22 14:13	10/29/22 03:59	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 03:59	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 03:59	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		10/26/22 14:13	10/29/22 03:59	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 03:59	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		10/26/22 14:13	10/29/22 03:59	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130			10/26/22 14:13	10/29/22 03:59	1
1,4-Difluorobenzene (Surr)	92		70 - 130			10/26/22 14:13	10/29/22 03:59	1
Method: TAL SOP Total BTEX - T	otal BTEX Cal	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			10/30/22 21:36	1
Method: SW846 8015 NM - Diese	l Range Organ	ics (DRO) (GC)					
Analyte	•	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			10/25/22 11:30	1
Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		10/24/22 08:52	10/24/22 19:15	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		10/24/22 08:52	10/24/22 19:15	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		10/24/22 08:52	10/24/22 19:15	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	84		70 - 130			10/24/22 08:52	10/24/22 19:15	1
o-Terphenyl	89		70 - 130			10/24/22 08:52	10/24/22 19:15	1
Method: MCAWW 300.0 - Anions	, Ion Chromato	ography - So	oluble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4650		50.5	mg/Kg			10/25/22 20:57	10

Surrogate Summary

Client: Ensolum Job ID: 890-3260-1 Project/Site: JRU 108H SDG: 03E1558090

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

	BFB1	DFBZ1
Lab Sample ID Client Sample ID	(70-130)	(70-130)
880-20605-A-1-E MS Matrix Spike	101	92
880-20605-A-1-F MSD Matrix Spike Duplicate	102	90
890-3260-1 BG01	108	92
LCS 880-37911/1-A Lab Control Sample	99	91
LCSD 880-37911/2-A Lab Control Sample Dup	101	91
MB 880-37911/5-A Method Blank	102	87
MB 880-38021/5-A Method Blank	72	60 S1-

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

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

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

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
ab Sample ID	Client Sample ID	(70-130)	(70-130)	
390-3253-A-1-H MS	Matrix Spike	95	92	
890-3253-A-1-I MSD	Matrix Spike Duplicate	88	84	
890-3260-1	BG01	84	89	
_CS 880-37617/2-A	Lab Control Sample	105	110	
LCSD 880-37617/3-A	Lab Control Sample Dup	108	114	
MB 880-37617/1-A	Method Blank	80	94	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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Client: Ensolum Job ID: 890-3260-1 SDG: 03E1558090 Project/Site: JRU 108H

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-37911/5-A

Matrix: Solid Analysis Batch: 38089 Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 37911

	МВ	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		10/26/22 14:13	10/29/22 01:12	1

MB MB

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130	_	10/26/22 14:13	10/29/22 01:12	1
1,4-Difluorobenzene (Surr)	87		70 - 130		10/26/22 14:13	10/29/22 01:12	1

Lab Sample ID: LCS 880-37911/1-A

Matrix: Solid

Analysis Batch: 38089

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 37911

ı		Spike	LCS	LCS				%Rec	
	Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
	Benzene	0.100	0.07484		mg/Kg		75	70 - 130	
	Toluene	0.100	0.07671		mg/Kg		77	70 - 130	
	Ethylbenzene	0.100	0.07425		mg/Kg		74	70 - 130	
ĺ	m-Xylene & p-Xylene	0.200	0.1480		mg/Kg		74	70 - 130	
	o-Xylene	0.100	0.08609		mg/Kg		86	70 - 130	
ı									

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	99	70 - 130
1,4-Difluorobenzene (Surr)	91	70 - 130

Lab Sample ID: LCSD 880-37911/2-A

Matrix: Solid

Analysis Batch: 38089

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 37911

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.07938		mg/Kg		79	70 - 130	6	35
Toluene	0.100	0.08189		mg/Kg		82	70 - 130	7	35
Ethylbenzene	0.100	0.08032		mg/Kg		80	70 - 130	8	35
m-Xylene & p-Xylene	0.200	0.1556		mg/Kg		78	70 - 130	5	35
o-Xylene	0.100	0.08950		mg/Kg		89	70 - 130	4	35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1.4-Difluorobenzene (Surr)	91		70 - 130

Lab Sample ID: 880-20605-A-1-E MS

Released to Imaging: 4/28/2023 8:49:46 AM

Matrix: Solid

Analysis Batch: 38089

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 37911

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U F1	0.100	0.08080		mg/Kg		80	70 - 130	
Toluene	<0.00201	U F1	0.100	0.07923		mg/Kg		78	70 - 130	

QC Sample Results

Job ID: 890-3260-1 Client: Ensolum Project/Site: JRU 108H SDG: 03E1558090

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

Lab Sample ID: 880-20605-A-1-E MS

Matrix: Solid

Analysis Batch: 38089

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 37911

Sample Sample Spike MS MS %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Ethylbenzene <0.00201 U F1 0.100 0.07637 76 70 - 130 mg/Kg m-Xylene & p-Xylene <0.00402 U F1 0.200 0.1440 mg/Kg 72 70 - 130 0.100 0.08398 o-Xylene <0.00201 U 84 70 - 130 mg/Kg

MS MS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 37911

Matrix: Solid Analysis Batch: 38089

Lab Sample ID: 880-20605-A-1-F MSD

Sample Sample Spike MSD MSD RPD Result Qualifier Result Qualifier RPD Limit Analyte babbA Unit %Rec Limits 0.0990 0.06610 F1 Benzene <0.00201 UF1 mg/Kg 66 70 - 130 20 35 0.0990 Toluene <0.00201 UF1 0.06481 F1 mg/Kg 65 70 - 130 20 35 Ethylbenzene U F1 0.0990 0.06337 F1 64 70 - 130 19 35 <0.00201 mg/Kg 0.198 70 - 130 m-Xylene & p-Xylene <0.00402 U F1 0.1224 F1 mg/Kg 62 16 35 0.0990 <0.00201 U 0.07052 71 70 - 130 o-Xylene mg/Kg 17

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	90		70 - 130

Lab Sample ID: MB 880-38021/5-A

Matrix: Solid

Analysis Batch: 38089

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 38021

MB MB

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		10/27/22 13:34	10/28/22 13:48	1

MB MB

мв мв

Qualifier

Result

<50.0 U

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	72		70 - 130	10/27/22 13:34	10/28/22 13:48	1
1,4-Difluorobenzene (Surr)	60	S1-	70 - 130	10/27/22 13:34	10/28/22 13:48	1

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

Lab Sample ID: MB 880-37617/1-A

Matrix: Solid

Analysis Batch: 37611

Client Sample ID: Method Blank

10/24/22 10:35

Prepared

10/24/22 08:52

Prep Type: Total/NA Prep Batch: 37617

Gasoline Range Organics (GRO)-C6-C10

Analyte

Eurofins Carlsbad

RL

50.0

Unit

mg/Kg

Job ID: 890-3260-1 Client: Ensolum Project/Site: JRU 108H SDG: 03E1558090

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

Lab Sample ID: MB 880-37617/1-A **Matrix: Solid**

Analysis Batch: 37611

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 37617

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		10/24/22 08:52	10/24/22 10:35	1
C10-C28) Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		10/24/22 08:52	10/24/22 10:35	1

MB MB

MB MB

	Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	1-Chlorooctane	80		70 - 130	10/24/22 08:52	10/24/22 10:35	1
Į	o-Terphenyl	94		70 - 130	10/24/22 08:52	10/24/22 10:35	1

Lab Sample ID: LCS 880-37617/2-A **Client Sample ID: Lab Control Sample**

Matrix: Solid Analysis Batch: 37611

Prep Type: Total/NA

Prep Batch: 37617

LCS LCS Spike Analyte Added Result Qualifier Unit %Rec Limits Gasoline Range Organics 1000 1169 117 70 - 130 mg/Kg (GRO)-C6-C10 1000 1015 Diesel Range Organics (Over mg/Kg 102 70 - 130 C10-C28)

LCS LCS

Surrogate	%Recovery Q	ualifier	Limits
1-Chlorooctane	105		70 - 130
o-Terphenyl	110		70 - 130

Lab Sample ID: LCSD 880-37617/3-A

Matrix: Solid

Analysis Batch: 37611

Client Sample	ID: Lab	Control	Sample Du	ıp
---------------	---------	---------	-----------	----

Prep Type: Total/NA

Prep Batch: 37617

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	1158		mg/Kg		116	70 - 130	1	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	1018		mg/Kg		102	70 - 130	0	20
C10-C28)									

LCSD LCSD Surrogate %Recovery Qualifier Limits 1-Chlorooctane 108 70 - 130 o-Terphenyl 114 70 - 130

Lab Sample ID: 890-3253-A-1-H MS

Matrix: Solid

Analysis Batch: 37611

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 37617

Sample Sample Spike MS MS %Rec Result Qualifier Added Result Qualifier Unit %Rec Limits Analyte <49.8 U F1 F2 998 1543 F1 70 - 130 Gasoline Range Organics 151 mg/Kg (GRO)-C6-C10 998 812.7 Diesel Range Organics (Over <49.8 U mg/Kg 81 70 - 130

C10-C28)

	IVIS	IVIS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	95		70 - 130
o-Terphenyl	92		70 - 130

QC Sample Results

Job ID: 890-3260-1 Client: Ensolum Project/Site: JRU 108H SDG: 03E1558090

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

Lab Sample ID: 890-3253-A-1-I MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid Analysis Batch: 37611 Prep Type: Total/NA

Prep Batch: 37617

Sample Sample Spike MSD MSD RPD Result Qualifier RPD Limit Analyte Added Result Qualifier Unit %Rec Limits Gasoline Range Organics <49.8 U F1 F2 998 1075 F2 mg/Kg 104 70 - 130 36 20 (GRO)-C6-C10 998 Diesel Range Organics (Over <49.8 U 782.1 mg/Kg 78 70 - 130 4

C10-C28)

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	88		70 - 130
o-Terphenyl	84		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-37579/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 37788

мв мв

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			10/25/22 19:00	1

Lab Sample ID: LCS 880-37579/2-A **Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Soluble**

Analysis Batch: 37788

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	242.4		mg/Kg		97	90 - 110	

Lab Sample ID: LCSD 880-37579/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 37788

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	250	243.5		mg/Kg		97	90 - 110	0	20	

Lab Sample ID: 890-3252-A-43-B MS Client Sample ID: Matrix Spike

Matrix: Solid

Analysis Batch: 37788

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	853	F1	250	1060	F1	ma/Ka		83	90 110	

Lab Sample ID: 890-3252-A-43-C MSD

Client Sample ID: Matrix Spike Duplicate **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 37788

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	853	F1	250	1030	F1	mg/Kg		71	90 - 110	3	20

Eurofins Carlsbad

Prep Type: Soluble

QC Association Summary

 Client: Ensolum
 Job ID: 890-3260-1

 Project/Site: JRU 108H
 SDG: 03E1558090

GC VOA

Prep Batch: 37911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3260-1	BG01	Total/NA	Solid	5035	
MB 880-37911/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-37911/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-37911/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-20605-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
880-20605-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 38021

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-38021/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 38089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3260-1	BG01	Total/NA	Solid	8021B	37911
MB 880-37911/5-A	Method Blank	Total/NA	Solid	8021B	37911
MB 880-38021/5-A	Method Blank	Total/NA	Solid	8021B	38021
LCS 880-37911/1-A	Lab Control Sample	Total/NA	Solid	8021B	37911
LCSD 880-37911/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	37911
880-20605-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	37911
880-20605-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	37911

Analysis Batch: 38191

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3260-1	BG01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 37611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3260-1	BG01	Total/NA	Solid	8015B NM	37617
MB 880-37617/1-A	Method Blank	Total/NA	Solid	8015B NM	37617
LCS 880-37617/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	37617
LCSD 880-37617/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	37617
890-3253-A-1-H MS	Matrix Spike	Total/NA	Solid	8015B NM	37617
890-3253-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	37617

Prep Batch: 37617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3260-1	BG01	Total/NA	Solid	8015NM Prep	
MB 880-37617/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-37617/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-37617/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3253-A-1-H MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3253-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 37812

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3260-1	BG01	Total/NA	Solid	8015 NM	

QC Association Summary

 Client: Ensolum
 Job ID: 890-3260-1

 Project/Site: JRU 108H
 SDG: 03E1558090

HPLC/IC

Leach Batch: 37579

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3260-1	BG01	Soluble	Solid	DI Leach	
MB 880-37579/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-37579/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-37579/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3252-A-43-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3252-A-43-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 37788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3260-1	BG01	Soluble	Solid	300.0	37579
MB 880-37579/1-A	Method Blank	Soluble	Solid	300.0	37579
LCS 880-37579/2-A	Lab Control Sample	Soluble	Solid	300.0	37579
LCSD 880-37579/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	37579
890-3252-A-43-B MS	Matrix Spike	Soluble	Solid	300.0	37579
890-3252-A-43-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	37579

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Lab Chronicle

 Client: Ensolum
 Job ID: 890-3260-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Client Sample ID: BG01

Lab Sample ID: 890-3260-1

Matrix: Solid

Date Collected: 10/20/22 14:40 Date Received: 10/21/22 10:55

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	37911	10/26/22 14:13	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	38089	10/29/22 03:59	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38191	10/30/22 21:36	SM	EET MID
Total/NA	Analysis	8015 NM		1			37812	10/25/22 11:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	37617	10/24/22 08:52	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	37611	10/24/22 19:15	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	37579	10/22/22 12:59	SMC	EET MID
Soluble	Analysis	300.0		10			37788	10/25/22 20:57	CH	EET MID

Laboratory References:

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

Eurofins Carlsbad

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Accreditation/Certification Summary

Client: Ensolum Job ID: 890-3260-1 Project/Site: JRU 108H SDG: 03E1558090

Laboratory: Eurofins Midland

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

Authority	Pr	ogram	Identification Number	Expiration Date	
Texas	NI	ELAP	T104704400-22-24	06-30-23	
The following analytes	are included in this report, bu	ut the laboratory is not certifi	ed by the governing authority. This list ma	av include analytes fo	
the agency does not of	fer certification.		, , ,	,	
the agency does not of Analysis Method	fer certification . Prep Method	Matrix	Analyte	,	
0 ,		Matrix Solid	Analyte Total TPH		

Method Summary

 Client: Ensolum
 Job ID: 890-3260-1

 Project/Site: JRU 108H
 SDG: 03E1558090

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

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions. SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

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Eurofins Carlsbad

Sample Summary

Client: Ensolum

Project/Site: JRU 108H

Job ID: 890-3260-1 SDG: 03E1558090

Lab Sample ID Client Sample ID Matrix Collected Received Depth 890-3260-1 BG01 Solid 10/20/22 14:40 10/21/22 10:55 6'

Project Number:

EDDY COUNTY, NM 03E1558090 JRU 108H

Due Date: ✓ Routine

Turn Around

ANALYSIS REQUEST

None: NO

DI Water: H₂O

Preservative Codes

Rush

Project Name:

City, State ZIP:

9898540852 Carlsbad, NM 88220 3122 National parks Hwy Project Manager:

Company Name: Address:

> Ensolum, LLC Ben Belill

Address:

City, State ZIP:

Carlsbad, NM 88220 3104 E. Green Street XTO Energy, Inc. Garrett Green

Bill to: (if different)

Company Name:

121314

Chain of Custody

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

Work Order No:

NM (575) 988-3199	
	www.xenco.com Page 1_of 1_
	Work Order Comments
	Program: UST/PST ☐ PRP☐ Brownfields ☐ RRC ☐ Superfund ☐
	State of Project:
	Reporting: Level II
	Deliverables: EDD ☐ ADaPT ☐ Other:

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		Y.	S\$501 C	מכונגו	O O	1 X +		7/1	il de Bran
Date/Time	Received by: (Signature)	Relinquished by: (Signature)	ime	Date/Time	(1)	Received by: (Signature)	Received	ture)	Relinquished by: (Signature)
	octors. It assigns standard terms and conditions asses are due to circumstances beyond the control terms will be enforced unless previously negotiated.	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 loases or expenses incurred by the client if such loases 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 negotiat	Eurofins Xence r expenses inc to Eurofins Xe	any losses of submitted	ase order from client ny responsibility for of \$5 for each samp	itutes a valid purch shall not assume a roject and a charge	f samples const t of samples and ipplied to each p	and relinquishment of able only for the cosige of \$85.00 will be	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontra of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any loases or expenses incurred by the client if such lot 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
7470 / 7471	Ag TI U Hg: 1631 / 245.1 / 7470 / 7471	Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U	Ba Be C	A Sb As	TCLP / SPLP 6010: 8RCRA	TCLP / SPL	ed	l(s) to be analyz	Circle Method(s) and Metal(s) to be analyzed
Sn U V Zn	X Se A	Cd Ca Cr Co Cu Fe Pb Mg Mn	Ве В	Al Sb As Ba	Texas 11 A	8RCRA 13PPM Texas 11	85	200.8 / 6020:	Total 200.7 / 6010
		II L							
									1
NAPP2217931599								(
Incident Number:							\	1	
Cost Center: 1139071001	Cost		×	×	Grab/	1440 6'	10/20/2022	S	BG01
Sample Comments	S		TPH (8	CHLO	Depth Grab/ # of Comp Cont	Time D Sampled	Date Sampled	n Matrix	Sample Identification
NaOH+Ascorbic Acid: SAPC	NaOH+	-		RIDE	4	nperature:	Corrected Temperature		Total Containers:
Zn Acetate+NaOH: Zn	Zn Acet	890-3260 Chain of Custody		S (E	7	Reading:	Temperature Reading:	Yes No NIA	Sample Custody Seals:
Na ₂ S ₂ O ₃ : NaSO ₃	Na ₂ S ₂ O				Ö		NIA Correction Factor	Yes No NIA	Cooler Custody Seals:
NaHSO ₄ NABIS	NaHSO				DW. CO		Thermometer ID:	(Pes) No	Samples Received Intact:
푸	H ₃ PO ₄ : HP				Yes No	Wet Ice:	Yes No	Temp Blank:	SAMPLE RECEIPT
NaOH: Na	H ₂ S0 ₄ : H ₂				_	the lab, if received by 4:30pm			PO #:
	HCL: HC				y received by	TAT starts the day received by		Ben Belill	Sampler's Name:
	Cool: Cool					Due Date:	N N	EDDY COUNTY, NM	Project Location:

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-3260-1 SDG Number: 03E1558090

Login Number: 3260 List Source: Eurofins Carlsbad

List Number: 1

Creator: Stutzman, Amanda

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 True tampered with. Samples were received on ice. True True Cooler Temperature is acceptable. 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 True HTs) Sample containers have legible labels. True Containers are not broken or leaking. True Sample collection date/times are provided. True Appropriate sample containers are used. N/A Refer to Job Narrative for details. Sample bottles are completely filled. True N/A Sample Preservation Verified. There is sufficient vol. for all requested analyses, incl. any requested True MS/MSDs

N/A

<6mm (1/4").

Containers requiring zero headspace have no headspace or bubble is

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-3260-1 SDG Number: 03E1558090

Login Number: 3260 **List Source: Eurofins Midland** List Number: 2 List Creation: 10/24/22 07:56 AM

Creator: Rodriguez, Leticia

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	N/A	

<6mm (1/4").



ANALYTICAL REPORT

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

Laboratory Job ID: 890-3261-1

Laboratory Sample Delivery Group: 03E1558090

Client Project/Site: JRU 108H

Revision: 1

For:

🗱 eurofins

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

J. KRAMER

Authorized for release by: 11/2/2022 4:39:15 PM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

Have a Question?

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The

EOL

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Released to Imaging: 4/28/2023 8:49:46 AM

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

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

Client: Ensolum
Project/Site: JRU 108H
Laboratory Job ID: 890-3261-1
SDG: 03E1558090

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Definitions/Glossary

Client: Ensolum Job ID: 890-3261-1 Project/Site: JRU 108H SDG: 03E1558090

Qualifiers

GC	VOA
Oual	ifior

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

GC Semi VOA

Qualifier	Qualifier Description
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.
LIDL C/IC	

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)

LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)

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

PQL	Practical Quantitation Limit
PRES	Presumptive

QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)

RL	Reporting Limit or Requested Limit ((Radiochemistry)
----	--------------------------------------	------------------

RPD	Dolotiva Doroont Difference	a measure of the relative difference between two points
RFD	Relative Percent Dillerence.	a measure of the relative difference between two points

111 5	reduite i crociii bilicionoc, a moasc
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

Released to Imaging: 4/28/2023 8:49:46 AM

Case Narrative

 Client: Ensolum
 Job ID: 890-3261-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Job ID: 890-3261-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-3261-1

REVISION

The report being provided is a revision of the original report sent on 10/31/2022. The report (revision 1) is being revised due to Per client email, requesting TPH re run.

Report revision history

Receipt

The samples were received on 10/21/2022 10:55 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.2°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: PH01 (890-3261-1), PH01 (890-3261-2), PH01 (890-3261-3), PH01 (890-3261-4) and PH01 (890-3261-5).

GC VOA

Method 8021B: The following samples were diluted due to the nature of the sample matrix: (880-20605-A-1-E MS) and (880-20605-A-1-F MSD). Because of this dilution, the surrogate spike and matrix spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-38021 and analytical batch 880-38089 was outside the upper control limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: PH01 (890-3261-1), PH01 (890-3261-2) and PH01 (890-3261-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-37617 and analytical batch 880-37611 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.

Method 8015MOD_NM: The matrix spike duplicate (MSD) recoveries for preparation batch 880-38417 and analytical batch 880-38323 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

HPLC/IC

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

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 Client: Ensolum
 Job ID: 890-3261-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Project/Site: JRU 108H SDG: 03E1558090

Client Sample ID: PH01

Date Collected: 10/20/22 11:50

Lab Sample ID: 890-3261-1

Matrix: Solid

Date Received: 10/21/22 10:55 Sample Depth: 2'

Method: SW846 8021B - Vo	olatile Organic	Compound	ds (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0498	U	0.0498	mg/Kg		10/26/22 14:13	10/29/22 08:31	25
Toluene	<0.0498	U	0.0498	mg/Kg		10/26/22 14:13	10/29/22 08:31	25
Ethylbenzene	0.120		0.0498	mg/Kg		10/26/22 14:13	10/29/22 08:31	25
m-Xylene & p-Xylene	1.90		0.0996	mg/Kg		10/26/22 14:13	10/29/22 08:31	25
o-Xylene	0.380		0.0498	mg/Kg		10/26/22 14:13	10/29/22 08:31	25
Xylenes, Total	2.28		0.0996	mg/Kg		10/26/22 14:13	10/29/22 08:31	25
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	245	S1+	70 - 130			10/26/22 14:13	10/29/22 08:31	25
1,4-Difluorobenzene (Surr)	105		70 - 130			10/26/22 14:13	10/29/22 08:31	25

Method: TAL SOP Total BTEX	- Total BTE	X Calculati	ion					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	2.40		0.0996	mg/Kg			10/30/22 21:36	1

Method: SW846 8015 NM - Dies	sel Range Org	ganics (DRO) (G	SC)					
Analyte	Result Qu	ualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	6370	50	0.0	mg/Kg	_		10/25/22 11:30	1

Method: SW846 8015B NM - Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	935	50.0	mg/Kg		10/24/22 08:52	10/24/22 16:50	1
Diesel Range Organics (Over C10-C28)	3250	50.0	mg/Kg		10/24/22 08:52	10/24/22 16:50	1
Oll Range Organics (Over C28-C36)	2180	50.0	mg/Kg		10/24/22 08:52	10/24/22 16:50	1
Surrogate	%Recovery Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	93	70 - 130			10/24/22 08:52	10/24/22 16:50	1

Method: MCAWW 300.0 - Anio	ons, Ion Chromatograp	hy - Soluble					
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2870	25.0	mg/Kg			10/25/22 21:06	5

70 - 130

86

Client Sample ID: PH01

Date Collected: 10/20/22 11:55

Lab Sample ID: 890-3261-2

Matrix: Solid

Date Received: 10/21/22 10:55 Sample Depth: 3'

o-Terphenyl

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0497	U	0.0497	mg/Kg		10/26/22 14:13	10/29/22 08:51	25
Toluene	2.13		0.0497	mg/Kg		10/26/22 14:13	10/29/22 08:51	25
Ethylbenzene	6.51		0.0497	mg/Kg		10/26/22 14:13	10/29/22 08:51	25
m-Xylene & p-Xylene	14.6		0.0994	mg/Kg		10/26/22 14:13	10/29/22 08:51	25
o-Xylene	9.38		0.0497	mg/Kg		10/26/22 14:13	10/29/22 08:51	25
Xylenes, Total	24.0		0.0994	mg/Kg		10/26/22 14:13	10/29/22 08:51	25

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10/24/22 08:52 10/24/22 16:50

2

3

4

6

8

10

12

Job ID: 890-3261-1 SDG: 03E1558090

Client: Ensolum Project/Site: JRU 108H

Lab Sample ID: 890-3261-2

Client Sample ID: PH01 Date Collected: 10/20/22 11:55 Date Received: 10/21/22 10:55

Matrix: Solid

Sample Depth: 3'

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	426	S1+	70 - 130	10/26/22 14:13	10/29/22 08:51	25
1,4-Difluorobenzene (Surr)	89		70 - 130	10/26/22 14:13	10/29/22 08:51	25

Method: TAL SOP Total BTEX - Total BTEX Calculation Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fac **Total BTEX** 32.6 0.0994 mg/Kg 10/30/22 21:36

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC) D **Analyte** Result Qualifier Unit Prepared Analyzed Dil Fac 50.0 **Total TPH** 4010 mg/Kg 10/25/22 11:30

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC) Result Qualifier Unit D **Analyte** Prepared Analyzed Dil Fac **Gasoline Range Organics** 848 50.0 10/24/22 08:52 10/24/22 17:11 mg/Kg (GRO)-C6-C10 **Diesel Range Organics (Over** 1970 50.0 mg/Kg 10/24/22 08:52 10/24/22 17:11 C10-C28) **Oll Range Organics (Over** 50.0 mg/Kg 10/24/22 08:52 10/24/22 17:11 1190 C28-C36)

Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 1-Chlorooctane 94 70 - 130 10/24/22 08:52 10/24/22 17:11 77 70 - 130 10/24/22 08:52 10/24/22 17:11 o-Terphenyl

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble Analyte Result Qualifier RL Unit Dil Fac Prepared Analyzed 100 Chloride 12300 mg/Kg 10/25/22 21:14

Client Sample ID: PH01 Lab Sample ID: 890-3261-3 Date Collected: 10/20/22 12:00 Matrix: Solid

Date Received: 10/21/22 10:55

Sample Depth: 4'

Analyte

Total BTEX

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0499	U	0.0499	mg/Kg		10/26/22 14:13	10/29/22 09:12	25
Toluene	1.76		0.0499	mg/Kg		10/26/22 14:13	10/29/22 09:12	25
Ethylbenzene	3.84		0.0499	mg/Kg		10/26/22 14:13	10/29/22 09:12	25
m-Xylene & p-Xylene	13.0		0.0998	mg/Kg		10/26/22 14:13	10/29/22 09:12	25
o-Xylene	8.51		0.0499	mg/Kg		10/26/22 14:13	10/29/22 09:12	25
Xylenes, Total	21.5		0.0998	mg/Kg		10/26/22 14:13	10/29/22 09:12	25
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	332	S1+	70 - 130			10/26/22 14:13	10/29/22 09:12	25
1,4-Difluorobenzene (Surr)	87		70 - 130			10/26/22 14:13	10/29/22 09:12	25

RL

0.0998

Unit

mg/Kg

Prepared

D

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Analyzed

10/30/22 21:36

Result Qualifier

27.1

Dil Fac

Matrix: Solid

Lab Sample ID: 890-3261-3

10/24/22 08:52 10/24/22 17:31

Job ID: 890-3261-1

Client: Ensolum Project/Site: JRU 108H SDG: 03E1558090

Client Sample ID: PH01

Date Collected: 10/20/22 12:00 Date Received: 10/21/22 10:55

Sample Depth: 4'

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)									
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Total TPH	2700		49.9	mg/Kg			10/25/22 11:30	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	531		49.9	mg/Kg		10/24/22 08:52	10/24/22 17:31	1
Diesel Range Organics (Over C10-C28)	1340		49.9	mg/Kg		10/24/22 08:52	10/24/22 17:31	1
Oll Range Organics (Over C28-C36)	824		49.9	mg/Kg		10/24/22 08:52	10/24/22 17:31	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	80		70 130			10/24/22 08:52	10/24/22 17:31	1

Method: MCAWW 300.0 - Anior	is, Ion Chro	omatograp	hy - Soluble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3160		25.2	mg/Kg			10/25/22 21:23	5

70 - 130

Lab Sample ID: 890-3261-4 **Client Sample ID: PH01 Matrix: Solid**

Date Collected: 10/20/22 12:10 Date Received: 10/21/22 10:55

Sample Depth: 6'

o-Terphenyl

79

method. Offort our ID - Ve	nathe Organie	Compoun	us (55)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		10/26/22 14:13	10/29/22 07:49	1
Toluene	< 0.00199	U	0.00199	mg/Kg		10/26/22 14:13	10/29/22 07:49	1
Ethylbenzene	< 0.00199	U	0.00199	mg/Kg		10/26/22 14:13	10/29/22 07:49	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		10/26/22 14:13	10/29/22 07:49	1
o-Xylene	< 0.00199	U	0.00199	mg/Kg		10/26/22 14:13	10/29/22 07:49	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		10/26/22 14:13	10/29/22 07:49	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	119		70 - 130			10/26/22 14:13	10/29/22 07:49	1
1,4-Difluorobenzene (Surr)	101		70 - 130			10/26/22 14:13	10/29/22 07:49	1

Method: TAL SOP Total BTEX	- Total BTEX Calculation
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Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			10/30/22 21:36	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)
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Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0 U	50.0	mg/Kg			10/25/22 11:30	1

Method: SW846 8015B NM - Diesel Range	Organics (DRO) (GC)
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Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		11/01/22 15:08	11/02/22 05:47	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		11/01/22 15:08	11/02/22 05:47	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/01/22 15:08	11/02/22 05:47	1

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Client Sample Results

Client: Ensolum Job ID: 890-3261-1 Project/Site: JRU 108H SDG: 03E1558090

Client Sample ID: PH01 Lab Sample ID: 890-3261-4

Date Collected: 10/20/22 12:10 **Matrix: Solid** Date Received: 10/21/22 10:55

Sample Depth: 6'

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	85		70 - 130	11/01/22 15:08	11/02/22 05:47	1
o-Terphenyl	90		70 - 130	11/01/22 15:08	11/02/22 05:47	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble Analyte Result Qualifier Unit Prepared Analyzed Dil Fac Chloride 26700 250 10/25/22 21:48 mg/Kg

Client Sample ID: PH01 Lab Sample ID: 890-3261-5 Date Collected: 10/20/22 12:20 **Matrix: Solid**

Date Received: 10/21/22 10:55

Sample Depth: 7'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		10/26/22 14:13	10/29/22 08:10	1
Toluene	<0.00199	U	0.00199	mg/Kg		10/26/22 14:13	10/29/22 08:10	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		10/26/22 14:13	10/29/22 08:10	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		10/26/22 14:13	10/29/22 08:10	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		10/26/22 14:13	10/29/22 08:10	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		10/26/22 14:13	10/29/22 08:10	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	129		70 - 130			10/26/22 14:13	10/29/22 08:10	1
1,4-Difluorobenzene (Surr)	98		70 - 130			10/26/22 14:13	10/29/22 08:10	1

MELIIOU. TAL SUP TOLAI BIEX	- IUIAI DIEX CAICUIALI	IOII					
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398 U	0.00398	mg/Kg			10/30/22 21:36	1

Method: SW846 8015 NM - Diesel	Range	Organics (D	(RO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			10/25/22 11:30	1

Method: SW846 8015B NM - D	Diesel Range	Organics	(DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		11/01/22 15:08	11/02/22 06:08	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		11/01/22 15:08	11/02/22 06:08	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/01/22 15:08	11/02/22 06:08	1
Surrogate 1-Chlorooctane	%Recovery 83	Qualifier				Prepared 11/01/22 15:08	Analyzed 11/02/22 06:08	Dil Fac

Method: MCAWW 300.0 - Anio	ns, Ion Chromatograp	hy - Soluble					
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4100	50.3	mg/Kg			10/25/22 21:56	10

70 - 130

87

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11/01/22 15:08 11/02/22 06:08

o-Terphenyl

Surrogate Summary

 Client: Ensolum
 Job ID: 890-3261-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

			Percen	t Surrogate Recovery (Acce
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-20605-A-1-E MS	Matrix Spike	101	92	
880-20605-A-1-F MSD	Matrix Spike Duplicate	102	90	
890-3261-1	PH01	245 S1+	105	
890-3261-2	PH01	426 S1+	89	
890-3261-3	PH01	332 S1+	87	
890-3261-4	PH01	119	101	
890-3261-5	PH01	129	98	
LCS 880-37911/1-A	Lab Control Sample	99	91	
LCSD 880-37911/2-A	Lab Control Sample Dup	101	91	
MB 880-37911/5-A	Method Blank	102	87	
MB 880-38021/5-A	Method Blank	72	60 S1-	

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid Prep Type: Total/NA

			Percen	t Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-3253-A-1-H MS	Matrix Spike	95	92	
890-3253-A-1-I MSD	Matrix Spike Duplicate	88	84	
890-3261-1	PH01	93	86	
890-3261-2	PH01	94	77	
890-3261-3	PH01	89	79	
890-3261-4	PH01	85	90	
890-3261-5	PH01	83	87	
890-3335-A-1-C MS	Matrix Spike	88	86	
890-3335-A-1-D MSD	Matrix Spike Duplicate	79	76	
LCS 880-37617/2-A	Lab Control Sample	105	110	
LCS 880-38417/2-A	Lab Control Sample	101	106	
LCSD 880-37617/3-A	Lab Control Sample Dup	108	114	
LCSD 880-38417/3-A	Lab Control Sample Dup	90	95	
MB 880-37617/1-A	Method Blank	80	94	
MB 880-38417/1-A	Method Blank	92	99	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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Client: Ensolum Job ID: 890-3261-1 Project/Site: JRU 108H SDG: 03E1558090

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-37911/5-A

Matrix: Solid

Analysis Batch: 38089

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 37911

	MB	MB					•	
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
	MD	MD						

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102	70 - 130	10/26/22 14:13	10/29/22 01:12	1
1,4-Difluorobenzene (Surr)	87	70 - 130	10/26/22 14:13	10/29/22 01:12	1

Lab Sample ID: LCS 880-37911/1-A

Matrix: Solid

Analysis Batch: 38089

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 37911

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.07484		mg/Kg		75	70 - 130	
Toluene	0.100	0.07671		mg/Kg		77	70 - 130	
Ethylbenzene	0.100	0.07425		mg/Kg		74	70 - 130	
m-Xylene & p-Xylene	0.200	0.1480		mg/Kg		74	70 - 130	
o-Xylene	0.100	0.08609		mg/Kg		86	70 - 130	

LCS LCS

Surrogate	%Recovery Q	ualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	91		70 - 130

Lab Sample ID: LCSD 880-37911/2-A

Matrix: Solid

Analysis Batch: 38089

Client	Sample	ID: L	_ab	Conti	ol ·	Samp	le	Dup)
				_	_	_			

Prep Type: Total/NA

Prep Batch: 37911

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.07938		mg/Kg		79	70 - 130	6	35	
Toluene	0.100	0.08189		mg/Kg		82	70 - 130	7	35	
Ethylbenzene	0.100	0.08032		mg/Kg		80	70 - 130	8	35	
m-Xylene & p-Xylene	0.200	0.1556		mg/Kg		78	70 - 130	5	35	
o-Xylene	0.100	0.08950		mg/Kg		89	70 - 130	4	35	

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	91		70 - 130

Lab Sample ID: 880-20605-A-1-E MS

Matrix: Solid

Analysis Batch: 38089

Client Sample ID: Matrix Sp	ike
Prep Type: Total/	NA

Prep Batch: 37911

Allalysis Datell. 30003									ı iebi	Jaicii.	,, ,
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Benzene	<0.00201	U F1	0.100	0.08080		mg/Kg		80	70 - 130		
Toluene	< 0.00201	U F1	0.100	0.07923		mg/Kg		78	70 - 130		

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Prep Batch: 37911

QC Sample Results

Client: Ensolum Job ID: 890-3261-1 SDG: 03E1558090 Project/Site: JRU 108H

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

Client Sample ID: Matrix Spike Lab Sample ID: 880-20605-A-1-E MS Prep Type: Total/NA

Matrix: Solid

Analysis Batch: 38089

•	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylbenzene	<0.00201	U F1	0.100	0.07637		mg/Kg		76	70 - 130	
m-Xylene & p-Xylene	<0.00402	U F1	0.200	0.1440		mg/Kg		72	70 - 130	
o-Xvlene	< 0.00201	U	0.100	0.08398		ma/Ka		84	70 - 130	

MS MS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	101	70 - 130
1,4-Difluorobenzene (Surr)	92	70 - 130

Lab Sample ID: 880-20605-A-1-F MSD **Client Sample ID: Matrix Spike Duplicate**

Matrix: Solid

Prep Type: Total/NA Prep Batch: 37911 **Analysis Batch: 38089** Sample Sample Spike MSD MSD %Rec **RPD**

Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits RPD Limit 0.0990 Benzene <0.00201 U F1 0.06610 F1 mg/Kg 66 70 - 130 20 35 Toluene 0.0990 0.06481 F1 65 70 - 130 20 35 <0.00201 UF1 mg/Kg Ethylbenzene <0.00201 UF1 0.0990 0.06337 F1 mg/Kg 64 70 - 130 19 35 m-Xylene & p-Xylene <0.00402 UF1 0.198 0.1224 F1 mg/Kg 62 70 - 130 16 35 <0.00201 U 0.0990 0.07052 71 o-Xylene mg/Kg 70 - 13017

MSD MSD Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 70 - 130 102 70 - 130 1,4-Difluorobenzene (Surr) 90

Lab Sample ID: MB 880-38021/5-A Client Sample ID: Method Blank **Prep Type: Total/NA**

Matrix: Solid

Xylenes, Total

Analysis Batch: 38089

Prep Batch: 38021 MB MB Result Qualifier Unit Analyte RL **Prepared** Analyzed Dil Fac Benzene <0.00200 U 0.00200 mg/Kg 10/27/22 13:34 10/28/22 13:48 1 Toluene <0.00200 U 0.00200 mg/Kg 10/27/22 13:34 10/28/22 13:48 Ethylbenzene <0.00200 U 0.00200 mg/Kg 10/27/22 13:34 10/28/22 13:48 m-Xylene & p-Xylene <0.00400 U 0.00400 mg/Kg 10/27/22 13:34 10/28/22 13:48 10/27/22 13:34 10/28/22 13:48 o-Xylene <0.00200 U 0.00200 mg/Kg

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	72		70 - 130	10/27/22 13:34 10/28/22 13:48	1
1,4-Difluorobenzene (Surr)	60	S1-	70 - 130	10/27/22 13:34 10/28/22 13:48	1

0.00400

mg/Kg

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

<0.00400 U

Lab Sample ID: MB 880-37617/1-A Client Sample ID: Method Blank **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 37611

Prep Batch: 37617 MB MB

Result Qualifier Analyte RL Unit Prepared Analyzed Dil Fac Gasoline Range Organics <50.0 U 50.0 mg/Kg 10/24/22 08:52 10/24/22 10:35

(GRO)-C6-C10

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10/27/22 13:34 10/28/22 13:48

Client: Ensolum Job ID: 890-3261-1 Project/Site: JRU 108H SDG: 03E1558090

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

Lab Sample ID: MB 880-37617/1-A Client Sample ID: Method Blank **Matrix: Solid**

Prep Type: Total/NA **Analysis Batch: 37611** Prep Batch: 37617

	IVID	IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		10/24/22 08:52	10/24/22 10:35	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		10/24/22 08:52	10/24/22 10:35	1

	MB	МВ				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	80		70 - 130	10/24/22 08:52	10/24/22 10:35	1
o-Terphenyl	94		70 - 130	10/24/22 08:52	10/24/22 10:35	1

Lab Sample ID: LCS 880-37617/2-A **Client Sample ID: Lab Control Sample** Matrix: Solid Prep Type: Total/NA **Analysis Batch: 37611** Prep Batch: 37617

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	1169		mg/Kg		117	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	1015		mg/Kg		102	70 - 130	
C10-C28)								

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	105		70 - 130
o-Terphenyl	110		70 - 130

Lab Sample ID: LCSD 880-37617/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Total/NA**

Analysis Batch: 37611							Prep E	Batch: 37617		
	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics (GRO)-C6-C10	1000	1158		mg/Kg		116	70 - 130	1	20	
Diesel Range Organics (Over C10-C28)	1000	1018		mg/Kg		102	70 - 130	0	20	

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	108		70 - 130
o-Terphenyl	114		70 - 130

Lab Sample ID: 890-3253-A-1-H MS Client Sample ID: Matrix Spike **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 37611

-	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	<49.8	U F1 F2	998	1543	F1	mg/Kg		151	70 - 130	
Diesel Range Organics (Over C10-C28)	<49.8	U	998	812.7		mg/Kg		81	70 - 130	

	IVIS	IVIS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	95		70 - 130
o-Terphenyl	92		70 - 130

Released to Imaging: 4/28/2023 8:49:46 AM

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Prep Batch: 37617

Client: Ensolum Job ID: 890-3261-1 Project/Site: JRU 108H SDG: 03E1558090

Spike

Added

998

998

MSD MSD

1075 F2

782.1

Result Qualifier

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

Lab Sample ID: 890-3253-A-1-I MSD

Matrix: Solid

Analysis Batch: 37611

Gasoline Range Organics

Client Sample ID: Matrix Spike Duplicate

78

Prep Type: Total/NA

Prep Batch: 37617

RPD %Rec D %Rec Limits **RPD** Limit 104 70 - 130 36 20

70 - 130

Client Sample ID: Method Blank

Diesel Range Organics (Over C10-C28)

(GRO)-C6-C10

Analyte

MSD MSD

<49.8 U

Sample Sample

Result Qualifier

<49.8 U F1 F2

Surrogate	%Recovery Qualifier	Limits
1-Chlorooctane	88	70 - 130
o-Terphenyl	84	70 - 130

Lab Sample ID: MB 880-38417/1-A

Matrix: Solid

Analysis Batch: 38323

Prep Type: Total/NA

Unit

mg/Kg

mg/Kg

Prep Batch: 38417

MB MB

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		11/01/22 15:08	11/01/22 21:10	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		11/01/22 15:08	11/01/22 21:10	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/01/22 15:08	11/01/22 21:10	1

MB MB

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	92	70 - 130	11/01/22 15:08	11/01/22 21:10	1
o-Terphenyl	99	70 - 130	11/01/22 15:08	11/01/22 21:10	1

Lab Sample ID: LCS 880-38417/2-A

Matrix: Solid

Analysis Batch: 38323

Client Sample ID: Lab Control Sample Prep Type: Total/NA Prep Batch: 38417

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	1076		mg/Kg		108	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	1008		mg/Kg		101	70 - 130	
C10 C28)								

C10-C28)

LCS LCS

Surrogate	%Recovery Qualifier	Limits
1-Chlorooctane	101	70 - 130
o-Terphenyl	106	70 - 130

Lab Sample ID: LCSD 880-38417/3-A

Matrix: Solid

Analysis Batch: 38323

Client Sample	ID: La	b Control	Sample Dup
		Drop T	mor Total/NIA

Prep Type: Total/NA Prep Batch: 38417

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	1087		mg/Kg		109	70 - 130	1	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	910.4		mg/Kg		91	70 - 130	10	20
C10-C28)									

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Client: Ensolum Job ID: 890-3261-1 SDG: 03E1558090 Project/Site: JRU 108H

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

Lab Sample ID: LCSD 880-38417/3-A

Matrix: Solid

Analysis Batch: 38323

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 38417

LCSD LCSD

%Recovery Qualifier Limits Surrogate 1-Chlorooctane 90 70 - 130 o-Terphenyl 95 70 - 130

Client Sample ID: Matrix Spike Lab Sample ID: 890-3335-A-1-C MS

Matrix: Solid Prep Type: Total/NA Analysis Batch: 38323 Prep Batch: 38417

MS MS %Rec Sample Sample Spike Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Gasoline Range Organics <50.0 U 997 812.4 mg/Kg 79 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over 77.7 F1 997 799.4 mg/Kg 72 70 - 130 C10-C28)

MS MS %Recovery Surrogate Qualifier Limits 1-Chlorooctane 88 70 - 130 70 - 130 o-Terphenyl 86

Lab Sample ID: 890-3335-A-1-D MSD

Matrix: Solid

Analysis Batch: 38323

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

Prep Batch: 38417

Sample Sample Spike MSD MSD %Rec **RPD** Result Qualifier Added Result Qualifier Limits **RPD Analyte** Unit D %Rec I imit 70 - 130 Gasoline Range Organics <50.0 U 999 984.3 mg/Kg 96 19 20 (GRO)-C6-C10 999 70 - 130 Diesel Range Organics (Over 77.7 F1 702.0 F1 mg/Kg 62 13 20

C10-C28)

MSD MSD Surrogate %Recovery Qualifier Limits 1-Chlorooctane 70 - 130 79 70 - 130 o-Terphenyl 76

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-37579/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 37788

MB MB

Result Qualifier RL Unit Dil Fac Analyte Prepared Analyzed Chloride <5.00 U 5.00 mg/Kg 10/25/22 19:00

Lab Sample ID: LCS 880-37579/2-A

Matrix: Solid

Analysis Batch: 37788

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit %Rec Limits Chloride 250 242.4 97 mg/Kg

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Prep Type: Soluble

Client Sample ID: Lab Control Sample

Lab Sample ID: LCSD 880-37579/3-A

QC Sample Results

Client: Ensolum Job ID: 890-3261-1 Project/Site: JRU 108H SDG: 03E1558090

Method: 300.0 - Anions, Ion Chromatography (Continued)

3160

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

mg/Kg

Matrix: Solid

Analysis Batch: 37788

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	250	243.5		mg/Kg	_	97	90 - 110	0	20	

Lab Sample ID: 890-3261-3 MS **Client Sample ID: PH01 Matrix: Solid Prep Type: Soluble**

Analysis Batch: 37788

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

1260

Lab Sample ID: 890-3261-3 MSD **Client Sample ID: PH01 Prep Type: Soluble Matrix: Solid**

4301

Chloride

Analysis Batch: 37788

Sample Sample Spike MSD MSD %Rec RPD Result Qualifier Analyte Added Result Qualifier Limits RPD Limit Unit %Rec Chloride 3160 1260 4415 100 90 - 110 20 mg/Kg

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90 - 110

QC Association Summary

 Client: Ensolum
 Job ID: 890-3261-1

 Project/Site: JRU 108H
 SDG: 03E1558090

GC VOA

Prep Batch: 37911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3261-1	PH01	Total/NA	Solid	5035	
890-3261-2	PH01	Total/NA	Solid	5035	
890-3261-3	PH01	Total/NA	Solid	5035	
890-3261-4	PH01	Total/NA	Solid	5035	
890-3261-5	PH01	Total/NA	Solid	5035	
MB 880-37911/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-37911/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-37911/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-20605-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
880-20605-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 38021

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-38021/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 38089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3261-1	PH01	Total/NA	Solid	8021B	37911
890-3261-2	PH01	Total/NA	Solid	8021B	37911
890-3261-3	PH01	Total/NA	Solid	8021B	37911
890-3261-4	PH01	Total/NA	Solid	8021B	37911
890-3261-5	PH01	Total/NA	Solid	8021B	37911
MB 880-37911/5-A	Method Blank	Total/NA	Solid	8021B	37911
MB 880-38021/5-A	Method Blank	Total/NA	Solid	8021B	38021
LCS 880-37911/1-A	Lab Control Sample	Total/NA	Solid	8021B	37911
LCSD 880-37911/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	37911
880-20605-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	37911
880-20605-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	37911

Analysis Batch: 38195

Lab Sample ID 890-3261-1	Client Sample ID PH01	Prep Type Total/NA	Matrix Solid	Method Total BTEX	Prep Batch
890-3261-2	PH01	Total/NA	Solid	Total BTEX	
890-3261-3	PH01	Total/NA	Solid	Total BTEX	
890-3261-4	PH01	Total/NA	Solid	Total BTEX	
890-3261-5	PH01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 37611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3261-1	PH01	Total/NA	Solid	8015B NM	37617
890-3261-2	PH01	Total/NA	Solid	8015B NM	37617
890-3261-3	PH01	Total/NA	Solid	8015B NM	37617
MB 880-37617/1-A	Method Blank	Total/NA	Solid	8015B NM	37617
LCS 880-37617/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	37617
LCSD 880-37617/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	37617
890-3253-A-1-H MS	Matrix Spike	Total/NA	Solid	8015B NM	37617
890-3253-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	37617

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QC Association Summary

Client: Ensolum Job ID: 890-3261-1 Project/Site: JRU 108H SDG: 03E1558090

GC Semi VOA

Prep Batch: 37617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3261-1	PH01	Total/NA	Solid	8015NM Prep	
890-3261-2	PH01	Total/NA	Solid	8015NM Prep	
890-3261-3	PH01	Total/NA	Solid	8015NM Prep	
MB 880-37617/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-37617/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-37617/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3253-A-1-H MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3253-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 37809

Lab Sample ID 890-3261-1	Client Sample ID PH01	Prep Type Total/NA	Matrix Solid	Method 8015 NM	Prep Batch
890-3261-2	PH01	Total/NA	Solid	8015 NM	
890-3261-3	PH01	Total/NA	Solid	8015 NM	
890-3261-4	PH01	Total/NA	Solid	8015 NM	
890-3261-5	PH01	Total/NA	Solid	8015 NM	

Analysis Batch: 38323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3261-4	PH01	Total/NA	Solid	8015B NM	38417
890-3261-5	PH01	Total/NA	Solid	8015B NM	38417
MB 880-38417/1-A	Method Blank	Total/NA	Solid	8015B NM	38417
LCS 880-38417/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	38417
LCSD 880-38417/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	38417
890-3335-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	38417
890-3335-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	38417

Prep Batch: 38417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3261-4	PH01	Total/NA	Solid	8015NM Prep	
890-3261-5	PH01	Total/NA	Solid	8015NM Prep	
MB 880-38417/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-38417/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-38417/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3335-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3335-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 37579

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3261-1	PH01	Soluble	Solid	DI Leach	
890-3261-2	PH01	Soluble	Solid	DI Leach	
890-3261-3	PH01	Soluble	Solid	DI Leach	
890-3261-4	PH01	Soluble	Solid	DI Leach	
890-3261-5	PH01	Soluble	Solid	DI Leach	
MB 880-37579/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-37579/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-37579/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3261-3 MS	PH01	Soluble	Solid	DI Leach	
890-3261-3 MSD	PH01	Soluble	Solid	DI Leach	

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QC Association Summary

 Client: Ensolum
 Job ID: 890-3261-1

 Project/Site: JRU 108H
 SDG: 03E1558090

HPLC/IC

Analysis Batch: 37788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3261-1	PH01	Soluble	Solid	300.0	37579
890-3261-2	PH01	Soluble	Solid	300.0	37579
890-3261-3	PH01	Soluble	Solid	300.0	37579
890-3261-4	PH01	Soluble	Solid	300.0	37579
890-3261-5	PH01	Soluble	Solid	300.0	37579
MB 880-37579/1-A	Method Blank	Soluble	Solid	300.0	37579
LCS 880-37579/2-A	Lab Control Sample	Soluble	Solid	300.0	37579
LCSD 880-37579/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	37579
890-3261-3 MS	PH01	Soluble	Solid	300.0	37579
890-3261-3 MSD	PH01	Soluble	Solid	300.0	37579

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Job ID: 890-3261-1

Client: Ensolum Project/Site: JRU 108H SDG: 03E1558090

Client Sample ID: PH01 Lab Sample ID: 890-3261-1

Date Collected: 10/20/22 11:50 **Matrix: Solid** Date Received: 10/21/22 10:55

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	37911	10/26/22 14:13	MNR	EET MID
Total/NA	Analysis	8021B		25	5 mL	5 mL	38089	10/29/22 08:31	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38195	10/30/22 21:36	SM	EET MID
Total/NA	Analysis	8015 NM		1			37809	10/25/22 11:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	37617	10/24/22 08:52	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	37611	10/24/22 16:50	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	37579	10/22/22 12:59	SMC	EET MID
Soluble	Analysis	300.0		5			37788	10/25/22 21:06	CH	EET MID

Client Sample ID: PH01 Lab Sample ID: 890-3261-2 Date Collected: 10/20/22 11:55 **Matrix: Solid**

Date Received: 10/21/22 10:55

Batch Batch Dil Initial Final Batch Prepared Method Number **Prep Type** Type Run **Factor Amount** Amount or Analyzed **Analyst** Lab Total/NA 5035 37911 10/26/22 14:13 MNR EET MID Prep 5.03 g 5 mL 8021B Total/NA 5 mL 38089 10/29/22 08:51 MNR **EET MID** Analysis 25 5 mL Total/NA Total BTEX Analysis 38195 10/30/22 21:36 SM **EET MID** 1 Total/NA 8015 NM **EET MID** Analysis 1 37809 10/25/22 11:30 SM Total/NA Prep 8015NM Prep 10.01 g 10 mL 37617 10/24/22 08:52 DM **EET MID** Total/NA 8015B NM 37611 Analysis 1 1 uL 1 uL 10/24/22 17:11 SM **EET MID** Soluble 4.98 g 50 mL 37579 10/22/22 12:59 SMC Leach DI Leach **EET MID** 300.0 10/25/22 21:14 CH Soluble Analysis 20 37788 **EET MID**

Client Sample ID: PH01 Lab Sample ID: 890-3261-3

Date Collected: 10/20/22 12:00 Date Received: 10/21/22 10:55

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	37911	10/26/22 14:13	MNR	EET MID
Total/NA	Analysis	8021B		25	5 mL	5 mL	38089	10/29/22 09:12	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38195	10/30/22 21:36	SM	EET MID
Total/NA	Analysis	8015 NM		1			37809	10/25/22 11:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	37617	10/24/22 08:52	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	37611	10/24/22 17:31	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	37579	10/22/22 12:59	SMC	EET MID
Soluble	Analysis	300.0		5			37788	10/25/22 21:23	CH	EET MID

Client Sample ID: PH01 Lab Sample ID: 890-3261-4 Date Collected: 10/20/22 12:10

Date Received: 10/21/22 10:55

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	37911	10/26/22 14:13	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	38089	10/29/22 07:49	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38195	10/30/22 21:36	SM	EET MID

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Matrix: Solid

Matrix: Solid

 Client: Ensolum
 Job ID: 890-3261-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Client Sample ID: PH01 Lab Sample ID: 890-3261-4

Date Collected: 10/20/22 12:10

Date Received: 10/21/22 10:55

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			37809	10/25/22 11:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	38417	11/01/22 15:08	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	38323	11/02/22 05:47	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	37579	10/22/22 12:59	SMC	EET MID
Soluble	Analysis	300.0		50			37788	10/25/22 21:48	CH	EET MID

Client Sample ID: PH01

Date Collected: 10/20/22 12:20

Lab Sample ID: 890-3261-5

Matrix: Solid

Date Received: 10/21/22 10:55

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	37911	10/26/22 14:13	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	38089	10/29/22 08:10	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38195	10/30/22 21:36	SM	EET MID
Total/NA	Analysis	8015 NM		1			37809	10/25/22 11:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	38417	11/01/22 15:08	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	38323	11/02/22 06:08	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	37579	10/22/22 12:59	SMC	EET MID
Soluble	Analysis	300.0		10			37788	10/25/22 21:56	CH	EET MID

Laboratory References:

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

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Accreditation/Certification Summary

 Client: Ensolum
 Job ID: 890-3261-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Laboratory: Eurofins Midland

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

Authority	Pr	ogram	Identification Number	Expiration Date
Texas	NE	ELAP	T104704400-22-24	06-30-23
The following analyte the agency does not		ort, but the laboratory is r	not certified by the governing authority.	This list may include analytes for which
and agency does not	oner certification.			
Analysis Method	Prep Method	Matrix	Analyte	
0 ,		Matrix Solid	Analyte Total TPH	

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Method Summary

Client: Ensolum

Project/Site: JRU 108H

Job ID: 890-3261-1

SDG: 03E1558090

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

Protocol References:

ASTM = ASTM International

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

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

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Sample Summary

Client: Ensolum

Project/Site: JRU 108H

Job ID: 890-3261-1

SDG: 03E1558090

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3261-1	 PH01	Solid	10/20/22 11:50	10/21/22 10:55	= * ****
890-3261-2	PH01	Solid	10/20/22 11:55	10/21/22 10:55	3'
890-3261-3	PH01	Solid	10/20/22 12:00	10/21/22 10:55	4'
890-3261-4	PH01	Solid	10/20/22 12:10	10/21/22 10:55	6'
890-3261-5	PH01	Solid	10/20/22 12:20	10/21/22 10:55	7'

ircle Method(s) and Metal(s) to be analyzed

Total 200.7 / 6010

200.8 / 6020:

8RCRA

13PPM Texas 11 Al Sb As Ba

Ве Ве

w င္ထ ဂ္ဂ

> Fe Pb Μg

Mn Mo Ni K

Se Αg

SiO₂ Na

Sr TI Sn U V Zn

NAPP221793169 Incident Number:

Hg: 1631 / 245.1 / 7470 / 7471

TCLP / SPLP 6010: 8RCRA

Sb As Ba

Cr Co Ca Q

Cu Pb င္ပ ဥ

Mn Mo Ni Se Ag TI U

eurofins

SAMPLE RECEIPT

Samples Received Intact:

ample Custody Seals: cooler Custody Seals:

Yes

N_O

NA

Yes No (M/A

Correction Factor: Temperature Reading: Corrected Temperature:

(A) Temp Blank:

ö

Thermometer ID:

res No

Wet Ice:

Ce Ce

Parameters

Š No

CHLORIDES (EPA: 300.0)

890-3261 Chain of Custody

TAT starts the day received by the lab, if received by 4:30pm

NaOH: Na

Sample Identification

Matrix

Date Sampled

Time Sampled

Depth

Grab/

TPH (8015)

BTEX (8021

Comp

Cont # 0

PH01

PH01 PHO1

S

1200 1155 1150

Grab/ Grab/ Grab/

ω

Q

PHO1 PH01

10/20/2022 10/20/2022 10/20/2022 10/20/2022 10/20/2022

1220 1210

Grab/ Grab/ Sampler's Name:

oject Location:

EDDY COUNTY, NM

Ben Belill

03E1558090

✓ Routine

Rush

Code

Turn Around

JRU 108H

Project Number:

roject Name:

Phone:

9898540852 Carlsbad, NM 88220 3122 National parks Hwy

Email:

Address:

3104 E. Green Street XTO Energy, Inc.

Carlsbad, NM 88220

City, State ZIP:

Bill to: (if different)

Garrett Green

Company Name:

ddress: ompany Name: roject Manager:

> Ensolum, LLC Ben Belill

ity, State ZIP

Chain of Custody

Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 EL Paso, TX (915) 585-3443, Lubbock, TX (8) Hobbs, NM (575) 392-7550, Carlsbad, NM (5) Houston, TX (281) 240-4200. Dallas, TX (214) 902-0300

ANALYSIS REQUEST Preservative Codes None: NO DI Water: H ₂ O Cool: Cool MeOH: Me HCL: HC HNO ₃ : HN	Program: UST/PST PRP Brownfields RRC Superfund State of Project: Reporting: Level III Level III PST/UST TRRP Level IV Deliverables: EDD ADaPT Other:	7:0) 509-3334 Work Order No:
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		o			5
		4			3
		r,	o celicio	and actually that we are	(Colors)
Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)
	ctors. It assigns standard terms and conditions sees are due to circumstances beyond the control terms will be enforced unless previously negotiated.	nco, its affiliates and subcontractors. It assigns neutrated by the client if such losses are due to client of the client of the series will be entited to client of the series will be entitled to client of the se	client company to Eurofins Xe ity for any losses or expenses i sample submitted to Eurofins	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofina 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 \$6 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	Notice: Signature of this document and reling of service. Eurofins Xenco will be liable only of Eurofins Xenco. A minimum charge of \$85

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NaOH+Ascorbic Acid: SAPC Zn Acetate+NaOH: Zn Na2S2O3: NaSO3 NaHSO4: NABIS H3PO4: HP H2SO4 H2

Sample Comments

Cost Center: 1139071001

11/2/2022 (Rev. 1)

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3261-1

SDG Number: 03E1558090

Login Number: 3261 List Source: Eurofins Carlsbad

List Number: 1

Creator: Stutzman, Amanda

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

210 0j 270

Login Sample Receipt Checklist

 Client: Ensolum
 Job Number: 890-3261-1

 SDG Number: 03E1558090

List Source: Eurofins Midland
List Number: 2
List Creation: 10/24/22 07:56 AM

Creator: Rodriguez, Leticia

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	N/A	

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14

<6mm (1/4").

Environment Testing

ANALYTICAL REPORT

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

Laboratory Job ID: 890-3262-1

Laboratory Sample Delivery Group: 03E1558090

Client Project/Site: JRU 108H

For:

💸 eurofins

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill



Authorized for release by: 10/31/2022 9:40:22 AM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

Review your project

.....LINKS

results through

Have a Question?



Visit us at:

www.eurofinsus.com/Env

Released to Imaging: 4/28/2023 8:49:46 AM

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

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

Client: Ensolum
Project/Site: JRU 108H
Laboratory Job ID: 890-3262-1
SDG: 03E1558090

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Certification Summary	18
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Definitions/Glossary

 Client: Ensolum
 Job ID: 890-3262-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Qualifiers

GC VOA

 Qualifier
 Qualifier Description

 F1
 MS and/or MSD recovery exceeds control limits.

 S1 Surrogate recovery exceeds control limits, low 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.

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

U Indicates the analyte was analyzed for but not detected.

HPLC/IC

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)

Duplicate Error Ratio (normalized absolute difference

Dil Fac Dilution Factor

DL Detection Limit (DoD/DOE)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

EDL Estimated Detection Limit (Dioxin)

LOD Limit of Detection (DoD/DOE)

LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level"

MDA Minimum Detectable Activity (Radiochemistry)

MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit
ML Minimum Level (Dioxin)
MPN Most Probable Number
MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent
POS Positive / Present

PQL Practical Quantitation Limit

PRES Presumptive
QC Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

Eurofins Carlsbad

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Case Narrative

Client: Ensolum

Job ID: 890-3262-1 Project/Site: JRU 108H SDG: 03E1558090

Job ID: 890-3262-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-3262-1

Receipt

The samples were received on 10/21/2022 10:55 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.2°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: PH02 (890-3262-1), PH02 (890-3262-2), PH02 (890-3262-3) and PH02 (890-3262-4).

GC VOA

Method 8021B: The following samples were diluted due to the nature of the sample matrix: (880-20605-A-1-E MS) and (880-20605-A-1-F MSD). Because of this dilution, the surrogate spike and matrix spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-38021 and analytical batch 880-38089 was outside the upper control 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 spiking solution was inadvertently omitted during the extraction process for the laboratory control sample (LCS) associated with preparation batch 880-37769; therefore, percent recoveries are unavailable. The LCSD and MS/MSD will show acceptability for the batch, therefore data was qualified and reported.

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.

Matrix: Solid

Lab Sample ID: 890-3262-1

Client Sample Results

Client: Ensolum Job ID: 890-3262-1 Project/Site: JRU 108H SDG: 03E1558090

Client Sample ID: PH02

Date Collected: 10/20/22 13:50 Date Received: 10/21/22 10:55

Sample Depth: 2'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		10/26/22 14:13	10/29/22 04:19	1
Toluene	<0.00201	U	0.00201	mg/Kg		10/26/22 14:13	10/29/22 04:19	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		10/26/22 14:13	10/29/22 04:19	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		10/26/22 14:13	10/29/22 04:19	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		10/26/22 14:13	10/29/22 04:19	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		10/26/22 14:13	10/29/22 04:19	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	120		70 - 130			10/26/22 14:13	10/29/22 04:19	1
1,4-Difluorobenzene (Surr)	97		70 - 130			10/26/22 14:13	10/29/22 04:19	1
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			10/30/22 21:36	1
Method: SW846 8015 NM - Diese	d Pango Organ	ice (DPO) (GC)					
Analyte	•	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	63.5		49.9	mg/Kg			10/26/22 11:59	1
- Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *- *1	49.9	mg/Kg		10/25/22 08:30	10/25/22 13:41	1
Diesel Range Organics (Over C10-C28)	63.5	*- *1	49.9	mg/Kg		10/25/22 08:30	10/25/22 13:41	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		10/25/22 08:30	10/25/22 13:41	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	89		70 - 130			10/25/22 08:30	10/25/22 13:41	1
o-Terphenyl	94		70 - 130			10/25/22 08:30	10/25/22 13:41	1
- 								
Method: MCAWW 300.0 - Anions	s, Ion Chromato	ograpny - So	oluble					

Client Sample ID: PH02

Date Collected: 10/20/22 14:00 Date Received: 10/21/22 10:55

Sample Depth: 4'

Chloride

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 04:40	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 04:40	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 04:40	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		10/26/22 14:13	10/29/22 04:40	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 04:40	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		10/26/22 14:13	10/29/22 04:40	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	130		70 - 130			10/26/22 14:13	10/29/22 04:40	1

100

mg/Kg

13600

Eurofins Carlsbad

10/25/22 22:21

Lab Sample ID: 890-3262-2

Matrix: Solid

Released to Imaging: 4/28/2023 8:49:46 AM

Matrix: Solid

Lab Sample ID: 890-3262-2

Job ID: 890-3262-1

Client: Ensolum Project/Site: JRU 108H SDG: 03E1558090

Client Sample ID: PH02

Date Collected: 10/20/22 14:00 Date Received: 10/21/22 10:55

Sample Depth: 4'

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

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	102	70 - 130	10/26/22 14:13	10/29/22 04:40	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			10/30/22 21:36	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			10/26/22 11:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *- *1	49.9	mg/Kg		10/25/22 08:30	10/25/22 14:02	1
Diesel Range Organics (Over C10-C28)	<49.9	U *- *1	49.9	mg/Kg		10/25/22 08:30	10/25/22 14:02	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		10/25/22 08:30	10/25/22 14:02	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	88	70 - 130	10/25/22 08:30	10/25/22 14:02	1
o-Terphenyl	93	70 - 130	10/25/22 08:30	10/25/22 14:02	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	22100	249	mg/Kg		_	10/25/22 22:30	50

Client Sample ID: PH02 Lab Sample ID: 890-3262-3 **Matrix: Solid**

Date Collected: 10/20/22 14:05 Date Received: 10/21/22 10:55

Sample Depth: 5'

ı	Method: SW846 8021B	Valatila Ossasia	O = (OO)

Mothod. Offoro COLID Toldino	anda. Otto-to obz. 15 Totalio Organio Compoundo (OO)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac		
Benzene	<0.00199	U	0.00199	mg/Kg		10/26/22 14:13	10/29/22 06:05	1		
Toluene	<0.00199	U	0.00199	mg/Kg		10/26/22 14:13	10/29/22 06:05	1		
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		10/26/22 14:13	10/29/22 06:05	1		
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		10/26/22 14:13	10/29/22 06:05	1		
o-Xylene	<0.00199	U	0.00199	mg/Kg		10/26/22 14:13	10/29/22 06:05	1		
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		10/26/22 14:13	10/29/22 06:05	1		
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac		
4-Bromofluorobenzene (Surr)	115		70 - 130			10/26/22 14:13	10/29/22 06:05	1		
1,4-Difluorobenzene (Surr)	96		70 - 130			10/26/22 14:13	10/29/22 06:05	1		

Mothod: TAI	SOP Total RTFY	- Total RTFY	Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00398	U	0.00398	mg/Kg			10/30/22 21:36	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			10/26/22 11:59	1

Matrix: Solid

Lab Sample ID: 890-3262-3

Job ID: 890-3262-1

Client: Ensolum Project/Site: JRU 108H SDG: 03E1558090

Client Sample ID: PH02

Date Collected: 10/20/22 14:05 Date Received: 10/21/22 10:55

Sample Depth: 5'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9	U *- *1	49.9	mg/Kg		10/25/22 08:30	10/25/22 14:23	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<49.9	U *- *1	49.9	mg/Kg		10/25/22 08:30	10/25/22 14:23	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		10/25/22 08:30	10/25/22 14:23	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	91		70 - 130			10/25/22 08:30	10/25/22 14:23	1
o-Terphenyl	98		70 - 130			10/25/22 08:30	10/25/22 14:23	1
Method: MCAWW 300.0 - Anions	, Ion Chromato	graphy - S	oluble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Client Sample ID: PH02 Lab Sample ID: 890-3262-4 Date Collected: 10/20/22 14:15 Matrix: Solid

Date Received: 10/21/22 10:55

Sample Depth: 7'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		10/26/22 14:13	10/29/22 06:26	1
Toluene	<0.00198	U	0.00198	mg/Kg		10/26/22 14:13	10/29/22 06:26	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		10/26/22 14:13	10/29/22 06:26	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		10/26/22 14:13	10/29/22 06:26	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		10/26/22 14:13	10/29/22 06:26	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		10/26/22 14:13	10/29/22 06:26	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	123		70 - 130			10/26/22 14:13	10/29/22 06:26	1
1,4-Difluorobenzene (Surr)	92		70 - 130			10/26/22 14:13	10/29/22 06:26	1
Method: TAL SOP Total BTEX - T	otal BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
T DTEV	<0.00396						10/00/00 01 00	
Total BTEX	<0.00396	U	0.00396	mg/Kg			10/30/22 21:36	1
Total BTEX	<0.00396	U	0.00396	mg/Kg			10/30/22 21:36	1
iotal BTEX : 	el Range Organ	ics (DRO) (10/30/22 21:36	
	el Range Organ			mg/Kg	D	Prepared	10/30/22 21:36 Analyzed	·
: Method: SW846 8015 NM - Diese	el Range Organ	ics (DRO) (GC)		<u>D</u>	Prepared		Dil Fac
Method: SW846 8015 NM - Diese Analyte	Range Organ Result <50.0	ics (DRO) (Qualifier	RL 50.0	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH	el Range Organ Result <50.0 sel Range Organ	ics (DRO) (Qualifier	RL 50.0	Unit	<u>D</u>	Prepared Prepared	Analyzed	Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics	Range Organ Result <50.0 sel Range Organ Result	Qualifier U	RL 50.0	Unit mg/Kg		<u> </u>	Analyzed 10/26/22 11:59	Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10	Result sel Range Organ Result <50.0 sel Range Organ Result <50.0	Qualifier Unics (DRO) Qualifier	GC) RL 50.0 (GC) RL	Unit mg/Kg		Prepared	Analyzed 10/26/22 11:59 Analyzed	Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics	Result sel Range Organ Result <50.0 sel Range Organ Result <50.0	Qualifier U nics (DRO) Qualifier U v-*1	GC) RL 50.0 (GC) RL 50.0	Unit mg/Kg Unit mg/Kg		Prepared 10/25/22 08:30	Analyzed 10/26/22 11:59 Analyzed 10/25/22 14:44	Dil Fac Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result sel Range Organ Result <50.0 sel Range Organ Result <50.0	cics (DRO) (One of the control of th	GC) RL 50.0 (GC) RL 50.0	Unit mg/Kg Unit mg/Kg		Prepared 10/25/22 08:30	Analyzed 10/26/22 11:59 Analyzed 10/25/22 14:44	Dil Fac Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result sel Range Organ Result <50.0 sel Range Organ Result <50.0 <50.0	cos (DRO) (Control of the control of	GC) RL 50.0 (GC) RL 50.0 50.0	Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 10/25/22 08:30 10/25/22 08:30	Analyzed 10/26/22 11:59 Analyzed 10/25/22 14:44 10/25/22 14:44	Dil Fac Dil Fac 1 1 1
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	sel Range Organ Result <50.0 sel Range Orga Result <50.0 <50.0 <50.0	cos (DRO) (Control of the control of	GC) RL 50.0 (GC) RL 50.0 50.0 50.0	Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 10/25/22 08:30 10/25/22 08:30 10/25/22 08:30	Analyzed 10/26/22 11:59 Analyzed 10/25/22 14:44 10/25/22 14:44	Dil Fac Dil Fac 1

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10/31/2022

Client Sample Results

 Client: Ensolum
 Job ID: 890-3262-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Client Sample ID: PH02 Lab Sample ID: 890-3262-4

Date Collected: 10/20/22 14:15

Matrix: Solid

Date Received: 10/21/22 10:55 Sample Depth: 7'

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5550	50.2	mg/Kg			10/25/22 22:46	10

4

5

8

10

12

13

12

Surrogate Summary

 Client: Ensolum
 Job ID: 890-3262-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-20605-A-1-E MS	Matrix Spike	101	92
880-20605-A-1-F MSD	Matrix Spike Duplicate	102	90
890-3262-1	PH02	120	97
890-3262-2	PH02	130	102
890-3262-3	PH02	115	96
890-3262-4	PH02	123	92
LCS 880-37911/1-A	Lab Control Sample	99	91
LCSD 880-37911/2-A	Lab Control Sample Dup	101	91
MB 880-37911/5-A	Method Blank	102	87
MB 880-38021/5-A	Method Blank	72	60 S1-

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)
		1001	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-3262-1	PH02	89	94	
890-3262-2	PH02	88	93	
890-3262-3	PH02	91	98	
890-3262-4	PH02	87	91	
890-3263-A-1-C MS	Matrix Spike	89	80	
890-3263-A-1-D MSD	Matrix Spike Duplicate	86	78	
LCS 880-37769/2-A	Lab Control Sample	117	125	
LCSD 880-37769/3-A	Lab Control Sample Dup	98	103	
MB 880-37769/1-A	Method Blank	100	107	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-3262-1 Project/Site: JRU 108H SDG: 03E1558090

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-37911/5-A

Analysis Batch: 38089

Matrix: Solid

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

Prep Batch: 37911

	IVID	IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		10/26/22 14:13	10/29/22 01:12	1

MB MB

MD MD

Surrogate	%Recovery	Qualifier	Limits	Prepare	d Analyzed	d Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130	10/26/22 1	4:13 10/29/22 01	1:12 1
1,4-Difluorobenzene (Surr)	87		70 - 130	10/26/22 14	4:13 10/29/22 01	1:12 1

Lab Sample ID: LCS 880-37911/1-A

Matrix: Solid

Analysis Batch: 38089

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 37911

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.07484		mg/Kg		75	70 - 130	
Toluene	0.100	0.07671		mg/Kg		77	70 - 130	
Ethylbenzene	0.100	0.07425		mg/Kg		74	70 - 130	
m-Xylene & p-Xylene	0.200	0.1480		mg/Kg		74	70 - 130	
o-Xylene	0.100	0.08609		mg/Kg		86	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	99	70 - 130
1,4-Difluorobenzene (Surr)	91	70 - 130

Lab Sample ID: LCSD 880-37911/2-A

Matrix: Solid

Analysis Batch: 38089

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 37911

LCSD LCSD RPD Spike %Rec Analyte Added Result Qualifier Unit %Rec Limits Limit Benzene 0.100 0.07938 mg/Kg 79 70 - 130 6 35 Toluene 0.100 0.08189 mg/Kg 82 70 - 130 35 Ethylbenzene 0.100 0.08032 mg/Kg 80 70 - 130 8 35 0.200 m-Xylene & p-Xylene 0.1556 mg/Kg 78 70 - 130 35 0.100 0.08950 o-Xylene mg/Kg 70 - 130 35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1.4-Difluorobenzene (Surr)	91		70 ₋ 130

Lab Sample ID: 880-20605-A-1-E MS

Matrix: Solid

Analysis Batch: 38089

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

Prep Batch: 37911

		Sample	Sample	Spike	MS	MS				%Rec	
	Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
	Benzene	<0.00201	U F1	0.100	0.08080		mg/Kg		80	70 - 130	
١	Toluene	<0.00201	U F1	0.100	0.07923		mg/Kg		78	70 - 130	

QC Sample Results

Job ID: 890-3262-1 Client: Ensolum Project/Site: JRU 108H SDG: 03E1558090

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

Lab Sample ID: 880-20605-A-1-E MS

Matrix: Solid

Analysis Batch: 38089

Client Sample ID: Matrix Spike Prep Type: Total/NA Prep Batch: 37911

Sample Sample Spike MS MS %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Ethylbenzene <0.00201 U F1 0.100 0.07637 76 70 - 130 mg/Kg m-Xylene & p-Xylene <0.00402 U F1 0.200 0.1440 mg/Kg 72 70 - 130 0.100 0.08398 o-Xylene <0.00201 U 84 70 - 130 mg/Kg

MS MS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

Lab Sample ID: 880-20605-A-1-F MSD

Client Sample ID: Matrix Spike Duplicate **Matrix: Solid** Prep Type: Total/NA Analysis Batch: 38089 Prep Batch: 37911

Sample Sample Spike MSD MSD RPD Result Qualifier Result Qualifier RPD Limit Analyte babbA Unit %Rec Limits 0.0990 Benzene <0.00201 UF1 0.06610 F1 mg/Kg 66 70 - 130 20 35 Toluene <0.00201 UF1 0.0990 0.06481 F1 mg/Kg 65 70 - 130 20 35 Ethylbenzene <0.00201 UF1 0.0990 0.06337 F1 64 70 - 130 19 35 mg/Kg 0.198 m-Xylene & p-Xylene <0.00402 U F1 0.1224 F1 mg/Kg 62 70 - 130 16 35

0.07052

0.0990

MSD MSD

<0.00201 U

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	102	70 _ 130
1 4-Difluorobenzene (Surr)	90	70 130

Lab Sample ID: MB 880-38021/5-A

Matrix: Solid

o-Xylene

Analysis Batch: 38089

Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 38021 MB MB

mg/Kg

71

70 - 130

17

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	DII Fac
Benzene	<0.00200	U	0.00200	mg/Kg	_	10/27/22 13:34	10/28/22 13:48	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		10/27/22 13:34	10/28/22 13:48	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	72		70 - 130	10/27/22 13:34	10/28/22 13:48	1
1,4-Difluorobenzene (Surr)	60	S1-	70 - 130	10/27/22 13:34	10/28/22 13:48	1

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

Lab Sample ID: MB 880-37769/1-A

Matrix: Solid

Analysis Batch: 37764

Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 37769

мв мв Analyte Result Qualifier RL Unit Prepared <50.0 U 50.0 mg/Kg 10/25/22 08:30 10/25/22 09:08 Gasoline Range Organics

(GRO)-C6-C10

 Client: Ensolum
 Job ID: 890-3262-1

 Project/Site: JRU 108H
 SDG: 03E1558090

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

Lab Sample ID: MB 880-37769/1-A

Matrix: Solid

Analysis Batch: 37764

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 37769

	MB	МВ						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		10/25/22 08:30	10/25/22 09:08	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		10/25/22 08:30	10/25/22 09:08	1
	МВ	MB						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130			10/25/22 08:30	10/25/22 09:08	1
o-Terphenyl	107		70 - 130			10/25/22 08:30	10/25/22 09:08	1

Lab Sample ID: LCS 880-37769/2-A Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Total/NA Analysis Batch: 37764 Prep Batch: 37769 LCS LCS Spike Analyte Added Result Qualifier Unit %Rec Limits 16.63 J*-Gasoline Range Organics 1000 2 70 - 130 mg/Kg (GRO)-C6-C10 1000 16.30 J*-Diesel Range Organics (Over mg/Kg 70 - 130 C10-C28) LCS LCS %Recovery Qualifier Limits Surrogate 1-Chlorooctane 70 - 130 117 o-Terphenyl 125 70 - 130

Lab Sample ID: LCSD 880-37769/3-A

Matrix: Solid

Analysis Batch: 37764

Spike

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 37769

%Rec RPD

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics	1000	802.8	*1	mg/Kg		80	70 - 130	192	20	
(GRO)-C6-C10										
Diesel Range Organics (Over	1000	841.9	*1	mg/Kg		84	70 - 130	192	20	
C10-C28)										

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	98		70 - 130
o-Terphenyl	103		70 - 130

Lab Sample ID: 890-3263-A-1-C MS

Client Sample ID: Matrix Spike

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 37764 Prep Batch: 37769

	Sample	Sample	Spike	MS	MS				%Rec
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Gasoline Range Organics (GRO)-C6-C10	<49.8	U *1 *-	998	1230		mg/Kg		121	70 - 130
Diesel Range Organics (Over C10-C28)	<49.8	U *1 *-	998	903.5		mg/Kg		91	70 - 130

Diesel Range Organics (Over	<49.8 U	J *1 *-	998	903.5	mg/Kg	91	70 - 130
C10-C28)							
	MS N	1S					
Surrogate	%Recovery C	Qualifier	Limits				
1-Chlorooctane	89		70 - 130				
o-Terphenyl	80		70 - 130				

Client: Ensolum Job ID: 890-3262-1 Project/Site: JRU 108H SDG: 03E1558090

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

Lab Sample ID: 890-3263-A-1-D MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Prep Type: Total/NA Analysis Batch: 37764 Prep Batch: 37769

١		Sample	Sample	Spike	MSD	MSD				%Rec		RPD
	Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
	Gasoline Range Organics	<49.8	U *1 *-	998	1205		mg/Kg		119	70 - 130	2	20
	(GRO)-C6-C10 Diesel Range Organics (Over	<10 R	U *1 *-	998	871.4		mg/Kg		87	70 - 130	1	20
	C10-C28)	\45.0	0 1 -	990	071.4		mg/Kg		01	70 - 130	-	20

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	86		70 - 130
o-Terphenyl	78		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-37579/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 37788

мв мв

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			10/25/22 19:00	1

Lab Sample ID: LCS 880-37579/2-A **Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Soluble**

Analysis Batch: 37788

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	242.4		mg/Kg		97	90 - 110	

Lab Sample ID: LCSD 880-37579/3-A

Matrix: Solid

Analysis Batch: 37788

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	250	243.5		ma/Ka		97	90 _ 110		20

Lab Sample ID: 890-3261-A-3-B MS Client Sample ID: Matrix Spike

Matrix: Solid

Analysis Batch: 37788

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	3160		1260	4301		ma/Ka		91	90 110	

Lab Sample ID: 890-3261-A-3-C MSD

Matrix: Solid

Analysis Batch: 37788

Analysis Daten. 37700											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	3160		1260	4415		mg/Kg		100	90 - 110	3	20

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Client Sample ID: Lab Control Sample Dup

Client Sample ID: Matrix Spike Duplicate

Prep Type: Soluble

Prep Type: Soluble

Prep Type: Soluble

QC Association Summary

Client: Ensolum Job ID: 890-3262-1 Project/Site: JRU 108H SDG: 03E1558090

GC VOA

Prep Batch: 37911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3262-1	PH02	Total/NA	Solid	5035	
890-3262-2	PH02	Total/NA	Solid	5035	
890-3262-3	PH02	Total/NA	Solid	5035	
890-3262-4	PH02	Total/NA	Solid	5035	
MB 880-37911/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-37911/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-37911/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-20605-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
880-20605-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 38021

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-38021/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 38089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3262-1	PH02	Total/NA	Solid	8021B	37911
890-3262-2	PH02	Total/NA	Solid	8021B	37911
890-3262-3	PH02	Total/NA	Solid	8021B	37911
890-3262-4	PH02	Total/NA	Solid	8021B	37911
MB 880-37911/5-A	Method Blank	Total/NA	Solid	8021B	37911
MB 880-38021/5-A	Method Blank	Total/NA	Solid	8021B	38021
LCS 880-37911/1-A	Lab Control Sample	Total/NA	Solid	8021B	37911
LCSD 880-37911/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	37911
880-20605-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	37911
880-20605-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	37911

Analysis Batch: 38192

	Lab Sample ID 890-3262-1	Client Sample ID PH02	Prep Type Total/NA	Matrix Solid	Method Prep I Total BTEX	Batch
;	890-3262-2	PH02	Total/NA	Solid	Total BTEX	
;	890-3262-3	PH02	Total/NA	Solid	Total BTEX	
;	890-3262-4	PH02	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 37764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3262-1	PH02	Total/NA	Solid	8015B NM	37769
890-3262-2	PH02	Total/NA	Solid	8015B NM	37769
890-3262-3	PH02	Total/NA	Solid	8015B NM	37769
890-3262-4	PH02	Total/NA	Solid	8015B NM	37769
MB 880-37769/1-A	Method Blank	Total/NA	Solid	8015B NM	37769
LCS 880-37769/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	37769
LCSD 880-37769/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	37769
890-3263-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	37769
890-3263-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	37769

Prep Batch: 37769

Released to Imaging: 4/28/2023 8:49:46 AM

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3262-1	PH02	Total/NA	Solid	8015NM Prep	

QC Association Summary

 Client: Ensolum
 Job ID: 890-3262-1

 Project/Site: JRU 108H
 SDG: 03E1558090

GC Semi VOA (Continued)

Prep Batch: 37769 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3262-2	PH02	Total/NA	Solid	8015NM Prep	
890-3262-3	PH02	Total/NA	Solid	8015NM Prep	
890-3262-4	PH02	Total/NA	Solid	8015NM Prep	
MB 880-37769/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-37769/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-37769/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3263-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3263-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 37884

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method Prep Batch
890-3262-1	PH02	Total/NA	Solid	8015 NM
890-3262-2	PH02	Total/NA	Solid	8015 NM
890-3262-3	PH02	Total/NA	Solid	8015 NM
890-3262-4	PH02	Total/NA	Solid	8015 NM

HPLC/IC

Leach Batch: 37579

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3262-1	PH02	Soluble	Solid	DI Leach	
890-3262-2	PH02	Soluble	Solid	DI Leach	
890-3262-3	PH02	Soluble	Solid	DI Leach	
890-3262-4	PH02	Soluble	Solid	DI Leach	
MB 880-37579/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-37579/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-37579/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3261-A-3-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3261-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 37788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3262-1	PH02	Soluble	Solid	300.0	37579
890-3262-2	PH02	Soluble	Solid	300.0	37579
890-3262-3	PH02	Soluble	Solid	300.0	37579
890-3262-4	PH02	Soluble	Solid	300.0	37579
MB 880-37579/1-A	Method Blank	Soluble	Solid	300.0	37579
LCS 880-37579/2-A	Lab Control Sample	Soluble	Solid	300.0	37579
LCSD 880-37579/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	37579
890-3261-A-3-B MS	Matrix Spike	Soluble	Solid	300.0	37579
890-3261-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	37579

Date Received: 10/21/22 10:55

Released to Imaging: 4/28/2023 8:49:46 AM

Job ID: 890-3262-1

Client: Ensolum Project/Site: JRU 108H SDG: 03E1558090

Client Sample ID: PH02 Lab Sample ID: 890-3262-1 Date Collected: 10/20/22 13:50

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	37911	10/26/22 14:13	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	38089	10/29/22 04:19	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38192	10/30/22 21:36	SM	EET MID
Total/NA	Analysis	8015 NM		1			37884	10/26/22 11:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	37769	10/25/22 08:30	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	37764	10/25/22 13:41	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	37579	10/22/22 12:59	SMC	EET MID
Soluble	Analysis	300.0		20			37788	10/25/22 22:21	CH	EET MID

Client Sample ID: PH02 Lab Sample ID: 890-3262-2

Date Collected: 10/20/22 14:00 Matrix: Solid

Date Received: 10/21/22 10:55

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	37911	10/26/22 14:13	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	38089	10/29/22 04:40	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38192	10/30/22 21:36	SM	EET MID
Total/NA	Analysis	8015 NM		1			37884	10/26/22 11:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	37769	10/25/22 08:30	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	37764	10/25/22 14:02	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	37579	10/22/22 12:59	SMC	EET MID
Soluble	Analysis	300.0		50			37788	10/25/22 22:30	CH	EET MID

Client Sample ID: PH02 Lab Sample ID: 890-3262-3

Date Collected: 10/20/22 14:05 **Matrix: Solid** Date Received: 10/21/22 10:55

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	37911	10/26/22 14:13	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	38089	10/29/22 06:05	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38192	10/30/22 21:36	SM	EET MID
Total/NA	Analysis	8015 NM		1			37884	10/26/22 11:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	37769	10/25/22 08:30	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	37764	10/25/22 14:23	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	37579	10/22/22 12:59	SMC	EET MID
Soluble	Analysis	300.0		10			37788	10/25/22 22:38	CH	EET MID

Client Sample ID: PH02 Lab Sample ID: 890-3262-4

Date Collected: 10/20/22 14:15 **Matrix: Solid** Date Received: 10/21/22 10:55

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	37911	10/26/22 14:13	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	38089	10/29/22 06:26	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38192	10/30/22 21:36	SM	EET MID

Lab Chronicle

Client: Ensolum Job ID: 890-3262-1 Project/Site: JRU 108H SDG: 03E1558090

Client Sample ID: PH02

Lab Sample ID: 890-3262-4

Matrix: Solid

Date Collected: 10/20/22 14:15 Date Received: 10/21/22 10:55

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			37884	10/26/22 11:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	37769	10/25/22 08:30	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	37764	10/25/22 14:44	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	37579	10/22/22 12:59	SMC	EET MID
Soluble	Analysis	300.0		10			37788	10/25/22 22:46	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum Job ID: 890-3262-1 Project/Site: JRU 108H SDG: 03E1558090

Laboratory: Eurofins Midland

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

Authority Texas		Program	Identification Number	Expiration Date
		NELAP	T104704400-22-24	06-30-23
The following analytes the agency does not of	' '	out the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes for whic
Analysis Method	Prep Method	Matrix	Analyte	
8015 NM		Solid	Total TPH	
Total BTEX		Solid	Total BTEX	

Method Summary

 Client: Ensolum
 Job ID: 890-3262-1

 Project/Site: JRU 108H
 SDG: 03E1558090

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

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions. SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Eurofins Carlsbad

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Sample Summary

Client: Ensolum

Project/Site: JRU 108H

Job ID: 890-3262-1

SDG: 03E1558090

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3262-1	PH02	Solid	10/20/22 13:50	10/21/22 10:55	2'
890-3262-2	PH02	Solid	10/20/22 14:00	10/21/22 10:55	4'
890-3262-3	PH02	Solid	10/20/22 14:05	10/21/22 10:55	5'
890-3262-4	PH02	Solid	10/20/22 14:15	10/21/22 10:55	7'

Company Name: ddress:

> Ensolum, LLC Ben Belill

Company Name: Bill to: (if different)

Address:

3104 E. Green Street XTO Energy, Inc. Garrett Green

State of Project:

Program: UST/PST 🗌 PRP 🗎 Brownfields 📗 RRC 📗 Superfund 📗

Work Order Comments

3122 National parks Hwy

oject Manager:

12 13

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

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Work Order No:

Revised Date: 08/25/2020 Rev. 2020.2	70			6			_						5
				4									3 (
				200	celic	100	6	X Ri	ala	arac.	ý	O	ansam).
Date/Time	Received by: (Signature)	Rece	Relinquished by: (Signature)		Date/Time	Date		ure)	by: (Signature	Received by:		(Signature)	Relinquisped by: (Signature)
	ors. It assigns standard terms and conditions are due to circumstances beyond the control mrs will be enforced unless previously negotiated.	igns standard term to circumstances be enforced unless p	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 negotiat	ins Xenco, i enses incur rofins Xenc	to Eurof or expe ted to Eur	it company r any losse ple submit	from clien Isibility fo each sam	rchase order ne any respor nrge of \$5 for	tutes a valid pu shall not assun roject and a cha	of samples consti t of samples and applied to each p	quishment of for the cos	ocument and relin will be liable only num charge of \$8	Notice: Signature of this d of service. Eurofins Xenco of Eurofins Xenco. A mini
7470 / 7471	Hg: 1631 / 245.1 / 7470 / 7471	àe Ag TI U	Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U	Be Cd	As Ba	A Sb	8RCR	TCLP / SPLP 6010: 8RCRA Sb As Ba	TCLP / S	red	oe analyz	d Metal(s) to	Circle Method(s) and Metal(s) to be analyzed
Sn U V Zn	Se A	Pb Mg Mn Mo Ni K	Ca Cr Co Cu Fe Pb Mg	Be B Cd	s Ba E	Al Sb As Ba	- 1	PM Texas 11	BRCRA 13PPM	87	5020:	0 200.8 / 6020:	Total 200.7 / 6010
	Ш												
NAPP2217931599	2 =						\vdash						
						1							
							_						
				×	×	×	Grab/	7' G	1415	10/20/2022	S		PH02
				×	×	×	Grab/	Q.	1405	10/20/2022	S		PH02
				×	×	<u></u>	Grab/	4	1400	10/20/2022	ഗ		PH02
Cost Center: 1139071001	Cost			×	×	×	Grab/	2 ²	1350	10/20/2022	S		PH02
Sample Comments	Sa			втех	TPH (8	다LOI	Grab/ # of Comp Cont	Depth c	Time Sampled	Date Sampled	Matrix	fication	Sample Identification
NaOH+Ascorbic Acid: SAPC	NaCH+A	-	1	(802	015)	RIDE	W)	-	perature:	Corrected Temperature:			Total Containers:
Zn Acetate+NaCH: Zn	Zn Aceta	ď	890-3262 Chain of Custody	1	1	S (E		ر	Reading:	Temperature Reading:	6	: Yes No	Sample Custody Seals:
NaoC3	Na20203 Na003					-	P)	þ	tor:	Correction Factor:	7	Yes No	Cooler Custody Seals:
NABIO	Na RO : Na RO						8	Down!	ë	Thermometer ID:	N _O	act: Res	Samples Received Intact:
5	H ₃ PO ₄ : HP			4			mete	Yes No	Wet ice:	No No	Blank:	Temp Blank:	SAMPLE RECEIPT
12 NaOH: Na	П ₂ 304. П ₂						_	eived by 4:30	the lab, if received by 4:30pm				PO#.
	HCLHC						d by	day receive	TAT starts the day received by		Ben Belill	В	Sampler's Name:
<u>_</u>	Cool: Cool								Due Date:		EDDY COUNTY, NM	EDDY (Project Location:
	None: NO					<u>.</u>	Code	Rush	✓ Routine		03E1558090	038	Project Number:
ervativ	Pre	ST	ANALYSIS REQUEST					Turn Around	Turn		JRU 108H	JF	Project Name:
Crier	ADar -	Deliverables: EDD	De			com	isolum.	bbelifi@ensolum.com	Email:			9898540852	Phone: 9
Cevel V		porting: Level II	7.00	Carlsbad, NM 88220	bad, NA	Carls	ZIP:	City, State ZIP:			88220	Carlsbad, NM 88220	City, State ZIP:
].					1		Addices.		y	Dalks	3 122 National parks (W)	Address:

Login Sample Receipt Checklist

 Client: Ensolum
 Job Number: 890-3262-1

 SDG Number: 03E1558090

Login Number: 3262 List Source: Eurofins Carlsbad

List Number: 1

Creator: Stutzman, Amanda

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

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Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3262-1 SDG Number: 03E1558090

Login Number: 3262
List Source: Eurofins Midland
List Number: 2
List Creation: 10/24/22 07:56 AM

Creator: Rodriguez, Leticia

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	N/A	

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<6mm (1/4").



APPENDIX E

NMOCD Notifications

From: Hamlet, Robert, EMNRD

To: Collins, Melanie

Cc: DelawareSpills /SM; Green, Garrett J; Ben Belill; Ashley Ager; Tacoma Morrissey; Kalei Jennings; Bratcher,

Michael, EMNRD; Nobui, Jennifer, EMNRD; Harimon, Jocelyn, EMNRD

Subject: (Extension Approval) - James Ranch Unit 108H - Incident Number NAPP221793159

Date: Monday, September 19, 2022 3:21:36 PM

Attachments: <u>image003.png</u>

[**EXTERNAL EMAIL**]

RE: Incident #NAPP2217931599

Melanie,

Your request for an extension to **December 19th, 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
506 W. Texas Ave.| Artesia, NM 88210
575.909.0302 | robert.hamlet@state.nm.us
http://www.emnrd.state.nm.us/OCD/



From: Collins, Melanie <melanie.collins@exxonmobil.com>

Sent: Monday, September 19, 2022 12:04 PM

To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; mike.bratcher@state.nm.us; Hamlet,

Robert, EMNRD < Robert. Hamlet@state.nm.us>

Cc: DelawareSpills /SM <DelawareSpills@exxonmobil.com>; Green, Garrett J

<garrett.green@exxonmobil.com>; bbelill@ensolum.com; Ashley Ager <aager@ensolum.com>;

Tacoma Morrissey <tmorrissey@ensolum.com>; Kalei Jennings <kjennings@ensolum.com>

Subject: [EXTERNAL] XTO - Extension Request - James Ranch Unit 108H - Incident Number

NAPP2217931599

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

ΑII,

XTO – Extension Request – James Ranch Unit 108H – Incident Number nAPP2217931599

XTO is requesting an extension for the current deadline of September 20, 2022 for submitting a remediation work plan or closure report required in 19.15.29.12.B.(1) NMAC at the James Ranch

Unit 108H (Incident Number NAPP2217931599). The release occurred on June 22, 2022, and initial site assessment activities were completed July 26, 2022. Additional delineation activities were completed last week and are pending laboratory analytical results. In order to review the laboratory analytical results, discuss remedial options, and submit a remediation work plan or closure report, XTO requests an extension until December 19, 2022.

Thank you,

Melanie Collins

ENERGY

Environmental Technician

melanie.collins@exxonmobil.com

432-556-3756

Ben Belill

From: Tacoma Morrissey

Sent: Wednesday, December 14, 2022 1:49 PM

To: Ben Belill

Subject: FW: XTO - Sampling Notification (Week of 10/17/22 - 10/21/22)

See below!



From: Green, Garrett J <garrett.green@exxonmobil.com>

Sent: Monday, October 17, 2022 11:21 AM

To: ocd.enviro@emnrd.nm.gov; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>

Cc: Tacoma Morrissey <tmorrissey@ensolum.com>; DelawareSpills /SM <DelawareSpills@exxonmobil.com>

Subject: XTO - Sampling Notification (Week of 10/17/22 - 10/21/22)

[**EXTERNAL EMAIL**]

All,

Please see the update below to this week's sampling schedule. XTO plans to complete final sampling activities at the following sites the week of Oct 17, 2022.

Monday

BEU 29W Vader 100H / nAPP2102831345

Tuesday

- BEU 29W Vader 100H / nAPP2102831345
- PLU 21 BD 125H/ nAPP2214547737

Wednesday

- BEU 29W Vader 100H / nAPP2102831345
- PLU 30 Big Sinks/ nAPP2209137379, nAPP2208351954, nAPP2206853301

Thursday

- PLU 30 Big Sinks/ nAPP2209137379, nAPP2208351954, nAPP2206853301
- JRU 108 / nAPP2217931599
- JRU 106 / nAPP2212344322

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

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 168318

CONDITIONS

Operator:	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road	Action Number:
Midland, TX 79707	168318
Γ.	Action Type:
	[C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	The Remediation Plan is Conditionally Approved. This release is in a high karst area and will need to be remediated to the strictest closure criteria from Table 1 of the OCD Spill Rule. Please collect confirmation samples, representing no more than 200 ft2. All samples must be analyzed for all constituents listed in Table I of 19.15.29.12 NMAC. Sidewall samples should be delineated/excavated to 600 mg/kg for chlorides and 100 mg/kg for TPH to define the edge of the release. All background samples should be collected in 1-foot increments down to the depth equivalent to the deepest depth of the excavation. The five background numbers at a depth of 1 foot should be averaged. The five background numbers at a depth of 2 feet should be averaged and so on. The composite numbers will be used for the final background numbers. The work will need to occur in 90 days after the work plan has been reviewed.	4/28/2023