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Incident ID	NAPP2230832832
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: Each of the following	items must be incl	luded in the closure report.
A scaled site and sampling diagram as described in 19.15.29.	.11 NMAC	
Photographs of the remediated site prior to backfill or photo must be notified 2 days prior to liner inspection)	s of the liner integ	rity if applicable (Note: appropriate OCD District office
☐ Laboratory analyses of final sampling (Note: appropriate OD	OC District office m	nust be notified 2 days prior to final sampling)
☐ Description of remediation activities		
I hereby certify that the information given above is true and compland regulations all operators are required to report and/or file certa may endanger public health or the environment. The acceptance of should their operations have failed to adequately investigate and rehuman health or the environment. In addition, OCD acceptance of compliance with any other federal, state, or local laws and/or regulatore, reclaim, and re-vegetate the impacted surface area to the caccordance with 19.15.29.13 NMAC including notification to the	nin release notificate of a C-141 report by the emediate contaminate of a C-141 report do lations. The responditions that exist	ions and perform corrective actions for releases which we the OCD does not relieve the operator of liability ation that pose a threat to groundwater, surface water, es not relieve the operator of responsibility for asible party acknowledges they must substantially and prior to the release or their final land use in
Printed Name:Garrett Green	Title:S	SHE Coordinator
Signature: Satt Surr	1/20/2	3
email:garrett.green@exxonmonil.com	Telephone:	575-200-0729
OCD Only		
Received by: Jocelyn Harimon	Date:(01/24/2023
Closure approval by the OCD does not relieve the responsible party remediate contamination that poses a threat to groundwater, surface party of compliance with any other federal, state, or local laws and	e water, human heal	
Closure Approved by: Robert Hamlet	Date:	5/19/2023
Printed Name: Robert Hamlet	Title:	Environmental Specialist - Advanced

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	NAPP2230832832
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party XTO Energy			OGRID 5	5380		
Contact Name Garrett Green			Contact Te	elephone 575-20	00-0729	
Contact email	l garrett.gree	en@exxonmobil.c	om	Incident #	(assigned by OCD)	
Contact maili	ng address g	3104 E. Greene St	reet, Carlsbad, Ne	w Mexico, 88220		
			Location	of Release So	ource	
32.1	6469			T11-	-103.79709	
Latitude			(NAD 83 in dec	Longitude _cimal degrees to 5 decim	nal places)	
Site Name P	oker Lake U	Jnit 147		Site Type	Tank Battery	
Date Release I	Discovered	10/26/2022		API# (if app	licable)	
Unit Letter	Section	Township	Range	Coun	tv	1
B	05	25S	31E	Edd		-
Б		233	SIE	Edd	<u>y</u>	
Surface Owner	: State	🗷 Federal 🗌 Tı	ribal 🔲 Private (/	Name:)
Nature and Volume of Release						
	Materia	l(s) Released (Select al	ll that apply and attach	calculations or specific	justification for the	volumes provided below)
x Crude Oil				Volume Reco	overed (bbls) 0.00	
roduced ?	Water	ver Volume Released (bbls) 3.49			Volume Reco	vered (bbls) 0.00
Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?		` /	☐ Yes 🗶 N	lo		
Condensate Volume Released (bbls)			Volume Reco	vered (bbls)		
☐ Natural Gas Volume Released (Mcf)			Volume Reco	vered (Mcf)		
Other (describe) Volume/Weight Released (provide units)		e units)	Volume/Weight Recovered (provide units)			
Cause of Rele	DDIS. A	total of 3.49 bbls	d found a release f of water and 3.49 and for remediation	obis of oil were rele	late. Tanks were eased. No fluids	e gauged and found to be off by 6.98 s were recoverable. A third-party

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Was this a major	If YES, for what reason(s) does the response	nsible party consider this a major release?
release as defined by	N/A	
19.15.29.7(A) NMAC?		
☐ Yes 🗷 No		
If YES, was immediate n	otice given to the OCD? By whom? To wl	om? When and by what means (phone, email, etc)?
N/A	·	•
	Initial R	esponse
The responsible	party must undertake the following actions immediate	y unless they 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 environment.
Released materials ha	ave been contained via the use of berms or o	likes, absorbent pads, or other containment devices.
★ All free liquids and red	ecoverable materials have been removed an	d managed appropriately.
If all the actions describe	d above have <u>not</u> been undertaken, explain	why:
NA	_	
Per 19 15 29 8 B (4) NM	fAC the responsible party may commence r	emediation immediately after discovery of a release. If remediation
		efforts have been successfully completed or if the release occurred
within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.		
		best of my knowledge and understand that pursuant to OCD rules and
		fications and perform corrective actions for releases which may endanger OCD does not relieve the operator of liability should their operations have
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 o and/or regulations.	f a C-141 report does not relieve the operator of	responsibility for compliance with any other federal, state, or local laws
Compatt C	reen	SSHE Coordinator
Printed Name:	al se	Title: SSHE Coordinator
Signature:	the Sun	Date:
email: garrett.green@exx	xonmobil.com	Telephone: 575-200-0729
cinaii.		retephone.
OCD Only		
Received by: Jocelyr	n Harimon	Date: 11/04/2022
Received by.		Date

Location:	Poker Lake Unit 1	47	
Spill Date:	10/26/2022		
	Area 1		
Approximate A	rea =	470.00	sq. ft.
Average Satura	tion (or depth) of spill =	10.00	inches
Average Porosi	ty Factor =	0.10	
	VOLUME OF LEAK		
Total Crude Oil	=	3.49	bbls
Total Produced	Water =	3.49	bbls
	TOTAL VOLUME OF L	EAK	
Total Crude Oi	=	3.49	bbls
Total Produced	Water =	3.49	bbls
	TOTAL VOLUME RECOV	/ERED	
Total Crude Oi	=	0.00	bbls
Total Produced	Water =	0.00	bbls

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II 811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III 1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

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 156283

CONDITIONS

Operator:	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road Midland, TX 79707	Action Number: 156283
	Action Type:
	[C-141] Release Corrective Action (C-141)

CONDITIONS

Created B	/ Condition	Condition Date
jharimo	n None	11/4/2022

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Incident ID NAPP2230832832
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Facility ID
Application ID

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	>100 (ft bgs)	
Did this release impact groundwater or surface water?	☐ Yes ⊠ No	
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ⊠ No	
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ⊠ No	
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ⊠ No	
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ⊠ No	
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ⊠ No	
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ⊠ No	
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ⊠ No	
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ⊠ No	
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ⊠ No	
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ⊠ No	
Did the release impact areas not on an exploration, development, production, or storage site?	☐ Yes ⊠ No	
Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.		
Characterization Report Checklist: Each of the following items must be included in the report.		
 \infty Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring well included in the property of the property o	ls.	
☐ Data table of soil contaminant concentration data ☐ Depth to water determination		
Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release		
 ☑ Boring or excavation logs ☑ Photographs including date and GIS information 		
☐ Topographic/Aerial maps ☐ I aboratory data including chain of custody		
LIAT LADOLATORY DATA INCHIOUN CHAIR OF CHNIOOV		

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.

Received by OCD: 1/23/2023 1:18:06 PM Form C-141 State of New Mexico Page 4 Oil Conservation Division

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Application ID

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.		
Printed Name:Garrett Green	Title:SSHE Coordinator	
Signature:Satt Surr	Date:1/20/23	
email:garrett.green@exxonmobil.com	Telephone:575-200-0729	
OCD Only		
Received by: Jocelyn Harimon	Date: 01/24/2023	
	-	

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Incident ID	NAPP2230832832
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: Each of the following items m	ust be included in the closure report.
☐ A scaled site and sampling diagram as described in 19.15.29.11 NMA	.C
Photographs of the remediated site prior to backfill or photos of the must be notified 2 days prior to liner inspection)	iner integrity if applicable (Note: appropriate OCD District office
☐ Laboratory analyses of final sampling (Note: appropriate ODC Distriction)	et office must be notified 2 days prior to final sampling)
Description of remediation activities	
I hereby certify that the information given above is true and complete to the and regulations all operators are required to report and/or file certain releas may endanger public health or the environment. The acceptance of a C-14 should their operations have failed to adequately investigate and remediate human health or the environment. In addition, OCD acceptance of a C-141 compliance with any other federal, state, or local laws and/or regulations. restore, reclaim, and re-vegetate the impacted surface area to the conditions accordance with 19.15.29.13 NMAC including notification to the OCD when the open conditions are the conditions accordance with 19.15.29.13 NMAC including notification to the OCD when the open conditions are the conditions accordance with 19.15.29.13 NMAC including notification to the OCD when the open conditions are the conditions accordance with 19.15.29.13 NMAC including notification to the OCD when the open conditions are the conditions accordance with 19.15.29.13 NMAC including notification to the OCD when the open conditions are the conditions are the conditions are the conditions accordance with 19.15.29.13 NMAC including notification to the OCD when the open conditions are the cond	e notifications and perform corrective actions for releases which I report by the OCD does not relieve the operator of liability contamination that pose a threat to groundwater, surface water, report does not relieve the operator of responsibility for The responsible party acknowledges they must substantially that existed prior to the release or their final land use in the reclamation and re-vegetation are complete.
Printed Name: Garrett Green Title:	SSHE Coordinator
Signature: Date:	1/20/23
	hone:575-200-0729
OCD Only	
Received by: Jocelyn Harimon	Date:01/24/2023
Closure approval by the OCD does not relieve the responsible party of liabi remediate contamination that poses a threat to groundwater, surface water, h party of compliance with any other federal, state, or local laws and/or regul	uman health, or the environment nor does not relieve the responsible
Closure Approved by:	Date:
Printed Name:	Title:



January 20, 2023

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

Re: Closure Request Poker Lake Unit 147

Incident Number nAPP2230832832

Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared the following *Closure Request* to document excavation and soil sampling activities completed to address impacted soil at the Poker Lake Unit 147 (Site). Soil was impacted by a release of produced water and crude oil onto the surface of the well pad. Based on the excavation activities and analytical results from the soil sampling events, XTO is submitting this *Closure Request*, describing remediation that has occurred and requesting closure for Incident Number nAPP2230832832.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit B, Section 5, Township 25 South, Range 31 East, in Eddy County, New Mexico (32.16469°, -103.79709°) and is associated with oil and gas exploration and production operations on federal land managed by the Bureau of Land Management (BLM).

On October 26, 2022, a spill from the manway plate on a tank resulted in the release of 3.49 barrels (bbls) of crude oil and 3.49 bbls of produced water. No fluids were recovered. XTO reported the release to the New Mexico Oil and Conservation Division (NMOCD) and submitted a Form C-141 on November 3, 2022. The release was assigned Incident Number nAPP2230832832.

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 greater than 100 feet below ground surface (bgs) based on a recent soil boring drilled for determination of regional groundwater depth. On October 9, 2020, a soil boring (C-4479) was drilled 0.4 miles east of the Site utilizing a truck-mounted hollow-stem air rotary. Soil boring C-4479 was drilled to a depth of 110 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 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 110 feet bgs. The borehole was properly abandoned with drill cuttings and hydrated bentonite chips. All wells used to

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

XTO Energy, Inc Closure Request Poker Lake Unit 147



determing depth to groundwater are depicted on Figure 1. The Well Record and Log is included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is an emergent wetland, located approximately 3,470 feet northwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

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

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

SITE ASSESSMENT AND SAMPLING ACTIVITIES

On November 28, 2022, Ensolum personnel visited the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. Six soil samples (SS01 through SS06) were collected within and around the release extent at a depth of 0.5 feet bgs to assess the lateral exent of the release. The soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride utilizing Hach® chloride QuanTab® test strips. The release extent and soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was completed during the site visit 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 chemicals 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 Celsius required for shipment and long term storage, but are considered to have been received in acceptable condition.

Based on the visible staining observed, field screenings and laboratory analytical results, additional remediation activities appeared warranted.

EXCAVATION SOIL SAMPLING ACTIVITIES AND ANALYTICAL RESULTS

On December 15, 2022, Ensolum personnel returned to the Site to oversee excavation activites. Impacted soil was excavated from the release area as indicated by visible staining and laboratory analytical results. Excavation activities were performed using hand shovels and a transport vehicle. To direct excavation activities, soil was screened for VOCs and chloride. The excavation was completed to a depth of 1-foot bgs.

XTO Energy, Inc Closure Request Poker Lake Unit 147



Following removal of impacted soil, a 5-point composite soil sample was collected every 200 square feet from the floor of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil sample FS01 was collected from the floor of the excavation from a depth of 1-foot bgs. Because the excavation was shallow, the floor sample included aliquots collected from the sidewalls. The soil sample was collected, handled, and analyzed following the same procedures as described above. The excavation extent and excavation soil sample locations are presented on Figure 3. Laboratory analytical results for excavation floor sample FS01 indicated TPH-GRO/TPH-DRO concentrations exceeded the Closure Criteria and as a result, additional excavation appeared required.

On January 13, 2023 Ensolum personnel returned to the Site to oversee additional excavation activites. Excavation activities were performed using hand shovels and a transport vehicle. The subsequent excavation was completed to a depth of 1.5 feet bgs. Following excavation, composite floor sample FS01A was collected from the floor of the excavation at a depth of 1.5 feet bgs. The soil sample was collected, handled, and analyzed following the same procedures as described above.

Laboratory analytical results for excavation floor sample FS01A indicated all COCs were in compliance with the Closure Criteria. The laboratory analytical results are summarized on Table 1 and the complete laboratory analytical reports are included in Appendix C.

The final excavation area measured approximately 115 square feet in areal extent. A total of approximately 5 cubic yards of impacted soil were removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Facility in Carlsbad, New Mexico.

CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the October 26, 2022 release of crude oil and produced water. Laboratory analytical results for the final excavation soil samples, collected from the final excavation extent, indicated all COCs concentrations were compliant with the Site Closure. Based on the soil sample laboratory analytical results, no further remediation is required. XTO will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions. As such, XTO respectfully requests closure for Incident Number nAPP2230832832.

XTO Energy, Inc Closure Request Poker Lake Unit 147



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

Sincerely, **Ensolum**, **LLC**

Tacoma Morrissey Senior Geologist

Mouissey

Ashley L. Ager, M.S., PG Program Director

ashley L. ager

cc: Garrett Green, XTO

Shelby Pennington, XTO

BLM

Appendices:

Figure 1 Site Receptor Map Figure 2 Soil Sample Locations

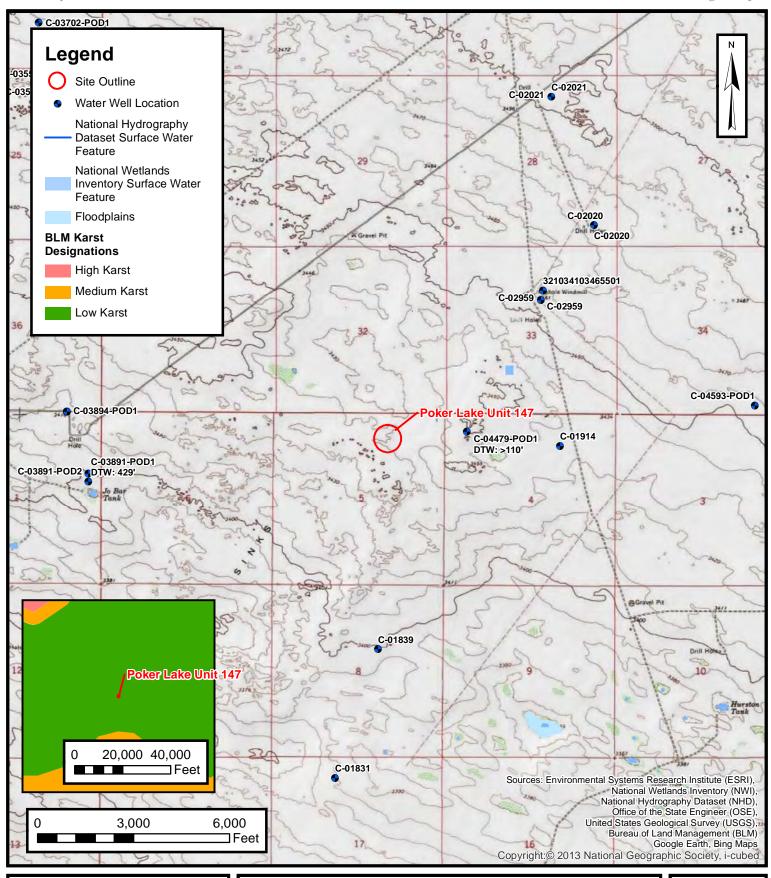
Figure 3 Excavation Soil Sample Locations
Table 1 Soil Sample Analytical Results
Appendix A Referenced Well Records

Appendix B Photographic Log

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



FIGURES





Site Receptor Map

XTO Energy, Inc Poker Lake Unit 147 NAPP2226339427 Unit B, Sec 5, T25S, R31E Eddy County, New Mexico FIGURE





Soil Sample Locations

XTO Energy, Inc Poker Lake Unit 147 NAPP2226339427 Unit B, Sec 5, T25S, R31E Eddy County, New Mexico **FIGURE**





Soil Sample Locations

XTO Energy, Inc Poker Lake Unit 147 NAPP2226339427 Unit B, Sec 5, T25S, R31E Eddy County, New Mexico **FIGURE**



TABLES



TABLE 1 **SOIL SAMPLE ANALYTICAL RESULTS Poker Lake Unit 147** 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 Cl	losure Criteria (l	NMAC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	20,000
				Asse	ssment Soil Sa	mples				
\$\$01	11/28/2022	0.5	5.98	566	5,070	4,900	1,770	9,970	11,700	4,040
\$\$02	11/28/2022	0.5	0.192	10.3	270	6,330	< 50.0	6,600	6,600	1,790
SS03	11/28/2022	0.5	<0.00200	<0.00401	<49.8	<49.8	<49.8	<49.8	<49.8	17.4
SS04	11/28/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	44.2
SS05	11/28/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	15.5
SS06	11/28/2022	0.5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	18.6
				Confi	rmation Soil Sa	mples				
FS01	12/15/2022	4	0.00594	1.05	424	1,880	< 50.0	2,300	2,300	1,160
FS01A	01/13/2023	1.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.0	294

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

requirement where applicable.

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

NMAC: New Mexico Administrative Code

Grey text indicates soil sample removed during excavation activities

Ensolum 1 of 1



APPENDIX A

Referenced Well Records

2020

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

	OSE POD NO		NO.)					TAG ID NO.			OSE FILE NO	(S).			(7)	
ION	POD1 (B						n/a				C-4479				S	77.7
CAT	WELL OWN XTO Ener			ttrell)							PHONE (OPT)	ONAL)				
10				-	·											
GENERAL AND WELL LOCATION	WELL OWN 6401 Holid										CITY Midland			TX	79707	ZIP
N N	WELL	T				REES		NUTES	SECO							
VL A	LOCATIO	n	LATI	TUDE	3	32°		9'	55.	.06" _N	• ACCURACY	REQUIR	ED: ONE TEN	TH OF A S	ECOND	
ER/	(FROM GI	PS)	LONG	GITUDE	-1	03°		14'	20.	.45" W	• DATUM RE	QUIRED:	WGS 84			
GEN	DESCRIPTION	ON RELA	TING	WELL LOCATIO	N TO S	TREET ADDI	RESS AN	D COMMON I	AND	MARKS – PLS	S (SECTION, TO	WNSHJI	, RANGE) WH	ERE AVAI	LABLE	
1.	NE L4 Sec	. 04 T2	5S F	R31E												
	LICENSE NO			NAME OF LICEN	SED D			·				NAME	OF WELL DR			
	124							D. Atkins							Associates,	
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	35	40	5	Sand, Fine-	grained , poorly	graded, some	clay, m	oist Red		Y	√ N		
ı,	40	54	14	Sand, Large-gr	ained , well-gra	ied, some cla	y, moist	Red-Brown		Y	√ N		•
VEL	54	83	29	Sand, Medium-g	rained , well-gr	aded, some cl	ay, mois	t Red-Brown		Y	√ N		
OF.	83	110	27	Sand, Large-grained	well-graded, cl	ay, caliche fr	agments	moist Red-B	rown	Y	√ N		
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										- , `			

2020-10-26_C-4479POD1_OSE_Well Record and Log-147-forsign

Final Audit Report

2020-10-27

Created:

2020-10-27

Ву:

Lucas Middleton (lucas@atkinseng.com)

Status:

Signed

Transaction ID:

CBJCHBCAABAA7SkWQIYYffb0w8t6xJlcqiH4l3eFqNWU

"2020-10-26_C-4479POD1_OSE_Well Record and Log-147-fors ign" History

- Document created by Lucas Middleton (lucas@atkinseng.com) 2020-10-27 3:14:56 PM GMT- IP address: 69.21.248.123
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USGS Home Contact USGS Search USGS

National Water Information System: Web Interface

USGS Water Resources	Data Category:		Geographic Area:		
0505 Water Resources	Groundwater	~	United States	~ [GO

Click to hideNews Bulletins

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

Groundwater levels for the Nation

Important: <u>Next Generation Monitoring Location Page</u>

Search Results -- 1 sites found

site_no list =

• 321034103465501

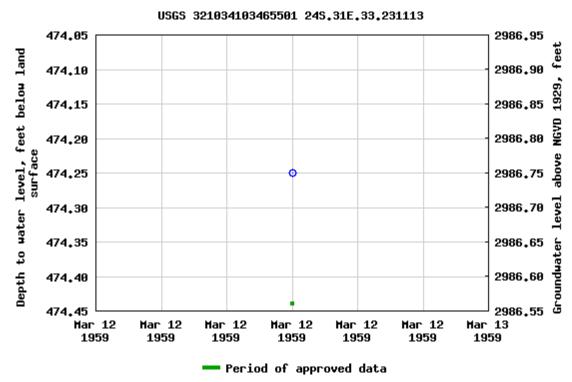
Minimum number of levels = 1

Save file of selected sites to local disk for future upload

USGS 321034103465501 24S.31E.33.231113

Available data for this site	Groundwater:	Field measurements	∨ G	6O
Eddy County, New Mexico				
Hydrologic Unit Code 1307	0001			
Latitude 32°10'38.2", Lon	gitude 103°	946'53.0" NAD83		
Land-surface elevation 3,4	61.00 feet a	above NGVD29		
The depth of the well is 74	0 feet below	w land surface.		
This well is completed in the	າe Other aq	uifers (N9999OTh	HER) r	national aquifer.
This well is completed in the	າe Rustler F	ormation (312RS	LR) lo	cal aquifer.
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Table of data	
Tab-separated data	
Graph of data	
Reselect period	



Breaks in the plot represent a gap of at least one year between field measurements. <u>Download a presentation-quality graph</u>

Questions about sites/data?
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U.S. Department of the Interior | U.S. Geological Survey

Title: Groundwater for USA: Water Levels

URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: <u>USGS Water Data Support Team</u>

Page Last Modified: 2022-10-07 11:45:35 EDT

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APPENDIX B

Photographic Log



Photographic Log XTO Energy, Inc. Poker Lake Unit 147 nAPP2230832832





Photograph 1 Description: Initial release. Looking East.

Date: 10/27/22

Photograph 2 Date: 11/28/22

Description: Initial site visit. Looking Northeast.





Photograph 3

Date: 12/15/2022

Description: Excavation of affected soil. Looking

northwest.

Photograph 4

Date: 12/15/2022 Description: Excavation of affected soil. Looking

northwest.



APPENDIX C

Laboratory Analytical Reports & Chain of Custody Documentation

Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Tacoma Morrissey Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701

Generated 12/6/2022 10:17:45 AM

JOB DESCRIPTION

PLU 147 SDG NUMBER 03E1558145

JOB NUMBER

890-3562-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220



Eurofins Carlsbad

Job Notes

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization

Generated 12/6/2022 10:17:45 AM

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

Eurofins Carlsbad is a laboratory within Eurofins Environment Testing South Central, LLC, a company within Eurofins Environment Testing Group of Companies

Page 2 of 28

Client: Ensolum
Project/Site: PLU 147
Laboratory Job ID: 890-3562-1
SDG: 03E1558145

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Definitions/Glossary

Job ID: 890-3562-1 Client: Ensolum Project/Site: PLU 147 SDG: 03E1558145

Qualifiers

GC VOA
Qualifier

Qualifier Description 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

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

GC Semi VOA

Qualifier

Qualifier Description

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

HPLC/IC

Qualifier **Qualifier Description**

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

Percent Recovery %R CFL Contains Free Liquid CFU Colony Forming Unit CNF Contains No Free Liquid

Duplicate Error Ratio (normalized absolute difference) DER

Dil Fac **Dilution Factor**

Detection Limit (DoD/DOE) DL

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

Decision Level Concentration (Radiochemistry) DLC

EDL Estimated Detection Limit (Dioxin) LOD Limit of Detection (DoD/DOE) Limit of Quantitation (DoD/DOE) LOQ

EPA recommended "Maximum Contaminant Level" MCL MDA Minimum Detectable Activity (Radiochemistry) MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit 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)

Reporting Limit or Requested Limit (Radiochemistry) RL

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

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

TNTC Too Numerous To Count

Case Narrative

 Client: Ensolum
 Job ID: 890-3562-1

 Project/Site: PLU 147
 SDG: 03E1558145

Job ID: 890-3562-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-3562-1

Receipt

The samples were received on 11/28/2022 3:06 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 4.8°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: SS01 (890-3562-1) and SS02 (890-3562-2).

GC VOA

Method 8021B: Surrogate recovery for the following samples were outside control limits: (890-3544-A-1-E) and (890-3544-A-1-D MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-40626 and analytical batch 880-40844 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8021B: Instrument misinjection for the LCSD. Since only an acceptable LCS is required per the method, the data has been qualified and reported.(LCSD 880-40811/2-A)

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-40771 and 880-40811 and analytical batch 880-40980 was outside the control limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (LCSD 880-40811/2-A). Evidence of matrix interferences is not obvious.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-40811 and analytical batch 880-40980 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

GC Semi VOA

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-40946 and analytical batch 880-40965 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-40946/2-A) and (LCSD 880-40946/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (880-22209-A-6-C) and (880-22209-A-6-D MS). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: SS02 (890-3562-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: SS01 (890-3562-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-41084 and analytical batch 880-40987 was outside the upper control limits.

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Case Narrative

 Client: Ensolum
 Job ID: 890-3562-1

 Project/Site: PLU 147
 SDG: 03E1558145

Job ID: 890-3562-1 (Continued)

Laboratory: Eurofins Carlsbad (Continued)

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-40987/31), (CCV 880-40987/47), (CCV 880-40987/58), (LCS 880-41084/2-A) and (LCSD 880-41084/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: SS02 (890-3562-2), (880-22272-A-21-G), (880-22272-A-21-H MS) and (880-22272-A-21-I MSD). 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.

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

Job ID: 890-3562-1 SDG: 03E1558145

Project/Site: PLU 147 SDG: 03E1558145

Client Sample ID: SS01 Lab Sample ID: 890-3562-1

Date Collected: 11/28/22 11:55 Date Received: 11/28/22 15:06

Sample Depth: 0.5

Client: Ensolum

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	5.98	*- *1	2.01	mg/Kg		12/01/22 14:14	12/05/22 16:14	1000
Toluene	156		2.01	mg/Kg		12/01/22 14:14	12/05/22 16:14	1000
Ethylbenzene	15.2	*- *1	2.01	mg/Kg		12/01/22 14:14	12/05/22 16:14	1000
n-Xylene & p-Xylene	321	*- *1	4.02	mg/Kg		12/01/22 14:14	12/05/22 16:14	1000
o-Xylene	68.3	*- *1	2.01	mg/Kg		12/01/22 14:14	12/05/22 16:14	1000
Kylenes, Total	389	*- *1	4.02	mg/Kg		12/01/22 14:14	12/05/22 16:14	1000
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Bromofluorobenzene (Surr)	76		70 - 130			12/01/22 14:14	12/05/22 16:14	1000
1,4-Difluorobenzene (Surr)	86		70 - 130			12/01/22 14:14	12/05/22 16:14	1000
Method: TAL SOP Total BTEX -	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	566		4.02	mg/Kg			12/06/22 11:03	1
Method: SW846 8015 NM - Dies	el Range Organ	ics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	11700		50.0	mg/Kg			12/06/22 09:30	1
Method: SW846 8015B NM - Die	esel Range Orga	nics (DRO)	(GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	5070		50.0	mg/Kg		12/02/22 15:34	12/06/22 00:35	1
Diesel Range Organics (Over C10-C28)	4900		50.0	mg/Kg		12/02/22 15:34	12/06/22 00:35	1
Oll Range Organics (Over 228-C36)	1770		50.0	mg/Kg		12/02/22 15:34	12/06/22 00:35	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	173	S1+	70 - 130			12/02/22 15:34	12/06/22 00:35	1
p-Terphenyl	115		70 - 130			12/02/22 15:34	12/06/22 00:35	1
Method: MCAWW 300.0 - Anion	s, Ion Chromato	graphy - So	oluble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Client Sample ID: SS02

Date Collected: 11/28/22 12:00

Lab Sample ID: 890-3562-2

Matrix: Solid

Date Collected: 11/28/22 12:00 Date Received: 11/28/22 15:06

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.192		0.0403	mg/Kg		11/29/22 16:06	12/03/22 20:02	20
Toluene	2.87		0.0403	mg/Kg		11/29/22 16:06	12/03/22 20:02	20
Ethylbenzene	0.322		0.0403	mg/Kg		11/29/22 16:06	12/03/22 20:02	20
m-Xylene & p-Xylene	5.77		0.0806	mg/Kg		11/29/22 16:06	12/03/22 20:02	20
o-Xylene	1.12		0.0403	mg/Kg		11/29/22 16:06	12/03/22 20:02	20
Xylenes, Total	6.89		0.0806	mg/Kg		11/29/22 16:06	12/03/22 20:02	20

Matrix: Solid

Lab Sample ID: 890-3562-2

Client Sample Results

 Client: Ensolum
 Job ID: 890-3562-1

 Project/Site: PLU 147
 SDG: 03E1558145

Client Sample ID: SS02

Date Collected: 11/28/22 12:00 Date Received: 11/28/22 15:06

Sample Depth: 0.5

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	81		70 - 130			11/29/22 16:06	12/03/22 20:02	2
1,4-Difluorobenzene (Surr)	88		70 - 130			11/29/22 16:06	12/03/22 20:02	2
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	10.3		0.0806	mg/Kg			12/05/22 14:19	
Method: SW846 8015 NM - Diese	el Range Organ	ics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	6600		50.0	mg/Kg			12/05/22 12:48	
Method: SW846 8015B NM - Dies	sal Panga Orga	nice (DRO)	(GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
	270		50.0	mg/Kg		12/03/22 11:09	12/03/22 21:45	
(GRO)-C6-C10 Diesel Range Organics (Over	270 6330		50.0	mg/Kg		12/03/22 11:09 12/05/22 15:06	12/03/22 21:45 12/06/22 05:28	
(GRO)-C6-C10 Diesel Range Organics (Over C10-C28)		U		0 0				
(GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	6330		49.8	mg/Kg		12/05/22 15:06	12/06/22 05:28	Dil Fa
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	6330 <50.0		49.8 50.0	mg/Kg		12/05/22 15:06 12/03/22 11:09	12/06/22 05:28 12/03/22 21:45	
(GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	6330 <50.0 %Recovery	Qualifier	49.8 50.0 <i>Limits</i>	mg/Kg		12/05/22 15:06 12/03/22 11:09 Prepared	12/06/22 05:28 12/03/22 21:45 <i>Analyzed</i>	
(GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	6330 <50.0 **Recovery 120 534	Qualifier S1+	49.8 50.0 Limits 70 - 130 70 - 130	mg/Kg		12/05/22 15:06 12/03/22 11:09 Prepared 12/03/22 11:09	12/06/22 05:28 12/03/22 21:45 Analyzed 12/03/22 21:45	
(GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	6330 <50.0 **Recovery 120 534 s, lon Chromato	Qualifier S1+	49.8 50.0 Limits 70 - 130 70 - 130	mg/Kg		12/05/22 15:06 12/03/22 11:09 Prepared 12/03/22 11:09	12/06/22 05:28 12/03/22 21:45 Analyzed 12/03/22 21:45	

Job ID: 890-3562-1 Client: Ensolum Project/Site: PLU 147 SDG: 03E1558145

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)	
880-22140-A-1-A MS	Matrix Spike	75	101	
880-22140-A-1-B MSD	Matrix Spike Duplicate	87	106	
890-3544-A-1-C MS	Matrix Spike	91	101	
890-3544-A-1-D MSD	Matrix Spike Duplicate	61 S1-	99	
890-3562-1	SS01	76	86	
890-3562-2	SS02	81	88	
LCS 880-40626/1-A	Lab Control Sample	77	96	
LCS 880-40811/1-A	Lab Control Sample	85	108	
LCSD 880-40626/2-A	Lab Control Sample Dup	85	107	
LCSD 880-40811/2-A	Lab Control Sample Dup	208 S1+	120	
MB 880-40626/5-A	Method Blank	71	107	
MB 880-40771/5-A	Method Blank	66 S1-	108	
MD 000 40044/5 A	Method Blank	67 S1-	102	
MB 880-40811/5-A		69 S1-	106	

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-21965-A-1-F MS	Matrix Spike	111	108	
880-21965-A-1-G MSD	Matrix Spike Duplicate	115	109	
880-22209-A-6-D MS	Matrix Spike	134 S1+	118	
880-22209-A-6-E MSD	Matrix Spike Duplicate	120	121	
880-22272-A-21-H MS	Matrix Spike	123	131 S1+	
880-22272-A-21-I MSD	Matrix Spike Duplicate	123	134 S1+	
890-3562-1	SS01	173 S1+	115	
890-3562-2	SS02	120	534 S1+	
LCS 880-40909/2-A	Lab Control Sample	108	110	
LCS 880-40946/2-A	Lab Control Sample	158 S1+	178 S1+	
LCS 880-41084/2-A	Lab Control Sample	156 S1+	190 S1+	
LCSD 880-40909/3-A	Lab Control Sample Dup	98	100	
LCSD 880-40946/3-A	Lab Control Sample Dup	146 S1+	153 S1+	
LCSD 880-41084/3-A	Lab Control Sample Dup	158 S1+	191 S1+	
MB 880-40909/1-A	Method Blank	95	105	
MB 880-40946/1-A	Method Blank	193 S1+	218 S1+	
IVID 000-40940/ I-A	Method Blank	113	142 S1+	

OTPH = o-Terphenyl

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-40626/5-A

Matrix: Solid Analysis Batch: 40844 Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 40626

	IVIB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00200	U	0.00200	mg/Kg		11/29/22 16:06	12/03/22 11:35	•
Toluene	<0.00200	U	0.00200	mg/Kg		11/29/22 16:06	12/03/22 11:35	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/29/22 16:06	12/03/22 11:35	
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		11/29/22 16:06	12/03/22 11:35	
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/29/22 16:06	12/03/22 11:35	
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		11/29/22 16:06	12/03/22 11:35	

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	71		70 - 130	11/29/22 16:06	12/03/22 11:35	1
1,4-Difluorobenzene (Surr)	107		70 - 130	11/29/22 16:06	12/03/22 11:35	1

Lab Sample ID: LCS 880-40626/1-A

Matrix: Solid

Analysis Batch: 40844

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 40626

	Spike	LCS	LUS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.08713		mg/Kg		87	70 - 130	
Toluene	0.100	0.1007		mg/Kg		101	70 - 130	
Ethylbenzene	0.100	0.09601		mg/Kg		96	70 - 130	
m-Xylene & p-Xylene	0.200	0.1683		mg/Kg		84	70 - 130	
o-Xylene	0.100	0.08105		mg/Kg		81	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	77	70 - 130
1,4-Difluorobenzene (Surr)	96	70 - 130

Lab Sample ID: LCSD 880-40626/2-A

Matrix: Solid

Analysis Batch: 40844

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 40626

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.08624		mg/Kg		86	70 - 130	1	35	
Toluene	0.100	0.09888		mg/Kg		99	70 - 130	2	35	
Ethylbenzene	0.100	0.09159		mg/Kg		92	70 - 130	5	35	
m-Xylene & p-Xylene	0.200	0.1623		mg/Kg		81	70 - 130	4	35	
o-Xylene	0.100	0.08012		mg/Kg		80	70 - 130	1	35	

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	85		70 - 130
1 4-Difluorobenzene (Surr)	107		70 - 130

Lab Sample ID: 890-3544-A-1-C MS

Matrix: Solid

Analysis Batch: 40844

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 40626

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U F1	0.0996	0.05233	F1	mg/Kg		53	70 - 130	
Toluene	<0.00200	U F1	0.0996	0.04591	F1	mg/Kg		46	70 - 130	

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

Lab Sample ID: 890-3544-A-1-C MS

Matrix: Solid

Analysis Batch: 40844

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 40626

Sa	imple Sample	Spike	MS	MS				%Rec	
Analyte F	Result Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylbenzene <0.0	00200 U F1	0.0996	0.04383	F1	mg/Kg		44	70 - 130	
m-Xylene & p-Xylene <0.0	00401 U F2 F1	0.199	0.008375	F1	mg/Kg		4	70 - 130	
o-Xylene <0.0	00200 UF1	0.0996	0.05307	F1	mg/Kg		53	70 - 130	

MS MS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	91		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 40626

Matrix: Solid Analysis Batch: 40844

Lab Sample ID: 890-3544-A-1-D MSD

-	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00200	U F1	0.0996	0.05284	F1	mg/Kg		53	70 - 130	1	35
Toluene	<0.00200	U F1	0.0996	0.03698	F1	mg/Kg		37	70 - 130	22	35
Ethylbenzene	<0.00200	U F1	0.0996	0.03533	F1	mg/Kg		35	70 - 130	21	35
m-Xylene & p-Xylene	<0.00401	U F2 F1	0.199	0.005413	F2 F1	mg/Kg		3	70 - 130	43	35
o-Xylene	<0.00200	U F1	0.0996	0.04182	F1	mg/Kg		42	70 - 130	24	35

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	61	S1-	70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

Lab Sample ID: MB 880-40771/5-A

Matrix: Solid

Analysis Batch: 40980

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 40771

MB MB

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		12/01/22 11:05	12/04/22 18:55	1
Toluene	<0.00200	U	0.00200	mg/Kg		12/01/22 11:05	12/04/22 18:55	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		12/01/22 11:05	12/04/22 18:55	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		12/01/22 11:05	12/04/22 18:55	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		12/01/22 11:05	12/04/22 18:55	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		12/01/22 11:05	12/04/22 18:55	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	66	S1-	70 - 130	12/01/22 11:05	12/04/22 18:55	1
1,4-Difluorobenzene (Surr)	108		70 - 130	12/01/22 11:05	12/04/22 18:55	1

Lab Sample ID: MB 880-40811/5-A

Matrix: Solid

Analysis Batch: 40980

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 40811

-	MB	MB	ИВ								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac			
Benzene	<0.00200	U	0.00200	mg/Kg		12/01/22 14:14	12/05/22 06:31	1			
Toluene	<0.00200	U	0.00200	mg/Kg		12/01/22 14:14	12/05/22 06:31	1			
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		12/01/22 14:14	12/05/22 06:31	1			
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		12/01/22 14:14	12/05/22 06:31	1			

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

Lab Sample ID: MB 880-40811/5-A

Matrix: Solid

Analysis Batch: 40980

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 40811

Prep Batch: 40811

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200	mg/Kg		12/01/22 14:14	12/05/22 06:31	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		12/01/22 14:14	12/05/22 06:31	1

MR MR

MR MR

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	67	S1-	70 - 130	12/01/22 14:14	12/05/22 06:31	1
1,4-Difluorobenzene (Surr)	102		70 - 130	12/01/22 14:14	12/05/22 06:31	1

Lab Sample ID: LCS 880-40811/1-A **Client Sample ID: Lab Control Sample** Prep Type: Total/NA

Matrix: Solid

o-Xylene

Analysis Batch: 40980

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.08833		mg/Kg		88	70 - 130	
Toluene	0.100	0.1000		mg/Kg		100	70 - 130	
Ethylbenzene	0.100	0.09631		mg/Kg		96	70 - 130	
m-Xylene & p-Xylene	0.200	0.1709		mg/Kg		85	70 - 130	

0.08525

mg/Kg

0.100

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	85	70 - 130
1.4-Difluorobenzene (Surr)	108	70 - 130

Lab Sample ID: LCSD 880-40811/2-A

Matrix: Solid

Analysis Batch: 40980

Client Sample	ID: Lab	Control	Sample	Dup
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70 - 130

Prep Type: Total/NA

Prep Batch: 40811

Spike	LCSD	LCSD				%Rec		RPD
Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
0.100	0.03146	*- *1	mg/Kg		31	70 - 130	95	35
0.100	0.08959		mg/Kg		90	70 - 130	11	35
0.100	0.01188	*- *1	mg/Kg		12	70 - 130	156	35
0.200	0.04413	*- *1	mg/Kg		22	70 - 130	118	35
0.100	0.04894	*- *1	mg/Kg		49	70 - 130	54	35
	Added 0.100 0.100 0.100 0.200	Added Result 0.100 0.03146 0.100 0.08959 0.100 0.01188 0.200 0.04413	Added Result Qualifier 0.100 0.03146 *- *1 0.100 0.08959 *- *1 0.200 0.04413 *- *1	Added Result Qualifier Unit 0.100 0.03146 *- *1 mg/Kg 0.100 0.08959 mg/Kg 0.100 0.01188 *- *1 mg/Kg 0.200 0.04413 *- *1 mg/Kg	Added Result Qualifier Unit D 0.100 0.03146 *- *1 mg/Kg 0.100 0.08959 mg/Kg 0.100 0.01188 *- *1 mg/Kg 0.200 0.04413 *- *1 mg/Kg	Added Result Qualifier Unit D %Rec 0.100 0.03146 *- *1 mg/Kg 31 0.100 0.08959 mg/Kg 90 0.100 0.01188 *- *1 mg/Kg 12 0.200 0.04413 *- *1 mg/Kg 22	Added Result Qualifier Unit D %Rec Limits 0.100 0.03146 *- *1 mg/Kg 31 70 - 130 0.100 0.08959 mg/Kg 90 70 - 130 0.100 0.01188 *- *1 mg/Kg 12 70 - 130 0.200 0.04413 *- *1 mg/Kg 22 70 - 130	Added Result Qualifier Unit D %Rec Limits RPD 0.100 0.03146 *- *1 mg/Kg 31 70 - 130 95 0.100 0.08959 mg/Kg 90 70 - 130 11 0.100 0.01188 *- *1 mg/Kg 12 70 - 130 156 0.200 0.04413 *- *1 mg/Kg 22 70 - 130 118

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	208	S1+	70 - 130
1.4-Difluorobenzene (Surr)	120		70 - 130

Lab Sample ID: 880-22140-A-1-A MS

Matrix: Solid

Analysis Batch: 40980

Client Sa	mple	ID: Ma	atrix \$	Spike
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Prep Type: Total/NA

Prep Batch: 40811

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U *- *1	0.100	0.07324		mg/Kg		73	70 - 130	
Toluene	<0.00201	U	0.100	0.07084		mg/Kg		71	70 - 130	
Ethylbenzene	<0.00201	U *- *1	0.100	0.07099		mg/Kg		71	70 - 130	
m-Xylene & p-Xylene	<0.00402	U *- *1 F1	0.200	0.1230	F1	mg/Kg		61	70 - 130	
o-Xylene	<0.00201	U *- *1 F1	0.100	0.06729	F1	mg/Kg		67	70 - 130	

Limits

70 - 130

70 - 130

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

101

Lab Sample ID: 880-22140-A-1-A MS

Matrix: Solid

Analysis Batch: 40980

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 40811

MS MS Surrogate %Recovery Qualifier 4-Bromofluorobenzene (Surr) 75

Lab Sample ID: 880-22140-A-1-B MSD

Matrix: Solid

Analysis Batch: 40980

1,4-Difluorobenzene (Surr)

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 40811

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00201	U *- *1	0.0996	0.07814		mg/Kg		78	70 - 130	6	35
Toluene	<0.00201	U	0.0996	0.07441		mg/Kg		75	70 - 130	5	35
Ethylbenzene	<0.00201	U *- *1	0.0996	0.07596		mg/Kg		76	70 - 130	7	35
m-Xylene & p-Xylene	<0.00402	U *- *1 F1	0.199	0.1338	F1	mg/Kg		67	70 - 130	8	35
o-Xylene	<0.00201	U *- *1 F1	0.0996	0.07476		mg/Kg		75	70 - 130	11	35

MSD MSD

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

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 40872

Analysis Batch: 40844 мв мв

Lab Sample ID: MB 880-40872/5-A

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		12/02/22 10:13	12/02/22 23:56	1
Toluene	<0.00200	U	0.00200	mg/Kg		12/02/22 10:13	12/02/22 23:56	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		12/02/22 10:13	12/02/22 23:56	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		12/02/22 10:13	12/02/22 23:56	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		12/02/22 10:13	12/02/22 23:56	1
Xylenes, Total	< 0.00400	U	0.00400	mg/Kg		12/02/22 10:13	12/02/22 23:56	1

мв мв

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	69	S1-	70 - 130	12/02/22 10:13	12/02/22 23:56	1
1,4-Difluorobenzene (Surr)	106		70 - 130	12/02/22 10:13	12/02/22 23:56	1

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

Lab Sample ID: MB 880-40909/1-A

Released to Imaging: 5/19/2023 3:33:06 PM

Matrix: Solid

Matrix: Solid

Analysis Batch: 40981

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

Prep Batch: 40909

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		12/02/22 15:34	12/05/22 20:24	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		12/02/22 15:34	12/05/22 20:24	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/02/22 15:34	12/05/22 20:24	1

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

Lab Sample ID: MB 880-40909/1-A

Matrix: Solid

Analysis Batch: 40981

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 40909

MB MB

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
1-Chlorooctane	95		70 - 130	_	12/02/22 15:34	12/05/22 20:24	1
o-Terphenyl	105		70 - 130		12/02/22 15:34	12/05/22 20:24	1

Lab Sample ID: LCS 880-40909/2-A **Client Sample ID: Lab Control Sample**

Matrix: Solid

Analysis Batch: 40981

Prep Type: Total/NA

Prep Batch: 40909

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	973.5		mg/Kg		97	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	975.0		mg/Kg		98	70 - 130	
C10-C28)								

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	108		70 - 130
o-Terphenyl	110		70 - 130

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Matrix: Solid Analysis Batch: 40981

Lab Sample ID: LCSD 880-40909/3-A

Prep Batch: 40909

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	987.7		mg/Kg		99	70 - 130	1	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	1001		mg/Kg		100	70 - 130	3	20
C10-C28)									

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	98		70 - 130
o-Terphenyl	100		70 - 130

Lab Sample ID: 880-21965-A-1-F MS Client Sample ID: Matrix Spike **Matrix: Solid**

Prep Type: Total/NA

Analysis Batch: 40981 Prep Batch: 40909

	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics	<50.0	U	999	997.3		mg/Kg		100	70 - 130		
(GRO)-C6-C10											
Diesel Range Organics (Over	<50.0	U	999	875.9		mg/Kg		88	70 - 130		
C10-C28)											

MS MS

Surrogate	%Recovery Qualifier	Limits
1-Chlorooctane	111	70 - 130
o-Terphenyl	108	70 - 130

Lab Sample ID: 880-21965-A-1-G MSD

 Client: Ensolum
 Job ID: 890-3562-1

 Project/Site: PLU 147
 SDG: 03E1558145

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

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 40909

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	<50.0	U	997	990.5		mg/Kg		99	70 - 130	1	20
(GRO)-C6-C10											
Diesel Range Organics (Over	<50.0	U	997	902.9		mg/Kg		91	70 - 130	3	20
C10-C28)											

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	115		70 - 130
o-Terphenyl	109		70 - 130

Lab Sample ID: MB 880-40946/1-A Client Sample ID: Method Blank

Matrix: Solid

Matrix: Solid

Analysis Batch: 40981

Analysis Batch: 40965

Prep Type: Total/NA

Prep Batch: 40946

	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		12/03/22 11:09	12/03/22 16:48	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		12/03/22 11:09	12/03/22 16:48	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/03/22 11:09	12/03/22 16:48	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	193	S1+	70 - 130	12/03/22 11:09	12/03/22 16:48	1
o-Terphenyl	218	S1+	70 - 130	12/03/22 11:09	12/03/22 16:48	1

Lab Sample ID: LCS 880-40946/2-A

Matrix: Solid

Analysis Batch: 40965

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

Prep Batch: 40946

	Spike	LCS	LCS				%Rec		
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics	1000	787.5		mg/Kg		79	70 - 130		
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	1294		mg/Kg		129	70 - 130		
C10-C28)									

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	158	S1+	70 - 130
o-Terphenvl	178	S1+	70 ₋ 130

Lab Sample ID: LCSD 880-40946/3-A

Matrix: Solid

C10-C28)

Analysis Batch: 40965

Prep Type: Total/NA Prep Batch: 40946

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	765.1		mg/Kg		77	70 - 130	3	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	1101		ma/Ka		110	70 - 130	16	20

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Job ID: 890-3562-1

SDG: 03E1558145

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

Lab Sample ID: LCSD 880-40946/3-A

Matrix: Solid

Client: Ensolum

Project/Site: PLU 147

Analysis Batch: 40965

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 40946

LCSD LCSD

%Recovery Qualifier Surrogate Limits 1-Chlorooctane 146 S1+ 70 - 130 o-Terphenyl 153 S1+ 70 - 130

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 40946

Lab Sample ID: 880-22209-A-6-D MS **Matrix: Solid**

Lab Sample ID: 880-22209-A-6-E MSD

Lab Sample ID: MB 880-41084/1-A

Analysis Batch: 40965

	Sample	Sample	Spike	MS	MS				%Rec
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Gasoline Range Organics	<50.0	U	999	1195		mg/Kg		118	70 - 130
(GRO)-C6-C10									
Diesel Range Organics (Over	<50.0	U	999	1184		mg/Kg		119	70 - 130
C10-C28)									

MS MS

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	134	S1+	70 - 130
o-Terphenyl	118		70 - 130

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 40946

Sample Sample Spike MSD MSD Added Result Qualifier Analyte Result Qualifier Unit D %Rec Limits RPD Limit Gasoline Range Organics <50.0 U 997 1134 mg/Kg 112 70 - 130 5 20 (GRO)-C6-C10 Diesel Range Organics (Over <50.0 U 997 1210 mg/Kg 121 70 - 130 2 20

C10-C28)

Matrix: Solid

Analysis Batch: 40987

Matrix: Solid

Analysis Batch: 40965

MSD MSD

Surrogate	%Recovery Qualifier	Limits
1-Chlorooctane	120	70 - 130
o-Terphenyl	121	70 - 130

Client Sample ID: Method Blank

Prep Type: Total/NA Prep Batch: 41084

мв мв

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		12/05/22 15:06	12/05/22 20:25	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		12/05/22 15:06	12/05/22 20:25	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/05/22 15:06	12/05/22 20:25	1

мв мв

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	113		70 - 130	12/05/22 15:06	12/05/22 20:25	1
o-Terphenyl	142	S1+	70 - 130	12/05/22 15:06	12/05/22 20:25	1

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

Lab Sample ID: LCS 880-41084/2-A **Client Sample ID: Lab Control Sample**

Matrix: Solid Analysis Batch: 40987 Prep Type: Total/NA Prep Batch: 41084

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	880.3		mg/Kg		88	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	951.5		mg/Kg		95	70 - 130	
C10-C28)								

LCS LCS %Recovery Qualifier Limits Surrogate 70 - 130 1-Chlorooctane 156 S1+ o-Terphenyl 190 S1+ 70 - 130

Lab Sample ID: LCSD 880-41084/3-A Client Sample ID: Lab Control Sample Dup

Matrix: Solid

Analysis Batch: 40987

Prep Type: Total/NA

Prep Batch: 41084

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	901.1		mg/Kg		90	70 - 130	2	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	955.6		mg/Kg		96	70 - 130	0	20
C10 C20)									

C10-C28)

	LUSD	LUSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	158	S1+	70 - 130
o-Terphenyl	191	S1+	70 - 130

100D 100D

Lab Sample ID: 880-22272-A-21-H MS Client Sample ID: Matrix Spike **Matrix: Solid**

Analysis Batch: 40987

Prep Type: Total/NA Prep Batch: 41084

	Sample	Sample	Spike	MS	MS				%Rec
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	1004		mg/Kg		101	70 - 130
Diesel Range Organics (Over	<50.0	U	999	1256		mg/Kg		126	70 - 130

	IVIS	IVIS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	123		70 - 130
o-Terphenyl	131	S1+	70 - 130

Lab Sample ID: 880-22272-A-21-I MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid Analysis Batch: 40987 Prep Type: Total/NA Prep Batch: 41084

MSD MSD RPD Sample Sample Spike %Rec Limit Result Qualifier Result Qualifier Analyte Added Limits RPD Unit D %Rec Gasoline Range Organics <50.0 U 997 1001 mg/Kg 100 70 - 130 20 (GRO)-C6-C10 997 1263 Diesel Range Organics (Over <50.0 U mg/Kg 127 70 - 130 20 C10-C28)

MSD MSD Surrogate %Recovery Qualifier Limits 1-Chlorooctane 70 - 130 123

Job ID: 890-3562-1 Client: Ensolum Project/Site: PLU 147 SDG: 03E1558145

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

<5.00

2340

2340

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Lab Sample ID: 880-22272-A-21-I MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid Prep Type: Total/NA Analysis Batch: 40987 Prep Batch: 41084

MSD MSD Surrogate %Recovery Qualifier Limits o-Terphenyl 134 S1+ 70 - 130

Method: 300.0 - Anions, Ion Chromatography

Chloride

Chloride

Chloride

Lab Sample ID: MB 880-40821/1-A Client Sample ID: Method Blank

Matrix: Solid **Prep Type: Soluble Analysis Batch: 40839**

MB MB Analyte Result Qualifier RL Unit D Dil Fac Prepared Analyzed 5.00

Lab Sample ID: LCS 880-40821/2-A Client Sample ID: Lab Control Sample

Matrix: Solid Prep Type: Soluble Analysis Batch: 40839

mg/Kg

LCS LCS Spike %Rec

Added Result Qualifier Analyte Unit %Rec Limits Chloride 250 256.9 mg/Kg 103 90 - 110

Lab Sample ID: LCSD 880-40821/3-A Client Sample ID: Lab Control Sample Dup

Matrix: Solid Prep Type: Soluble Analysis Batch: 40839

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

Chloride 250 254.9 90 - 110 20 mg/Kg 102

Lab Sample ID: 880-22180-A-3-B MS Client Sample ID: Matrix Spike **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 40839

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

1250

1250

Lab Sample ID: 880-22180-A-3-C MSD Client Sample ID: Matrix Spike Duplicate

3595

3596

mg/Kg

mg/Kg

Matrix: Solid Prep Type: Soluble

Analysis Batch: 40839 Sample Sample Spike MSD MSD %Rec RPD Result Qualifier Added Qualifier Limits RPD Limit Analyte Result Unit %Rec

Released to Imaging: 5/19/2023 3:33:06 PM

12/02/22 06:01

101

101

90 - 110

90 - 110

Client: Ensolum Job ID: 890-3562-1 Project/Site: PLU 147 SDG: 03E1558145

GC VOA

Pre	n Ba	atch:	40626
	P D	aton.	70020

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3562-2	SS02	Total/NA	Solid	5035	
MB 880-40626/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-40626/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-40626/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3544-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-3544-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 40771

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-40771/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 40811

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
890-3562-1	SS01	Total/NA	Solid	5035	
MB 880-40811/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-40811/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-40811/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-22140-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-22140-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 40844

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3562-2	SS02	Total/NA	Solid	8021B	40626
MB 880-40626/5-A	Method Blank	Total/NA	Solid	8021B	40626
MB 880-40872/5-A	Method Blank	Total/NA	Solid	8021B	40872
LCS 880-40626/1-A	Lab Control Sample	Total/NA	Solid	8021B	40626
LCSD 880-40626/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	40626
890-3544-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	40626
890-3544-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	40626

Prep Batch: 40872

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-40872/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 40980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3562-1	SS01	Total/NA	Solid	8021B	40811
MB 880-40771/5-A	Method Blank	Total/NA	Solid	8021B	40771
MB 880-40811/5-A	Method Blank	Total/NA	Solid	8021B	40811
LCS 880-40811/1-A	Lab Control Sample	Total/NA	Solid	8021B	40811
LCSD 880-40811/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	40811
880-22140-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	40811
880-22140-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	40811

Analysis Batch: 41069

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3562-1	SS01	Total/NA	Solid	Total BTEX	
890-3562-2	SS02	Total/NA	Solid	Total BTEX	

Client: Ensolum Job ID: 890-3562-1 Project/Site: PLU 147 SDG: 03E1558145

GC Semi VOA

Prep Batch: 40909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3562-1	SS01	Total/NA	Solid	8015NM Prep	
MB 880-40909/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-40909/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-40909/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-21965-A-1-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-21965-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Prep Batch: 40946

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3562-2	SS02	Total/NA	Solid	8015NM Prep	
MB 880-40946/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-40946/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-40946/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-22209-A-6-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-22209-A-6-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 40965

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3562-2	SS02	Total/NA	Solid	8015B NM	40946
MB 880-40946/1-A	Method Blank	Total/NA	Solid	8015B NM	40946
LCS 880-40946/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	40946
LCSD 880-40946/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	40946
880-22209-A-6-D MS	Matrix Spike	Total/NA	Solid	8015B NM	40946
880-22209-A-6-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	40946

Analysis Batch: 40981

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3562-1	SS01	Total/NA	Solid	8015B NM	40909
MB 880-40909/1-A	Method Blank	Total/NA	Solid	8015B NM	40909
LCS 880-40909/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	40909
LCSD 880-40909/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	40909
880-21965-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B NM	40909
880-21965-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	40909

Analysis Batch: 40987

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3562-2	SS02	Total/NA	Solid	8015B NM	41084
MB 880-41084/1-A	Method Blank	Total/NA	Solid	8015B NM	41084
LCS 880-41084/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	41084
LCSD 880-41084/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	41084
880-22272-A-21-H MS	Matrix Spike	Total/NA	Solid	8015B NM	41084
880-22272-A-21-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	41084

Analysis Batch: 41037

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3562-1	SS01	Total/NA	Solid	8015 NM	
890-3562-2	SS02	Total/NA	Solid	8015 NM	

Prep Batch: 41084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3562-2	SS02	Total/NA	Solid	8015NM Prep	

 Client: Ensolum
 Job ID: 890-3562-1

 Project/Site: PLU 147
 SDG: 03E1558145

GC Semi VOA (Continued)

Prep Batch: 41084 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-41084/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-41084/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-41084/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-22272-A-21-H MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-22272-A-21-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 40821

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3562-1	SS01	Soluble	Solid	DI Leach	
890-3562-2	SS02	Soluble	Solid	DI Leach	
MB 880-40821/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-40821/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-40821/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-22180-A-3-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-22180-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 40839

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3562-1	SS01	Soluble	Solid	300.0	40821
890-3562-2	SS02	Soluble	Solid	300.0	40821
MB 880-40821/1-A	Method Blank	Soluble	Solid	300.0	40821
LCS 880-40821/2-A	Lab Control Sample	Soluble	Solid	300.0	40821
LCSD 880-40821/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	40821
880-22180-A-3-B MS	Matrix Spike	Soluble	Solid	300.0	40821
880-22180-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	40821

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Client Sample ID: SS01 Lab Sample ID: 890-3562-1 Date Collected: 11/28/22 11:55

Matrix: Solid

Date Received: 11/28/22 15:06

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	40811	12/01/22 14:14	MNR	EET MID
Total/NA	Analysis	8021B		1000	5 mL	5 mL	40980	12/05/22 16:14	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			41069	12/06/22 11:03	AJ	EET MID
Total/NA	Analysis	8015 NM		1			41037	12/06/22 09:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	40909	12/02/22 15:34	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40981	12/06/22 00:35	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	40821	12/02/22 10:00	SMC	EET MID
Soluble	Analysis	300.0		5			40839	12/02/22 13:15	SMC	EET MID

Lab Sample ID: 890-3562-2 **Client Sample ID: SS02**

Date Collected: 11/28/22 12:00 **Matrix: Solid**

Date Received: 11/28/22 15:06

Batch Dil Initial Final Batch Batch Prepared Prep Type Туре Method Run Factor Amount Amount Number or Analyzed Analyst Lab 5035 Total/NA Prep 4.96 g 5 mL 40626 11/29/22 16:06 MNR EET MID 8021B Total/NA 5 mL 12/03/22 20:02 **EET MID** Analysis 20 5 mL 40844 MNR Total/NA Total BTEX 41069 12/05/22 14:19 Analysis A.I **EET MID** 1 Total/NA Analysis 8015 NM 41037 12/05/22 12:48 SM **EET MID** Total/NA Prep 8015NM Prep 10.00 g 10 mL 40946 12/03/22 11:09 DM EET MID Total/NA Analysis 8015B NM 1 uL 1 uL 40965 12/03/22 21:45 SM **EET MID** Total/NA 10.04 g Prep 8015NM Prep 10 mL 41084 12/05/22 15:06 DM **EET MID** Total/NA Analysis 8015B NM 1 uL 1 uL 40987 12/06/22 05:28 SM **EET MID** Soluble 5.03 g 50 mL 40821 12/02/22 10:00 SMC **EET MID** Leach DI Leach Soluble Analysis 300.0 5 40839 12/02/22 13:23 SMC **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: 890-3562-1

 Project/Site: PLU 147
 SDG: 03E1558145

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 renert hu	it the leberatory is not contiffi	to all booking and committees as a first of the first con-	
the agency does not of		at the laboratory is not certil	ied by the governing authority. This list ma	ay include analytes for v
,		Matrix	led by the governing authority. This list ma	ay include analytes for v
the agency does not of	fer certification.	•	, , ,	ay include analytes for v

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Method Summary

 Client: Ensolum
 Job ID: 890-3562-1

 Project/Site: PLU 147
 SDG: 03E1558145

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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Sample Summary

Client: Ensolum Project/Site: PLU 147 Job ID: 890-3562-1

SDG: 03E1558145

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Donti
890-3562-1	SS01	Solid	11/28/22 11:55	11/28/22 15:06	Depth 0.5
890-3562-2	SS02	Solid	11/28/22 12:00	11/28/22 15:06	0.5

Circle Method(s) and Notice: Signature of this doc

7-28.9215

Address:

City, State ZIP:

Company Name: Project Manager:

Phone:

SAMPLE RECEIPT

Samples Received Intac

Total Containers:

Sample Custody Seals Cooler Custody Seals: Sampler's Name: Project Location: Project Number: Project Name:

Chain of Custody

euronns		Environment Testing	00	Houst Midland,	on, TX TX (43	(281) z 2) 704-	5440, San	Antonio, TX	Houston, TX (281) 240-4200, Dalias, Ix (214) 902-0300 Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334	Work Order No:	No:	12
	Aenco			EL Pas Hobbs	NM (5	915) 58	:5-3443, Lu :-7550, Carl	sbad, NM (5	EL Paso, I X (915) 585-3443, Lubbock, I X (905) / 94-1495 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	www.xenco.com	om Page of	
roiect Manager:	Tacoma Morrissey		8	Bill to: (if different)		Garret	Garrett Green			Work Orde	Work Order Comments	
	Ensolum		C	Company Name		XTO Energy	nergy		Pro	Program: UST/PST ☐ PRP☐ Brownfields ☐	ownfields ☐ RRC ☐ Superfund ☐	
	3122 National Parks Hwy	Hwv	A	Address:		3104 E	3104 E. Green St		Sta	State of Project:		
e ZIP:	Carlsbad, NM 88220		С	City, State ZIP:		Carlsb	Carlsbad, NM 88220	220	Re	Reporting: Level III Level III PST/UST TRRP	PST/UST TRRP Level IV	
	303-887-2946		Email: G	Garrett.Green@ExxonMobil.com	@Exx	nMot	oil.com		De	Deliverables: EDD 🔲 ADa	ADaPT L. Other:	
roject Name:	PLU 147	47	Furn Around	round					ANALYSIS REQUEST	ST	Preservative Codes	
roject Number:	03E1558145		Routine	X Rush	Code						None: NO DI Water: H ₂ O	
roject Location:		0/	Due Date:								<u>u</u>	
ampler's Name:	Connor Whitman		TAT starts the day received by the lab, if received by 4:30pm	day received by ved by 4:30pm	•						H ₂ SO ₄ : H ₂ NaOH: Na	
		1			ter						H.BO. HB	
AMPLE RECEIPT	Temp Blank	Thermometer ID:	Wet Ice:	A Yes No	rame	(0.00					NaHSO ₄ : NABIS	
ooler Custody Seals:	Yes 40		or.	6.0	Pa	PA: 3			890-3562 Chain of	in of Custody	Na ₂ S ₂ O ₃ : NaSO ₃	28
ample Custody Seals:	Yes		eading:	JI O		S (EI	1)		_	_	Zn Acetate+NaOH: Zn	of
otal Containers:		Corrected Temperature:	perature:	4-X		RIDE	_	_				26
Sample identification	ification Matrix	Date Sampled	Time Sampled	Depth Comp	# of Cont	CHLOR	TPH (8				Sample Comments	Page
\$801	S	11/28/2022	11:55	.5' Grab	_	×	×				Incident ID:	ı
\$802		_	12:00		_	×	×				nAPP2230832832	
											Cost Center:	
											1137341001	
											AFE:	
												M
												D
					1		CM					.22
												12.2
Total 200.7 / 6010 ircle Method(s) and I	Total 200.7 / 6010 200.8 / 6020: Sircle Method(s) and Metal(s) to be analyzed	8RCRA alyzed TC I	TCLP / SPLI	Texas 11 P 6010: 8R(Al Sb CRA S	Sb A	Ba Be B ∖s Ba Be	Cd Ca	b As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni	Mn Mo Ni K Se A Se Ag TI U	Ng SiO ₂ Na Sr Ti Sn ∪ V Zn Hg: 1631 / 245.1 / 7470 / 7471	10/202
			toe a valid purch	ase order from cli	ent com	pany to	Eurofins Xe	nco. its affilia	ates and subcontractors. It assig	assigns standard terms and conditions		E /:
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Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-3562-1 SDG Number: 03E1558145

Login Number: 3562 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.	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: 890-3562-1 SDG Number: 03E1558145

> **List Source: Eurofins Midland** List Creation: 11/29/22 10:55 AM

Creator: Rodriguez, Leticia

Login Number: 3562

List Number: 2

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").

Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Tacoma Morrissey
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 12/7/2022 11:49:55 AM Revision 1

JOB DESCRIPTION

PLU 147 SDG NUMBER 03E1558145

JOB NUMBER

890-3563-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220



Eurofins Carlsbad

Job Notes

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization

Generated 12/7/2022 11:49:55 AM Revision 1

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

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Client: Ensolum
Project/Site: PLU 147
Laboratory Job ID: 890-3563-1
SDG: 03E1558145

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Definitions/Glossary

 Client: Ensolum
 Job ID: 890-3563-1

 Project/Site: PLU 147
 SDG: 03E1558145

Qualifiers

GC VOA

Qualifier Description

S1- Surrogate recovery exceeds control limits, low biased.
U Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier Qualifier Description

U Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier Qualifier Description

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

Glossary

Abbreviation These commonly used abbreviations may or may not be present in this report.

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

Case Narrative

 Client: Ensolum
 Job ID: 890-3563-1

 Project/Site: PLU 147
 SDG: 03E1558145

Job ID: 890-3563-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-3563-1

REVISION

The report being provided is a revision of the original report sent on 12/6/2022. The report (revision 1) is being revised due to Per client email, requesting TPH re run on SS03.

Report revision history

Receipt

The samples were received on 11/28/2022 3:06 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 4.8°C

GC VOA

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

GC Semi VOA

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (880-22243-A-22-B). 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.

HPLC/IC

Method 300_ORGFM_28D: The matrix spike (MS) recoveries for preparation batch 880-40727 and analytical batch 880-40840 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits. The associated samples are: SS03 (890-3563-1), SS04 (890-3563-2), SS05 (890-3563-3), SS06 (890-3563-4) and (890-3563-A-1-C MS).

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

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Job ID: 890-3563-1

Client: Ensolum Project/Site: PLU 147 SDG: 03E1558145

Client Sample ID: SS03 Lab Sample ID: 890-3563-1 Date Collected: 11/28/22 12:20

Matrix: Solid

Date Received: 11/28/22 15:06 Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		11/29/22 16:02	12/02/22 20:18	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/29/22 16:02	12/02/22 20:18	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/29/22 16:02	12/02/22 20:18	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		11/29/22 16:02	12/02/22 20:18	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/29/22 16:02	12/02/22 20:18	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		11/29/22 16:02	12/02/22 20:18	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			11/29/22 16:02	12/02/22 20:18	1
1,4-Difluorobenzene (Surr)	97		70 - 130			11/29/22 16:02	12/02/22 20:18	1

Method: TAL SOP Total BTEX	- Total BTE)	K Calculation	on					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			12/05/22 14:17	1

Method: SW846 8015 NM - Dies	sel Range (Organics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			12/06/22 09:30	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg	_	12/06/22 15:00	12/07/22 04:59	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		12/06/22 15:00	12/07/22 04:59	1
Oll Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		12/06/22 15:00	12/07/22 04:59	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	116		70 - 130			12/06/22 15:00	12/07/22 04:59	1

Method: MCAWW 300.0 - Anio	ns. Ion Chro	omatogran	ohv - Soluble						
Analyte	•	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	17.4	F1	4 95	ma/Ka			12/01/22 21:47		

70 - 130

Client Sample ID: SS04 Lab Sample ID: 890-3563-2 Date Collected: 11/28/22 12:30 **Matrix: Solid**

Date Received: 11/28/22 15:06

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

112

Sample Depth: 0.5

o-Terphenyl

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		11/29/22 16:02	12/02/22 20:45	1
Toluene	<0.00199	U	0.00199	mg/Kg		11/29/22 16:02	12/02/22 20:45	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		11/29/22 16:02	12/02/22 20:45	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		11/29/22 16:02	12/02/22 20:45	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		11/29/22 16:02	12/02/22 20:45	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		11/29/22 16:02	12/02/22 20:45	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			11/29/22 16:02	12/02/22 20:45	1

Eurofins Carlsbad

12/06/22 15:00 12/07/22 04:59

Client Sample ID: SS04 Lab Sample ID: 890-3563-2

Date Collected: 11/28/22 12:30 Matrix: Solid Date Received: 11/28/22 15:06

Sample Depth: 0.5

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

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	98	70 - 130	11/29/22 16:02	12/02/22 20:45	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total BTEX	<0.00398	U	0.00398	 mg/Kg			12/05/22 14:17	1	

н	Method: SW846 8015 N	M Discal Danas	Organica		\sim
н	IVIELLIOU: SYVOAD OUTS IN	w - Diesei Kande	Organics	IDROLI	

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			12/06/22 09:30	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		12/02/22 15:34	12/06/22 01:15	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		12/02/22 15:34	12/06/22 01:15	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		12/02/22 15:34	12/06/22 01:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	115		70 - 130	12/02/22 15:34	12/06/22 01:15	1
o-Terphenyl	123		70 - 130	12/02/22 15:34	12/06/22 01:15	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte		Qualifier RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	44.2	4.97	mg/Kg			12/01/22 22:07	1

Lab Sample ID: 890-3563-3 **Client Sample ID: SS05** Matrix: Solid

Date Collected: 11/28/22 12:35 Date Received: 11/28/22 15:06

Sample Depth: 0.5

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

INICITION. SAMO TO OUZ ID - WO	nathe Organic	Compoun	us (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		11/29/22 16:02	12/02/22 21:11	1
Toluene	< 0.00199	U	0.00199	mg/Kg		11/29/22 16:02	12/02/22 21:11	1
Ethylbenzene	< 0.00199	U	0.00199	mg/Kg		11/29/22 16:02	12/02/22 21:11	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		11/29/22 16:02	12/02/22 21:11	1
o-Xylene	< 0.00199	U	0.00199	mg/Kg		11/29/22 16:02	12/02/22 21:11	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		11/29/22 16:02	12/02/22 21:11	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130			11/29/22 16:02	12/02/22 21:11	1
1 4-Difluorobenzene (Surr)	86		70 _ 130			11/29/22 16:02	12/02/22 21:11	1

Method: TA	I SOP Total RTFX.	- Total RTFY	Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			12/05/22 14:17	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg	_		12/06/22 09:30	1

Matrix: Solid

Lab Sample ID: 890-3563-3

Job ID: 890-3563-1

Client: Ensolum Project/Site: PLU 147 SDG: 03E1558145

Client Sample ID: SS05

Date Collected: 11/28/22 12:35 Date Received: 11/28/22 15:06

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		12/02/22 15:34	12/06/22 01:55	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		12/02/22 15:34	12/06/22 01:55	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		12/02/22 15:34	12/06/22 01:55	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	118		70 - 130			12/02/22 15:34	12/06/22 01:55	1
o-Terphenyl	124		70 - 130			12/02/22 15:34	12/06/22 01:55	1

Method: MCAWW 300.0 - Anio	ns, Ion Chr	omatograp	hy - Soluble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15.5		4.96	mg/Kg			12/01/22 22:13	1

Lab Sample ID: 890-3563-4 **Client Sample ID: SS06** Date Collected: 11/28/22 12:40 Matrix: Solid

Date Received: 11/28/22 15:06

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		11/29/22 16:02	12/02/22 21:38	1
Toluene	< 0.00201	U	0.00201	mg/Kg		11/29/22 16:02	12/02/22 21:38	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		11/29/22 16:02	12/02/22 21:38	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		11/29/22 16:02	12/02/22 21:38	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		11/29/22 16:02	12/02/22 21:38	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		11/29/22 16:02	12/02/22 21:38	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	126		70 - 130			11/29/22 16:02	12/02/22 21:38	1
1,4-Difluorobenzene (Surr)	104		70 - 130			11/29/22 16:02	12/02/22 21:38	1
Method: TAL SOP Total BT	EX - Total BTE	X Calculat	ion					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			12/05/22 14:17	1
	Diesel Range	Organics (DRO) (GC)					
Method: SW846 8015 NM -			, , ,		_			
Method: SW846 8015 NM - Analyte	•	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Analyte	Result	Qualifier	KL	Unit	ט	Prepared	Anaiyzea	DII Fac
Total TPH	<50.0	U	50.0	mg/Kg			12/06/22 09:30	1
- Method: SW846 8015B NM - D	iesel 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		12/02/22 15:34	12/06/22 02:16	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		12/02/22 15:34	12/06/22 02:16	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/02/22 15:34	12/06/22 02:16	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	112		70 - 130			12/02/22 15:34	12/06/22 02:16	1
o-Terphenyl	119		70 - 130			12/02/22 15:34	12/06/22 02:16	1

Client Sample Results

 Client: Ensolum
 Job ID: 890-3563-1

 Project/Site: PLU 147
 SDG: 03E1558145

Client Sample ID: SS06 Lab Sample ID: 890-3563-4

Date Collected: 11/28/22 12:40 Matrix: Solid

Date Received: 11/28/22 15:06 Sample Depth: 0.5

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result Qu	ualifier RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	18.6	5.02	mg/Kg			12/01/22 22:20	1

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Surrogate Summary

Client: Ensolum Job ID: 890-3563-1 Project/Site: PLU 147 SDG: 03E1558145

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

			Percen	t Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-3549-A-1-C MS	Matrix Spike	114	102	
890-3549-A-1-D MSD	Matrix Spike Duplicate	104	101	
890-3563-1	SS03	112	97	
890-3563-2	SS04	112	98	
890-3563-3	SS05	102	86	
890-3563-4	SS06	126	104	
LCS 880-40625/1-A	Lab Control Sample	105	100	
LCSD 880-40625/2-A	Lab Control Sample Dup	104	97	
MB 880-40625/5-A	Method Blank	68 S1-	94	
Surrogate Legend				

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid Prep Type: Total/NA

			Percent Surrog	ate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-21965-A-1-F MS	Matrix Spike	111	108	
880-21965-A-1-G MSD	Matrix Spike Duplicate	115	109	
880-22243-A-22-C MS	Matrix Spike	117	97	
880-22243-A-22-D MSD	Matrix Spike Duplicate	118	98	
890-3563-1	SS03	116	112	
890-3563-2	SS04	115	123	
890-3563-3	SS05	118	124	
890-3563-4	SS06	112	119	
LCS 880-40909/2-A	Lab Control Sample	108	110	
LCS 880-41142/2-A	Lab Control Sample	128	114	
LCSD 880-40909/3-A	Lab Control Sample Dup	98	100	
LCSD 880-41142/3-A	Lab Control Sample Dup	109	113	
MB 880-40909/1-A	Method Blank	95	105	
MB 880-41142/1-A	Method Blank	109	110	

1CO = 1-Chlorooctane OTPH = o-Terphenyl

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-40625/5-A

Matrix: Solid

Analysis Batch: 40842

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 40625

	MB	MB					•	
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		11/29/22 16:02	12/02/22 11:45	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/29/22 16:02	12/02/22 11:45	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/29/22 16:02	12/02/22 11:45	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		11/29/22 16:02	12/02/22 11:45	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/29/22 16:02	12/02/22 11:45	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		11/29/22 16:02	12/02/22 11:45	1
	440	140						

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	68	S1-	70 - 130	11/29/22 16:02	12/02/22 11:45	1
1,4-Difluorobenzene (Surr)	94		70 - 130	11/29/22 16:02	12/02/22 11:45	1

Lab Sample ID: LCS 880-40625/1-A

Matrix: Solid

Analysis Batch: 40842

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 40625

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1252		mg/Kg		125	70 - 130	
Toluene	0.100	0.1206		mg/Kg		121	70 - 130	
Ethylbenzene	0.100	0.1093		mg/Kg		109	70 - 130	
m-Xylene & p-Xylene	0.200	0.2198		mg/Kg		110	70 - 130	
o-Xylene	0.100	0.1069		mg/Kg		107	70 - 130	

LCS LCS

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

Lab Sample ID: LCSD 880-40625/2-A

Matrix: Solid

Analysis Batch: 40842

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

Prep Batch: 40625

	Spike	LCSD LCSD				%Rec		RPD
Analyte	Added	Result Qualifie	r Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.1186	mg/Kg		119	70 - 130	5	35
Toluene	0.100	0.1151	mg/Kg		115	70 - 130	5	35
Ethylbenzene	0.100	0.1044	mg/Kg		104	70 - 130	5	35
m-Xylene & p-Xylene	0.200	0.2094	mg/Kg		105	70 - 130	5	35
o-Xylene	0.100	0.1069	mg/Kg		107	70 - 130	0	35

LCSD LCSD

Surrogate	%Recovery Quali	fier Limits
4-Bromofluorobenzene (Surr)	104	70 - 130
1,4-Difluorobenzene (Surr)	97	70 - 130

Lab Sample ID: 890-3549-A-1-C MS

Matrix: Solid

Analysis Batch: 40842

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

Prep Batch: 40625

١		Sample	Sample	Spike	MS	MS				%Rec	
	Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
	Benzene	<0.00201	U	0.0996	0.1021		mg/Kg		103	70 - 130	
١	Toluene	<0.00201	U	0.0996	0.1062		mg/Kg		107	70 - 130	

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

Lab Sample ID: 890-3549-A-1-C MS

Client Sample ID: Matrix Spike Matrix: Solid Prep Type: Total/NA Prep Batch: 40625 **Analysis Batch: 40842**

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylbenzene	<0.00201	U	0.0996	0.1009		mg/Kg		101	70 - 130	
m-Xylene & p-Xylene	<0.00402	U	0.199	0.2022		mg/Kg		101	70 - 130	
o-Xylene	<0.00201	U	0.0996	0.1035		mg/Kg		104	70 - 130	

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

Lab Sample ID: 890-3549-A-1-D MSD **Client Sample ID: Matrix Spike Duplicate** Prep Type: Total/NA

Matrix: Solid

C10-C28)

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Analysis Batch: 40842										atch: 4	10625
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00201	U	0.0990	0.09136		mg/Kg		92	70 - 130	11	35
Toluene	<0.00201	U	0.0990	0.09165		mg/Kg		93	70 - 130	15	35
Ethylbenzene	<0.00201	U	0.0990	0.08677		mg/Kg		88	70 - 130	15	35
m-Xylene & p-Xylene	<0.00402	U	0.198	0.1732		mg/Kg		87	70 - 130	15	35
o-Xylene	<0.00201	U	0.0990	0.08889		mg/Kg		90	70 - 130	15	35

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

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

Lab Sample ID: MB 880-40909/1-A **Client Sample ID: Method Blank Matrix: Solid Prep Type: Total/NA Analysis Batch: 40981** Prep Batch: 40909

MB MB Analyte Result Qualifier RL Unit **Prepared** Analyzed Dil Fac Gasoline Range Organics <50.0 U 50.0 12/02/22 15:34 12/05/22 20:24 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over <50.0 U 50.0 12/02/22 15:34 12/05/22 20:24 mg/Kg C10-C28) Oll Range Organics (Over C28-C36) <50.0 U 50.0 mg/Kg 12/02/22 15:34 12/05/22 20:24

MB MB Surrogate %Recovery Qualifier Limits Prepared Dil Fac Analyzed 12/02/22 15:34 12/05/22 20:24 1-Chlorooctane 70 - 130 95

105 70 - 130 12/02/22 15:34 12/05/22 20:24 o-Terphenyl

Lab Sample ID: LCS 880-40909/2-A **Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Total/NA**

Analysis Batch: 40981 Prep Batch: 40909 LCS LCS Spike %Rec Analyte Added Result Qualifier Unit %Rec Limits 1000 973.5 97 70 - 130 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 975.0 mg/Kg 98 70 - 130

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

Lab Sample ID: LCS 880-40909/2-A

Lab Sample ID: LCSD 880-40909/3-A

Lab Sample ID: 880-21965-A-1-F MS

Matrix: Solid

Analysis Batch: 40981

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 40909

LCS LCS

%Recovery Qualifier Surrogate Limits 1-Chlorooctane 108 70 - 130 o-Terphenyl 110 70 - 130

Client Sample ID: Lab Control Sample Dup

Matrix: Solid

Analysis Batch: 40981

Prep Type: Total/NA

Prep Batch: 40909

LCSD LCSD RPD %Rec Spike Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Gasoline Range Organics 1000 987.7 mg/Kg 99 70 - 130 1 20 (GRO)-C6-C10 1000 Diesel Range Organics (Over 1001 mg/Kg 100 70 - 130 20

C10-C28)

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	98		70 - 130
o-Terphenyl	100		70 - 130

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Matrix: Solid

Analysis Batch: 40981

Prep Batch: 40909

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	997.3		mg/Kg		100	70 - 130	
Diesel Range Organics (Over C10-C28)	<50.0	U	999	875.9		mg/Kg		88	70 - 130	

Spike

Added

997

997

MS MS

Surrogate	%Recovery Qualifier	Limits
1-Chlorooctane	111	70 - 130
o-Terphenyl	108	70 - 130

Lab Sample ID: 880-21965-A-1-G MSD **Client Sample ID: Matrix Spike Duplicate**

MSD MSD

990.5

902.9

Result Qualifier

Unit

mg/Kg

mg/Kg

Matrix: Solid

Analysis Batch: 40981

Gasoline Range Organics

Prep Type: Total/NA Prep Batch: 40909

91

%Rec **RPD** Limits **RPD** Limit %Rec 99 70 - 130 20

3

20

70 - 130

Diesel Range Organics (Over C10-C28)

(GRO)-C6-C10

Analyte

MSD MSD

Sample Sample

<50.0 U

<50.0 U

Result Qualifier

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	115		70 - 130
o-Terphenyl	109		70 - 130

Client: Ensolum Project/Site: PLU 147

Job ID: 890-3563-1 SDG: 03E1558145

Prep Type: Total/NA Prep Batch: 41142

Prep Type: Total/NA

Prep Type: Total/NA

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

Client Sample ID: Lab Control Sample Dup

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

Lab Sample ID: MB 880-41142/1-A

Matrix: Solid

Analysis Batch: 41104

•	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		12/06/22 10:12	12/06/22 20:18	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		12/06/22 10:12	12/06/22 20:18	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/06/22 10:12	12/06/22 20:18	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	109		70 - 130	12/06/22 10:12	12/06/22 20:18	1
o-Terphenyl	110		70 - 130	12/06/22 10:12	12/06/22 20:18	1

Lab Sample ID: LCS 880-41142/2-A

Matrix: Solid

Analysis Batch: 41104							Prep	Batch: 41142
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	1000	867.2		mg/Kg	<u> </u>	87	70 - 130	
Diesel Range Organics (Over C10-C28)	1000	841.6		mg/Kg		84	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
1-Chlorooctane	128	70 - 130
o-Terphenyl	114	70 - 130

Lab Sample ID: LCSD 880-41142/3-A

Matrix: Solid

Analysis Ratch: 41104

Analysis Batch: 41104						Prep Batch: 41142			
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	1000	998.7		mg/Kg		100	70 - 130	14	20
Diesel Range Organics (Over C10-C28)	1000	841.9		mg/Kg		84	70 - 130	0	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	109		70 - 130
o-Terphenyl	113		70 - 130

Lab Sample ID: 880-22243-A-22-C MS

Matrix: Solid

Analysis Batch: 41104									Prep I	Batch: 41142
	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	853.6		mg/Kg		83	70 - 130	
Diesel Range Organics (Over C10-C28)	<49.9	U	999	902.6		mg/Kg		90	70 - 130	

Job ID: 890-3563-1 SDG: 03E1558145

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

MS MS

Lab Sample ID: 880-22243-A-22-C MS Client Sample ID: Matrix Spike

Matrix: Solid

Analysis Batch: 41104

Prep Type: Total/NA

Prep Batch: 41142

Surrogate %Recovery Qualifier Limits 1-Chlorooctane 117 70 - 130 o-Terphenyl 97 70 - 130

Lab Sample ID: 880-22243-A-22-D MSD **Client Sample ID: Matrix Spike Duplicate**

Matrix: Solid

Client: Ensolum

Project/Site: PLU 147

Analysis Batch: 41104

Prep Type: Total/NA

Prep Batch: 41142

MSD MSD %Rec **RPD** Sample Sample Spike Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit Gasoline Range Organics <49.9 U 997 822.8 mg/Kg 80 70 - 130 4 20 (GRO)-C6-C10 Diesel Range Organics (Over <49.9 U 997 918.3 mg/Kg 92 70 - 130 2 20 C10-C28)

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	118		70 - 130
o-Terphenyl	98		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-40727/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 40840

MB MB

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			12/01/22 21:27	1

Lab Sample ID: LCS 880-40727/2-A **Client Sample ID: Lab Control Sample Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 40840

		Spike	LCS	LCS				%Rec	
Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	 	250	261.2		ma/Ka		104	90 - 110	

Lab Sample ID: LCSD 880-40727/3-A **Client Sample ID: Lab Control Sample Dup Matrix: Solid Prep Type: Soluble**

Analysis Batch: 40840

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	 250	274.8		mg/Kg		110	90 - 110	5	20

Lab Sample ID: 890-3563-1 MS Client Sample ID: SS03 **Matrix: Solid**

Analysis Batch: 40840

nalyte Result Qualifier Added Result Qualifier Unit D %Rec Limits

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Prep Type: Soluble

QC Sample Results

Client: Ensolum Job ID: 890-3563-1 Project/Site: PLU 147 SDG: 03E1558145

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-3563-1 MSD **Client Sample ID: SS03 Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 40840

•	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	17.4	F1	248	288.7		mg/Kg		110	90 - 110	6	20

Client: Ensolum Job ID: 890-3563-1 Project/Site: PLU 147 SDG: 03E1558145

GC VOA

Prep Batch: 40625

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3563-1	SS03	Total/NA	Solid	5035	
890-3563-2	SS04	Total/NA	Solid	5035	
890-3563-3	SS05	Total/NA	Solid	5035	
890-3563-4	SS06	Total/NA	Solid	5035	
MB 880-40625/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-40625/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-40625/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3549-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-3549-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 40842

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3563-1	SS03	Total/NA	Solid	8021B	40625
890-3563-2	SS04	Total/NA	Solid	8021B	40625
890-3563-3	SS05	Total/NA	Solid	8021B	40625
890-3563-4	SS06	Total/NA	Solid	8021B	40625
MB 880-40625/5-A	Method Blank	Total/NA	Solid	8021B	40625
LCS 880-40625/1-A	Lab Control Sample	Total/NA	Solid	8021B	40625
LCSD 880-40625/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	40625
890-3549-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	40625
890-3549-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	40625

Analysis Batch: 41057

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3563-1	SS03	Total/NA	Solid	Total BTEX	
890-3563-2	SS04	Total/NA	Solid	Total BTEX	
890-3563-3	SS05	Total/NA	Solid	Total BTEX	
890-3563-4	SS06	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 40909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3563-2	SS04	Total/NA	Solid	8015NM Prep	
890-3563-3	SS05	Total/NA	Solid	8015NM Prep	
890-3563-4	SS06	Total/NA	Solid	8015NM Prep	
MB 880-40909/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-40909/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-40909/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-21965-A-1-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-21965-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 40981

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Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3563-2	SS04	Total/NA	Solid	8015B NM	40909
890-3563-3	SS05	Total/NA	Solid	8015B NM	40909
890-3563-4	SS06	Total/NA	Solid	8015B NM	40909
MB 880-40909/1-A	Method Blank	Total/NA	Solid	8015B NM	40909
LCS 880-40909/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	40909
LCSD 880-40909/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	40909
880-21965-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B NM	40909

QC Association Summary

 Client: Ensolum
 Job ID: 890-3563-1

 Project/Site: PLU 147
 SDG: 03E1558145

GC Semi VOA (Continued)

Analysis Batch: 40981 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-21965-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	40909

Analysis Batch: 41104

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3563-1	SS03	Total/NA	Solid	8015B NM	41142
MB 880-41142/1-A	Method Blank	Total/NA	Solid	8015B NM	41142
LCS 880-41142/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	41142
LCSD 880-41142/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	41142
880-22243-A-22-C MS	Matrix Spike	Total/NA	Solid	8015B NM	41142
880-22243-A-22-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	41142

Analysis Batch: 41124

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3563-1	SS03	Total/NA	Solid	8015 NM	
890-3563-2	SS04	Total/NA	Solid	8015 NM	
890-3563-3	SS05	Total/NA	Solid	8015 NM	
890-3563-4	SS06	Total/NA	Solid	8015 NM	

Prep Batch: 41142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3563-1	SS03	Total/NA	Solid	8015NM Prep	
MB 880-41142/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-41142/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-41142/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-22243-A-22-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-22243-A-22-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 40727

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3563-1	SS03	Soluble	Solid	DI Leach	
890-3563-2	SS04	Soluble	Solid	DI Leach	
890-3563-3	SS05	Soluble	Solid	DI Leach	
890-3563-4	SS06	Soluble	Solid	DI Leach	
MB 880-40727/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-40727/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-40727/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3563-1 MS	SS03	Soluble	Solid	DI Leach	
890-3563-1 MSD	SS03	Soluble	Solid	DI Leach	

Analysis Batch: 40840

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3563-1	SS03	Soluble	Solid	300.0	40727
890-3563-2	SS04	Soluble	Solid	300.0	40727
890-3563-3	SS05	Soluble	Solid	300.0	40727
890-3563-4	SS06	Soluble	Solid	300.0	40727
MB 880-40727/1-A	Method Blank	Soluble	Solid	300.0	40727
LCS 880-40727/2-A	Lab Control Sample	Soluble	Solid	300.0	40727
LCSD 880-40727/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	40727
890-3563-1 MS	SS03	Soluble	Solid	300.0	40727

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QC Association Summary

 Client: Ensolum
 Job ID: 890-3563-1

 Project/Site: PLU 147
 SDG: 03E1558145

HPLC/IC (Continued)

Analysis Batch: 40840 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3563-1 MSD	SS03	Soluble	Solid	300.0	40727

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Date Received: 11/28/22 15:06

Client: Ensolum Job ID: 890-3563-1 Project/Site: PLU 147 SDG: 03E1558145

Client Sample ID: SS03 Lab Sample ID: 890-3563-1 Date Collected: 11/28/22 12:20

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			4.99 g	5 mL	40625	11/29/22 16:02	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40842	12/02/22 20:18	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			41057	12/05/22 14:17	AJ	EET MID
Total/NA	Analysis	8015 NM		1			41124	12/06/22 09:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	41142	12/06/22 15:00	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	41104	12/07/22 04:59	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	40727	11/30/22 15:52	SMC	EET MID
Soluble	Analysis	300.0		1			40840	12/01/22 21:47	SMC	EET MID

Client Sample ID: SS04 Lab Sample ID: 890-3563-2

Date Collected: 11/28/22 12:30 **Matrix: Solid**

Date Received: 11/28/22 15:06

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	40625	11/29/22 16:02	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40842	12/02/22 20:45	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			41057	12/05/22 14:17	AJ	EET MID
Total/NA	Analysis	8015 NM		1			41124	12/06/22 09:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	40909	12/02/22 15:34	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40981	12/06/22 01:15	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	40727	11/30/22 15:52	SMC	EET MID
Soluble	Analysis	300.0		1			40840	12/01/22 22:07	SMC	EET MID

Client Sample ID: SS05 Lab Sample ID: 890-3563-3 Date Collected: 11/28/22 12:35 **Matrix: Solid**

Date Received: 11/28/22 15:06

	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	40625	11/29/22 16:02	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40842	12/02/22 21:11	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			41057	12/05/22 14:17	AJ	EET MID
Total/NA	Analysis	8015 NM		1			41124	12/06/22 09:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	40909	12/02/22 15:34	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40981	12/06/22 01:55	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	40727	11/30/22 15:52	SMC	EET MID
Soluble	Analysis	300.0		1			40840	12/01/22 22:13	SMC	EET MID

Client Sample ID: SS06 Lab Sample ID: 890-3563-4 Date Collected: 11/28/22 12:40 Matrix: Solid

Date Received: 11/28/22 15:06

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	40625	11/29/22 16:02	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40842	12/02/22 21:38	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			41057	12/05/22 14:17	AJ	EET MID

Eurofins Carlsbad

Released to Imaging: 5/19/2023 3:33:06 PM

Lab Chronicle

Client: Ensolum Job ID: 890-3563-1 Project/Site: PLU 147 SDG: 03E1558145

Client Sample ID: SS06 Lab Sample ID: 890-3563-4 Date Collected: 11/28/22 12:40

Matrix: Solid

Date Received: 11/28/22 15:06

	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			41124	12/06/22 09:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	40909	12/02/22 15:34	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40981	12/06/22 02:16	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	40727	11/30/22 15:52	SMC	EET MID
Soluble	Analysis	300.0		1			40840	12/01/22 22:20	SMC	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: 890-3563-1

 Project/Site: PLU 147
 SDG: 03E1558145

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:	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	•	ore, 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: PLU 147 Job ID: 890-3563-1 SDG: 03E1558145

rotocol	Laboratory
W846	EET MID
AL SOP	EET MID
W846	EET MID
W846	EET MID
CAWW	EET MID

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: PLU 147 Job ID: 890-3563-1

SDG: 03E1558145

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3563-1	SS03	Solid	11/28/22 12:20	11/28/22 15:06	0.5
890-3563-2	SS04	Solid	11/28/22 12:30	11/28/22 15:06	0.5
890-3563-3	SS05	Solid	11/28/22 12:35	11/28/22 15:06	0.5
890-3563-4	SS06	Solid	11/28/22 12:40	11/28/22 15:06	0.5

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City, State ZIP:

Carlsbad, NM 88220 3122 National Parks Hwy

\ddress:

Company Name: Project Manager:

Ensolum

Tacoma Morrissey

Bill to: (If different) Company Name Address:

Garrett Green

Carlsbad, NM 88220 3104 E. Green St. XTO Energy

Deliverables: EDD

ADaPT [

Other

Xenco **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) 392-7550, Carlsbad, NM (575) 988-3199 Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300

Work Order No:	
www.xenco.com Page of of	
Work Order Comments	
Program: UST/PST ☐ PRP☐ Brownfields ☐ RRC ☐ Superfund ☐	
State of Project:	
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV☐	

Phone: 303-8	303-887-2946		Email: G	Email: Garrett.Green@ExxonMobil.com	@Exx	nMok	il.con		Delivera	Deliverables: EDD [] ADAPT LD Other:
Project Name:	PLU 147		Turn Around	ound					ANALYSIS REQUEST	Preservative Codes
Project Number:	03E1558145		Routine	Rush	Code					None: NO DI Water: H ₂ O
Project Location:			Due Date:							Cool: Cool MeOH: Me
Sampler's Name:	Connor Whitman		TAT starts the day received by	ay received by						HCL: HC HNO3: HN
PO#			the lab, if received by 4:30pm	ed by 4:30pm	rs				-	H ₂ SO ₄ : H ₂ NaOH: Na
SAMPLE RECEIPT	Temp Blank:	(Yes) No	Wet Ice:	Yes No	nete	0)				H ₃ PO ₄ : HP
Samples Received Intact	No T	Thermometer ID:	M	MOOT	aran	300.				NaHSO ₄ : NABIS
	Yes No MAN	Correction Factor:		-0.2	Pa	PA: 3				Na ₂ S ₂ O ₃ ; NaSO ₃
Sample Custody Seals:	NO NIA	Temperature Reading:		5.0		(EI)	800-3563 Chain of Custody	Zn Acetate+NaOH: Zn
Total Containers:	0	Corrected Temperature	erature: 4	1.8		IDES	15)	8021		NaOH+Ascorbic Acid: SAPC
Sample Identification	on Matrix	Date Sampled	Time D	Depth Comp	# of Cont	CHLOR	TPH (80	BTEX (Sample Comments
\$\$03	S	11/28/2022	12:20	.5' Grab	1	×	×	×		Incident ID:
SS04	S	11/28/2022	12:30	.5' Grab	_	×	×	×		nAPP2230832832
SS05	S	11/28/2022	12:35	.5' Grab	1	×	×	×		Cost Center:
SS06	S	11/28/2022	12:40	.5' Grab	_	×	×	×		1137341001
/										AFE:
					/	_	5	×		
						_	1			
Total 200.7 / 6010	200.8 / 6020:	8RC	8RCRA 13PPM Texas 11 Al Sb As Ba Be	Texas 11	Al Sb	As E	За Ве	B Cd	Ca Cr Co Cu Fe Pb Mg	Mn Mo Ni K Se Ag SiO ₂ Na Sr Tl Sn U V Zn
ĕ e	tal(s) to be analyze	ed	TCLP / SPLP 6010: 8RCRA	6010: 8RC		Sb As	Ba	ВеС	Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U	^{Ag} TI U Hg: 1631 / 245.1 / 7470 / 7471
Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. 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 at	it and relinquishment of	samples constitut of samples and sh	es a valid purcha	se order from cli	or any l	pany to	Eurofin	s Xenco	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 the	It assigns standard terms and conditions e due to circumstances beyond the control will be enforced unless newlocally negotiated
Relinquished by: (Signature)	nature)	Repeived, t	Repeived by: (Signature)	9)		Date/Time	Time		Relinquished by: (Signature)	Received by: (Signature) Date/Time

Revised Date: 06/25/2020 Rev 2020.2

12/7/2022 (Rev. 1)

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3563-1

SDG Number: 03E1558145

Login Number: 3563 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.	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: 890-3563-1

SDG Number: 03E1558145

List Source: Eurofins Midland
List Number: 2
List Creation: 11/30/22 12:31 PM

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	

Page 27 of 27 12/7/2022 (Rev. 1)

<6mm (1/4").

Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Tacoma Morrissey Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701

Generated 1/17/2023 4:33:05 PM

JOB DESCRIPTION

PLU 147 SDG NUMBER 03E1558145

JOB NUMBER

890-3863-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

Eurofins Carlsbad

Job Notes

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization

Generated 1/17/2023 4:33:05 PM

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

 Client: Ensolum
 Laboratory Job ID: 890-3863-1

 Project/Site: PLU 147
 SDG: 03E1558145

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Definitions/Glossary

Client: Ensolum Job ID: 890-3863-1 Project/Site: PLU 147 SDG: 03E1558145

Qualifiers

GC VOA	
Qualifier	

Qualifici	Qualific Boothplion
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.

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

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

Glossary A la la una vila 41 a un

DL

DLC

DL, RA, RE, IN

Appreviation	These commonly used appreviations 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

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

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)

Decision Level Concentration (Radiochemistry)

Detection Limit (DoD/DOE)

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)

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

Case Narrative

Job ID: 890-3863-1 Client: Ensolum Project/Site: PLU 147 SDG: 03E1558145

Job ID: 890-3863-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-3863-1

Receipt

The sample was received on 1/13/2023 3:20 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 4.0°C

Receipt Exceptions

The following sample was received and analyzed from an unpreserved bulk soil jar: FS01A (890-3863-1).

GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-43991 and analytical batch 880-44129 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

GC Semi VOA

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.

Eurofins Carlsbad 1/17/2023

Job ID: 890-3863-1

Matrix: Solid

Lab Sample ID: 890-3863-1

Client: Ensolum Project/Site: PLU 147 SDG: 03E1558145

Client Sample ID: FS01A

Date Collected: 01/13/23 14:25 Date Received: 01/13/23 15:20

Sample Depth: 1.5

Analyte

Chloride

Released to Imaging: 5/19/2023 3:33:06 PM

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		01/16/23 14:35	01/17/23 13:31	1
Toluene	<0.00201	U	0.00201	mg/Kg		01/16/23 14:35	01/17/23 13:31	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		01/16/23 14:35	01/17/23 13:31	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		01/16/23 14:35	01/17/23 13:31	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		01/16/23 14:35	01/17/23 13:31	,
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		01/16/23 14:35	01/17/23 13:31	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130			01/16/23 14:35	01/17/23 13:31	
1,4-Difluorobenzene (Surr)	67	S1-	70 - 130			01/16/23 14:35	01/17/23 13:31	
Method: TAL SOP Total BTEX - 1								
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			01/17/23 17:23	1
Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		01/17/23 11:00	01/17/23 14:46	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		01/17/23 11:00	01/17/23 14:46	,
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/17/23 11:00	01/17/23 14:46	
	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
Surrogate						01/17/23 11:00	01/17/23 14:46	
Surrogate 1-Chlorooctane	98		70 - 130			01/11/23 11.00	01/11/23 14.40	

RL

5.03

Result Qualifier

294

Unit

mg/Kg

D

Prepared

Eurofins Carlsbad

Analyzed

01/17/23 14:24

Dil Fac

Surrogate Summary

 Client: Ensolum
 Job ID: 890-3863-1

 Project/Site: PLU 147
 SDG: 03E1558145

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

_				Percent Surre	rogate F
		BFB1	DFBZ1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		
890-3838-A-61-E MS	Matrix Spike	102	84		
890-3838-A-61-F MSD	Matrix Spike Duplicate	134 S1+	93		
890-3863-1	FS01A	97	67 S1-		
LCS 880-43991/1-A	Lab Control Sample	108	97		
LCSD 880-43991/2-A	Lab Control Sample Dup	111	100		
MB 880-43991/5-A	Method Blank	85	90		
Surrogate Legend					
BFB = 4-Bromofluorobei	nzene (Surr)				
DFBZ = 1,4-Difluoroben:	zene (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)	
890-3843-A-1-D MS	Matrix Spike	90	78	
890-3843-A-1-D MSD	Matrix Spike Duplicate	103	77	
890-3863-1	FS01A	98	87	
LCS 880-43987/2-A	Lab Control Sample	171 S1+	161 S1+	
LCSD 880-43987/3-A	Lab Control Sample Dup	119	98	
MB 880-43987/1-A	Method Blank	103	103	
Surrogate Legend				

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Eurofins Carlsbad

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Client: Ensolum Job ID: 890-3863-1 SDG: 03E1558145 Project/Site: PLU 147

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-43991/5-A

Lab Sample ID: LCS 880-43991/1-A

Matrix: Solid

Analysis Batch: 44129

Matrix: Solid Analysis Batch: 44129 Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 43991

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/16/23 14:35	01/17/23 12:29	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/16/23 14:35	01/17/23 12:29	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/16/23 14:35	01/17/23 12:29	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/16/23 14:35	01/17/23 12:29	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/16/23 14:35	01/17/23 12:29	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/16/23 14:35	01/17/23 12:29	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		70 - 130	01/16/23 14:35	01/17/23 12:29	1
1,4-Difluorobenzene (Surr)	90		70 - 130	01/16/23 14:35	01/17/23 12:29	1

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 43991

Docult					
Kesuit	Qualifier	Unit	D	%Rec	Limits
0.09402		mg/Kg		94	70 - 130
0.1033		mg/Kg		103	70 - 130
0.09664		mg/Kg		97	70 - 130
0.2150		mg/Kg		107	70 - 130
0.1176		mg/Kg		118	70 - 130
	0.1033 0.09664 0.2150	0.1033 0.09664 0.2150	0.1033 mg/Kg 0.09664 mg/Kg 0.2150 mg/Kg	0.1033 mg/Kg 0.09664 mg/Kg 0.2150 mg/Kg	0.1033 mg/Kg 103 0.09664 mg/Kg 97 0.2150 mg/Kg 107

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	108	70 - 130
1,4-Difluorobenzene (Surr)	97	70 - 130

Client Sample ID: Lab Control Sample Dup

Matrix: Solid

Lab Sample ID: LCSD 880-43991/2-A

Analysis Batch: 44129

Prep Type: Total/NA Prep Batch: 43991

	Бріке	LCSD	LC2D				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.1023		mg/Kg		102	70 - 130	8	35	
Toluene	0.100	0.1067		mg/Kg		107	70 - 130	3	35	
Ethylbenzene	0.100	0.09902		mg/Kg		99	70 - 130	2	35	
m-Xylene & p-Xylene	0.200	0.2172		mg/Kg		109	70 - 130	1	35	
o-Xylene	0.100	0.1197		mg/Kg		120	70 - 130	2	35	

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	111	70 - 130
1,4-Difluorobenzene (Surr)	100	70 - 130

Lab Sample ID: 890-3838-A-61-E MS

Matrix: Solid

Analysis Batch: 44129

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

Prep Batch: 43991

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00199	U F1	0.0998	0.06666	F1	mg/Kg	_	67	70 - 130	
Toluene	< 0.00199	U	0.0998	0.08616		mg/Kg		86	70 - 130	

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Prep Batch: 43991

Prep Type: Total/NA

Client Sample ID: Matrix Spike Duplicate

QC Sample Results

Client: Ensolum Job ID: 890-3863-1 Project/Site: PLU 147 SDG: 03E1558145

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

Lab Sample ID: 890-3838-A-61-E MS Client Sample ID: Matrix Spike Prep Type: Total/NA

Matrix: Solid

Analysis Batch: 44129

Sample	Sample	Spike	MS	MS				%Rec	
Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
<0.00199	U	0.0998	0.09887		mg/Kg		99	70 - 130	
<0.00398	U	0.200	0.1769		mg/Kg		89	70 - 130	
<0.00199	U	0.0998	0.09305		mg/Kg		93	70 - 130	
	Result <0.00199 <0.00398	Result Qualifier	Result Qualifier Added <0.00199	Result Qualifier Added Result <0.00199	Result Qualifier Added Result Qualifier <0.00199	Result Qualifier Added Result Qualifier Unit <0.00199	Result Qualifier Added Result Qualifier Unit D <0.00199	Result Qualifier Added Result Qualifier Unit D %Rec <0.00199	Result Qualifier Added Result Qualifier Unit D %Rec Limits <0.00199

MS MS

Surrogate	%Recovery Qι	ıalifier	Limits
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	84		70 - 130

Lab Sample ID: 890-3838-A-61-F MSD

Matrix: Solid

Analysis Batch: 44129

Prep Batch: 43991 Sample Sample Spike MSD MSD Result Qualifier Added Result Qualifier RPD Limit Analyte Unit %Rec Limits 0.100 Benzene <0.00199 UF1 0.06608 F1 mg/Kg 66 70 - 130 1 35 Toluene 0.07566 70 - 130 <0.00199 U 0.100 mg/Kg 76 13 35 Ethylbenzene <0.00199 U 0.100 0.08076 81 70 - 130 20 35 mg/Kg <0.00398 U 0.200 0.1847 92 70 - 130 35 m-Xylene & p-Xylene mg/Kg 4 0.100 <0.00199 U 0.1021 102 70 - 130 9 o-Xylene mg/Kg

MSD MSD

Surrogate	%Recovery		Limits
4-Bromofluorobenzene (Surr)	134	S1+	70 - 130
1,4-Difluorobenzene (Surr)	93		70 - 130

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

Lab Sample ID: MB 880-43987/1-A

Matrix: Solid

Analysis Batch: 44121

Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 43987 MR MR

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		01/16/23 14:04	01/17/23 11:49	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		01/16/23 14:04	01/17/23 11:49	1
C10-C28)								
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/16/23 14:04	01/17/23 11:49	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130	01/16/23 14:0	4 01/17/23 11:49	1
o-Terphenyl	103		70 - 130	01/16/23 14:0	4 01/17/23 11:49	1

Lab Sample ID: LCS 880-43987/2-A

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Matrix: Solid

Analysis Batch: 44121							Prep	Batch: 43987
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	876.4		mg/Kg		88	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	923.3		mg/Kg		92	70 - 130	
C10-C28)								

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

Job ID: 890-3863-1 Client: Ensolum Project/Site: PLU 147 SDG: 03E1558145

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

LCS LCS

Lab Sample ID: LCS 880-43987/2-A **Client Sample ID: Lab Control Sample**

Matrix: Solid

Analysis Batch: 44121

Prep Type: Total/NA

Prep Batch: 43987

Surrogate %Recovery Qualifier Limits 1-Chlorooctane 171 S1+ 70 - 130 o-Terphenyl 161 S1+ 70 - 130

Lab Sample ID: LCSD 880-43987/3-A Client Sample ID: Lab Control Sample Dup

Matrix: Solid

Analysis Batch: 44121

Prep Type: Total/NA

Prep Batch: 43987

Spike LCSD LCSD %Rec RPD Analyte Added Result Qualifier Unit D %Rec Limits RPD Limit 1000 990.8 99 70 - 13012 20 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 842.9 mg/Kg 84 70 - 1309 20

C10-C28)

LCSD LCSD

Surrogate %Recovery Qualifier Limits 70 - 130 1-Chlorooctane 119 70 - 130 o-Terphenyl 98

Lab Sample ID: 890-3843-A-1-D MS Client Sample ID: Matrix Spike

Matrix: Solid

Analysis Batch: 44121

Prep Type: Total/NA

Prep Batch: 43987

Surrogate %Recovery Qualifier Limits 1-Chlorooctane 90 70 - 130 o-Terphenyl 78 70 - 130

MS MS

Lab Sample ID: 890-3843-A-1-D MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Analysis Batch: 44121

Prep Type: Total/NA Prep Batch: 43987 MSD MSD

Surrogate %Recovery Qualifier Limits 1-Chlorooctane 103 70 - 130 o-Terphenyl 77 70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-44148/1-A Client Sample ID: Method Blank **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 44156

MB MB

Result Qualifier Analyte RL Unit Prepared Analyzed Dil Fac Chloride <5.00 U 5.00 01/17/23 14:05 mg/Kg

Lab Sample ID: LCS 880-44148/2-A **Client Sample ID: Lab Control Sample Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 44156

Released to Imaging: 5/19/2023 3:33:06 PM

LCS LCS Spike %Rec Analyte Added Result Qualifier Unit %Rec Limits Chloride 250 254.0 102 90 - 110 mg/Kg

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QC Sample Results

Client: Ensolum Job ID: 890-3863-1 SDG: 03E1558145 Project/Site: PLU 147

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 880-44148/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 44156

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

Lab Sample ID: 890-3863-1 MS Client Sample ID: FS01A **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 44156

	Sample Sample	Spike	MS MS				%Rec
Analyte	Result Qualifier	Added	Result Qualifi	er Unit	D	%Rec	Limits
Chloride	294	252	541.9	mg/Kg		98	90 - 110

Lab Sample ID: 890-3863-1 MSD Client Sample ID: FS01A **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 44156

MSD MSD %Rec RPD Sample Sample Spike Result Qualifier Limit Analyte Added Result Qualifier Unit Limits **RPD** Chloride 294 252 542.0 90 - 110 20 mg/Kg

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QC Association Summary

 Client: Ensolum
 Job ID: 890-3863-1

 Project/Site: PLU 147
 SDG: 03E1558145

GC VOA

Prep Batch: 43991

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3863-1	FS01A	Total/NA	Solid	5035	
MB 880-43991/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-43991/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-43991/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3838-A-61-E MS	Matrix Spike	Total/NA	Solid	5035	
890-3838-A-61-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 44129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3863-1	FS01A	Total/NA	Solid	8021B	43991
MB 880-43991/5-A	Method Blank	Total/NA	Solid	8021B	43991
LCS 880-43991/1-A	Lab Control Sample	Total/NA	Solid	8021B	43991
LCSD 880-43991/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	43991
890-3838-A-61-E MS	Matrix Spike	Total/NA	Solid	8021B	43991
890-3838-A-61-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	43991

Analysis Batch: 44211

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3863-1	FS01A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 43987

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3863-1	FS01A	Total/NA	Solid	8015NM Prep	
MB 880-43987/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-43987/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-43987/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3843-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3843-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 44121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3863-1	FS01A	Total/NA	Solid	8015B NM	43987
MB 880-43987/1-A	Method Blank	Total/NA	Solid	8015B NM	43987
LCS 880-43987/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	43987
LCSD 880-43987/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	43987
890-3843-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	43987
890-3843-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	43987

HPLC/IC

Leach Batch: 44148

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3863-1	FS01A	Soluble	Solid	DI Leach	
MB 880-44148/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-44148/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-44148/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3863-1 MS	FS01A	Soluble	Solid	DI Leach	
890-3863-1 MSD	FS01A	Soluble	Solid	DI Leach	

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QC Association Summary

 Client: Ensolum
 Job ID: 890-3863-1

 Project/Site: PLU 147
 SDG: 03E1558145

HPLC/IC

Analysis Batch: 44156

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3863-1	FS01A	Soluble	Solid	300.0	44148
MB 880-44148/1-A	Method Blank	Soluble	Solid	300.0	44148
LCS 880-44148/2-A	Lab Control Sample	Soluble	Solid	300.0	44148
LCSD 880-44148/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	44148
890-3863-1 MS	FS01A	Soluble	Solid	300.0	44148
890-3863-1 MSD	FS01A	Soluble	Solid	300.0	44148

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Lab Chronicle

Client: Ensolum Job ID: 890-3863-1 Project/Site: PLU 147 SDG: 03E1558145

Client Sample ID: FS01A

Lab Sample ID: 890-3863-1 Date Collected: 01/13/23 14:25 Date Received: 01/13/23 15:20

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			4.97 g	5 mL	43991	01/16/23 14:35	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44129	01/17/23 13:31	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44211	01/17/23 17:23	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	43987	01/17/23 11:00	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44121	01/17/23 14:46	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	44148	01/17/23 11:25	KS	EET MID
Soluble	Analysis	300.0		1			44156	01/17/23 14:24	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: 890-3863-1

 Project/Site: PLU 147
 SDG: 03E1558145

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	T104704400-22-25	06-30-23	
The following analytes	are included in this report but	it the laboratory is not certifi	ied by the governing authority. This list ma	av include analytes for	
0 ,		it the laboratory is not certifi	ied by the governing authority. This list ma	ay include analytes for	
The following analytes the agency does not o		it the laboratory is not certifi	ied by the governing authority. This list ma	ay include analytes for	
0 ,		t the laboratory is not certifi Matrix	ied by the governing authority. This list ma Analyte	ay include analytes for	

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Method Summary

Job ID: 890-3863-1 Client: Ensolum Project/Site: PLU 147

SDG: 03E1558145

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

Sample Summary

Client: Ensolum Project/Site: PLU 147 Job ID: 890-3863-1

SDG: 03E1558145

Lab Sample ID Client Sample ID Matrix Collected Received Depth 890-3863-1 FS01A Solid 01/13/23 14:25 01/13/23 15:20 1.5

Circle Method(s) a

Relinquished by: (Signature)

eceived by: (Signa

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Date/Time

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Revised Date: 08/25/2020 Rev. 2020.2

eurofins **Environment Testing**

Phone:

City, State ZIP:

Address:

Project Number:

Project Name:

SAMPLE RECEIPT

Cooler Custody Seals:

samples Received Inta

Total Containers: Sample Custody Seals: Sampler's Name:

Project Location:

Project Manager:

Company Name:

Chain of Custody

Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300

Environment Testing	Midland, TX (43	Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334	Work Order No:		1/1
	Hobbs, NM (5	Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	www.xenco.com	Page of	
ject Manager: Tercense Marissey	Bill to: (if different)	Cressery Green	Work Order Comments	m	
2 - DX	Company Name:	LAJONS OIL	Program: UST/PST PRP Bro	Brownfields ☐ RRC ☐ Superfund ☐	
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			Deliverables: EDD ADaí	ADaPT Other:	
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per: 1361558145 Rout	JRUSH 2 YH Code			None: NO DI Water: H ₂ O	
Edd, (a Dru			Cool: Cool MeOH: Me	
CB'	TAT starts the day received by				
	the lab, if received by 4:30pm			H ₂ SO ₄ : H ₂ NaOH: Na	
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nd Metal(s) to be analyzed	SPLP 6010 : 8RCRA S	s Ba Be Cd Cr Co Cu P	Se Ag Tl U Hg: 1631/245.1/7470.	/7470 /7471	
itee: 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 condition 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	rder from client company to Eurot consibility for any losses or expen-	ns Xenco, Its affiliates and subcontractors. It assigns standard termes incurred by the client if such losses are due to circumstances be	ns and conditions yond the control		
EUOMS ACRO. A minimum chalge of 30000 win be adopted to each project and a chalge of 30 for each sample subminisca for Europhia Across the complete Submin	o tot edul adulhe adolinives to a	Company of the locality page 1100 company	, J		

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

Chain of Custody Record

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Environment Testing

Custody Seals Intact. Custody Seal No ∆ Yes ∆ No	Relinquished by:	Relinquished by	Relinquished by	Empty Kit Relinquished by	Deliverable Requested I II III, IV Other (specify)	Possible Hazard Identification Unconfirmed	Note: Since laboratory accreditations are subject to change Eurofins Environment Testing South Central, LLC places the ownership of method analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Environment Testing South Central. LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central. LLC					FS01A (890-3863-1)		Sample Identification - Client ID (Lab ID)	O.E.	PLU 147	Email	Phone 432-704-5440(Tel)	State, Zip: TX, 79701	City: Midland	Address 1211 W Florida Ave ,	Company Eurofins Environment Testing South Centr	Shipping/Receiving	Client Information (Sub Contract Lab)
	Date/Time [.]	Date/Time	Date/Time		Primary Deliverable Rank		environment Testing South Centralin listed above for analysis/tests/ g South Central LLC attention im					1/13/23	N	Sample Date	SCW#	Project #: 89000093	WO#	PO#:		TAT Requested (days)	Due Date Requested 1/18/2023		Pnone	Sampler
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Coo	Rec	# #	Total Control	Time A	Special Instructions/QC Requirements	Sample	te & accredinipped bac current to d					×	X	Perform M 8015MOD_N		Beech Block	Solo, AND EARL	DD) Fu	II TPH	ar salah		Accreditations Requir NELAP - Texas	E-Mail: Jessica Kramer@et.eu	Kramer, Jessica
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o de la company	Date/Time	Date/Time	Date/Time	nipment		ples	This sa LC labo	-	<u> </u>															(s)
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				Ì		taine Archin	nipment or other o Eurof		25.00.0		 in a	 -	X	Total Numl	sider to made and	Buckeyolek	- middelastes	יסב	ana all	ဂဏာ	, u	ر 8 د	Q Q	8 00
						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Return To Clent Disposal By Lab Archive For Mon	t is forwarded under instructions will be ins Environment Te							Special In	Other:	EDA		F MBOTI G Amchlor H Ascorbic Acid		NaOH	Preservation Codes:	Job #: 890-3863-1	Page [.] Page 1 of 1	COC No: 890-1102 1
	Company	Company	Company			Months	r chain-of-custody If provided Any chang sting South Central I							Special Instructions/Note			V MCAA W pH 4-5		R Na2SO3		des: M Hexane			

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3863-1

SDG Number: 03E1558145

Login Number: 3863 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.	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	

127

Login Number: 3863

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-3863-1 SDG Number: 03E1558145

List Source: Eurofins Midland

List Number: 2 List Creation: 01/17/23 11:09 AM Creator: Teel, Brianna

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

<6mm (1/4").

Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Tacoma Morrissey Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701

Generated 12/27/2022 2:48:19 PM

JOB DESCRIPTION

PLU 147 SDG NUMBER 03E1558145

JOB NUMBER

890-3668-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220



Released to Imaging: 5/19/2023 3:33:06 PM

Eurofins Carlsbad

Job Notes

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization

Generated 12/27/2022 2:48:19 PM

Authorized for release by Jessica Kramer, Project Manager <u>Jessica.Kramer@et.eurofinsus.com</u> (432)704-5440 Client: Ensolum
Project/Site: PLU 147
Laboratory Job ID: 890-3668-1
SDG: 03E1558145

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Definitions/Glossary

Client: Ensolum Job ID: 890-3668-1 Project/Site: PLU 147 SDG: 03E1558145

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

LOD

Abbreviation	These commonly used abbreviations may or may not be present in this report.
n	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)

LOQ Limit of Quantitation (DoD/DOE) MCL EPA recommended "Maximum Contaminant Level" MDA Minimum Detectable Activity (Radiochemistry) MDC Minimum Detectable Concentration (Radiochemistry)

Limit of Detection (DoD/DOE)

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)

RL Reporting Limit or Requested Limit (Radiochemistry)

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

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

TNTC Too Numerous To Count

Eurofins Carlsbad

Case Narrative

 Client: Ensolum
 Job ID: 890-3668-1

 Project/Site: PLU 147
 SDG: 03E1558145

Job ID: 890-3668-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-3668-1

Receipt

The sample was received on 12/16/2022 9:06 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 0.8°C

Receipt Exceptions

The following sample was received and analyzed from an unpreserved bulk soil jar: FS01 (890-3668-1).

GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-42531 and analytical batch 880-42623 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

GC Semi VOA

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-42124 and analytical batch 880-42120 was outside the upper control limits.

Method 8015MOD_NM: The matrix spike duplicate (MSD) recoveries for preparation batch 880-42124 and analytical batch 880-42120 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 880-42015 and analytical batch 880-42050 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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Job ID: 890-3668-1

SDG: 03E1558145

Client Sample ID: FS01

Lab Sample ID: 890-3668-1

Matrix: Solid

Date Collected: 12/15/22 13:30 Date Received: 12/16/22 09:06

Sample Depth: 1

Client: Ensolum

Project/Site: PLU 147

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	0.00594		0.00200	mg/Kg		12/22/22 14:30	12/27/22 13:24	
Toluene	0.299	F1	0.00200	mg/Kg		12/22/22 14:30	12/27/22 13:24	
Ethylbenzene	0.0128	F1	0.00200	mg/Kg		12/22/22 14:30	12/27/22 13:24	
m-Xylene & p-Xylene	0.604	F1	0.00401	mg/Kg		12/22/22 14:30	12/27/22 13:24	
o-Xylene	0.131	F1	0.00200	mg/Kg		12/22/22 14:30	12/27/22 13:24	
Xylenes, Total	0.735	F1	0.00401	mg/Kg		12/22/22 14:30	12/27/22 13:24	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	92		70 - 130			12/22/22 14:30	12/27/22 13:24	
1,4-Difluorobenzene (Surr)	109		70 - 130			12/22/22 14:30	12/27/22 13:24	
Method: TAL SOP Total BTEX - T	otal BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	1.05		0.00401	mg/Kg			12/27/22 15:14	
Method: SW846 8015 NM - Diese			•					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	2300		50.0	mg/Kg			12/19/22 17:46	
Method: SW846 8015B NM - Dies	•							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	424		50.0	mg/Kg		12/19/22 08:43	12/19/22 10:53	
Diesel Range Organics (Over C10-C28)	1880	F1	50.0	mg/Kg		12/19/22 08:43	12/19/22 10:53	
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/19/22 08:43	12/19/22 10:53	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	99		70 - 130			12/19/22 08:43	12/19/22 10:53	
o-Terphenyl	92		70 - 130			12/19/22 08:43	12/19/22 10:53	
Method: MCAWW 300.0 - Anions	, Ion Chromato	graphy - So	oluble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
			4.95				12/19/22 19:09	

Surrogate Summary

Client: Ensolum Job ID: 890-3668-1 Project/Site: PLU 147 SDG: 03E1558145

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Red
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-3668-1	FS01	92	109	
890-3668-1 MS	FS01	104	99	
890-3668-1 MSD	FS01	101	107	
LCS 880-42531/1-A	Lab Control Sample	99	96	
LCSD 880-42531/2-A	Lab Control Sample Dup	99	96	
MB 880-42531/5-A	Method Blank	95	93	
Surrogate Legend				
BFB = 4-Bromofluorobenzer	ne (Surr)			
DFBZ = 1,4-Difluorobenzene	e (Surr)			

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
ab Sample ID	Client Sample ID	(70-130)	(70-130)	
90-3668-1	FS01	99	92	
90-3668-1 MS	FS01	107	83	
90-3668-1 MSD	FS01	91	72	
CS 880-42124/2-A	Lab Control Sample	101	108	
CSD 880-42124/3-A	Lab Control Sample Dup	109	104	
1B 880-42124/1-A	Method Blank	140 S1+	139 S1+	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-3668-1 Project/Site: PLU 147 SDG: 03E1558145

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-42531/5-A

Matrix: Solid

Analysis Batch: 42623

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 42531

	IVID	IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		12/22/22 14:30	12/27/22 13:02	1
Toluene	<0.00200	U	0.00200	mg/Kg		12/22/22 14:30	12/27/22 13:02	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		12/22/22 14:30	12/27/22 13:02	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		12/22/22 14:30	12/27/22 13:02	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		12/22/22 14:30	12/27/22 13:02	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		12/22/22 14:30	12/27/22 13:02	1

MB MB

MD MD

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130	12/22/22 14:	30 12/27/22 13:02	1
1,4-Difluorobenzene (Surr)	93		70 - 130	12/22/22 14:	30 12/27/22 13:02	1

Lab Sample ID: LCS 880-42531/1-A

Matrix: Solid

Analysis Batch: 42623

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 42531

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1042		mg/Kg		104	70 - 130	
Toluene	0.100	0.1015		mg/Kg		101	70 - 130	
Ethylbenzene	0.100	0.09525		mg/Kg		95	70 - 130	
m-Xylene & p-Xylene	0.200	0.2103		mg/Kg		105	70 - 130	
o-Xylene	0.100	0.1038		mg/Kg		104	70 - 130	

LCS LCS

Surrogate	%Recovery Quali	fier Limits
4-Bromofluorobenzene (Surr)	99	70 - 130
1,4-Difluorobenzene (Surr)	96	70 - 130

Lab Sample ID: LCSD 880-42531/2-A

Matrix: Solid

Analysis Batch: 42623

	Client Sam	ple ID: Lab	Control Sam	ple Dup
--	------------	-------------	--------------------	---------

Prep Type: Total/NA

Prep Batch: 42531

RPD LCSD LCSD Spike %Rec Analyte Added Result Qualifier Unit %Rec Limits Limit Benzene 0.100 0.1033 mg/Kg 103 70 - 130 35 Toluene 0.100 0.09966 mg/Kg 100 70 - 130 2 35 Ethylbenzene 0.100 0.09323 mg/Kg 93 70 - 130 2 35 0.200 0.2065 m-Xylene & p-Xylene mg/Kg 103 70 - 130 35 0.100 0.1020 102 70 - 130 o-Xylene mg/Kg 35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1.4-Difluorobenzene (Surr)	96		70 - 130

Lab Sample ID: 890-3668-1 MS

Matrix: Solid

Analysis Batch: 42623

Client Sample ID: FS01

Prep Type: Total/NA

Prep Batch: 42531

-	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.00594		0.0998	0.09222		mg/Kg		86	70 - 130	
Toluene	0.299	F1	0.0998	0.2514	F1	mg/Kg		-47	70 - 130	

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Page 8 of 20

Client Sample ID: FS01

 Client: Ensolum
 Job ID: 890-3668-1

 Project/Site: PLU 147
 SDG: 03E1558145

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

Lab Sample ID: 890-3668-1 MS

Matrix: Solid Prep Type: Total/NA
Analysis Batch: 42623 Prep Batch: 42531

	Sample	Sample	эріке	IVIS	IVIS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylbenzene	0.0128	F1	0.0998	0.06078	F1	mg/Kg		48	70 - 130	
m-Xylene & p-Xylene	0.604	F1	0.200	0.6899	F1	mg/Kg		43	70 - 130	
o-Xylene	0.131	F1	0.0998	0.1930	F1	mg/Kg		62	70 - 130	

 Surrogate
 %Recovery
 Qualifier
 Limits

 4-Bromofluorobenzene (Surr)
 104
 70 - 130

 1,4-Difluorobenzene (Surr)
 99
 70 - 130

Lab Sample ID: 890-3668-1 MSD

Matrix: Solid

Client Sample ID: FS01

Prep Type: Total/NA

Analysis Batch: 42623

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
Benzene	0.00594		0.0990	0.08090		mg/Kg		76	70 - 130	13	35
Toluene	0.299	F1	0.0990	0.2714	F1	mg/Kg		-27	70 - 130	8	35
Ethylbenzene	0.0128	F1	0.0990	0.05630	F1	mg/Kg		44	70 - 130	8	35
m-Xylene & p-Xylene	0.604	F1	0.198	0.6837	F1	mg/Kg		40	70 - 130	1	35
o-Xylene	0.131	F1	0.0990	0.1832	F1	mg/Kg		53	70 - 130	5	35

 Surrogate
 %Recovery
 Qualifier
 Limits

 4-Bromofluorobenzene (Surr)
 101
 70 - 130

 1,4-Difluorobenzene (Surr)
 107
 70 - 130

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

Lab Sample ID: MB 880-42124/1-A

Matrix: Solid

Analysis Batch: 42120

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 42124

MB MB

	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		12/19/22 08:13	12/19/22 08:19	1
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		12/19/22 08:13	12/19/22 08:19	1
C10-C28) Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/19/22 08:13	12/19/22 08:19	1

MB MB Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 70 - 130 12/19/22 08:13 1-Chlorooctane 140 S1+ 12/19/22 08:19 12/19/22 08:13 o-Terphenyl 139 S1+ 70 - 130 12/19/22 08:19

Lab Sample ID: LCS 880-42124/2-A Client Sample ID: Lab Control Sample

Matrix: Solid Prep Type: Total/NA
Analysis Batch: 42120 Prep Batch: 42124

	Бріке	LUS	LUS				%Rec		
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics	1000	922.2		mg/Kg		92	70 - 130		-
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	1001		mg/Kg		100	70 - 130		
C10-C28)									

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Limits

70 - 130

70 - 130

Job ID: 890-3668-1 SDG: 03E1558145

Project/Site: PLU 147 Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 880-42124/2-A **Matrix: Solid**

Analysis Batch: 42120

Client: Ensolum

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 42124

Lab Sample ID: LCSD 880-42124/3-A

Matrix: Solid

Surrogate

o-Terphenyl

1-Chlorooctane

Analysis Batch: 42120

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 42124

Spike LCSD LCSD %Rec RPD Analyte Added Result Qualifier Unit D %Rec Limits RPD Limit 1000 985.3 99 70 - 130 7 20 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 961.2 96 mg/Kg 70 - 13020 C10-C28)

LCSD LCSD

Sample Sample

LCS LCS

%Recovery Qualifier

101

108

Surrogate %Recovery Qualifier Limits 109 70 - 130 1-Chlorooctane o-Terphenyl 104 70 - 130

Client Sample ID: FS01 Lab Sample ID: 890-3668-1 MS **Matrix: Solid**

Me Me

Analysis Batch: 42120

Prep Type: Total/NA

Prep Batch: 42124

	Sample	Sample	Spike	IVIO	IVIO				70KeC	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	424		999	1417		mg/Kg		99	70 - 130	
(GRO)-C6-C10										
Diesel Range Organics (Over	1880	F1	999	2625		mg/Kg		74	70 - 130	
C10 C28)										

Cnika

C10-C28)

MS MS %Recovery Qualifier Surrogate Limits 70 - 130 1-Chlorooctane 107 o-Terphenyl 83 70 - 130

Lab Sample ID: 890-3668-1 MSD Client Sample ID: FS01

Matrix: Solid

Analysis Batch: 42120

Prep Type: Total/NA Prep Batch: 42124

	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	424		997	1196		mg/Kg		77	70 - 130	17	20	
Diesel Range Organics (Over	1880	F1	997	2290	F1	mg/Kg		41	70 - 130	14	20	

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	91		70 - 130
o-Terphenyl	72		70 - 130

Eurofins Carlsbad

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Client Sample ID: Matrix Spike

Client Sample ID: Matrix Spike Duplicate

Job ID: 890-3668-1 Project/Site: PLU 147 SDG: 03E1558145

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-42015/1-A

Matrix: Solid

Analysis Batch: 42050

Client: Ensolum

мв мв

Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fac Chloride <5.00 U 5.00 mg/Kg 12/19/22 15:19

Lab Sample ID: LCS 880-42015/2-A

Matrix: Solid

Analysis Batch: 42050

Spike LCS LCS %Rec Added Analyte Result Qualifier Unit D %Rec Limits Chloride 250 273.6 mg/Kg 109 90 - 110

Lab Sample ID: LCSD 880-42015/3-A

Matrix: Solid

Analysis Batch: 42050

LCSD LCSD %Rec RPD Spike Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 250 274.6 mg/Kg 110 90 - 110

Lab Sample ID: 880-22814-A-1-B MS

Matrix: Solid

Analysis Batch: 42050

MS MS Sample Sample Spike %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits 986.3 F1 Chloride 695 F1 252 116 90 - 110 mg/Kg

Lab Sample ID: 880-22814-A-1-C MSD

Matrix: Solid

Analysis Batch: 42050

Sample Sample Spike MSD MSD %Rec RPD Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit 695 F1 252 Chloride 969.6 mg/Kg 109 90 - 110 20

Eurofins Carlsbad

QC Association Summary

 Client: Ensolum
 Job ID: 890-3668-1

 Project/Site: PLU 147
 SDG: 03E1558145

GC VOA

Prep Batch: 42531

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3668-1	FS01	Total/NA	Solid	5035	
MB 880-42531/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-42531/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-42531/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3668-1 MS	FS01	Total/NA	Solid	5035	
890-3668-1 MSD	FS01	Total/NA	Solid	5035	

Analysis Batch: 42623

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3668-1	FS01	Total/NA	Solid	8021B	42531
MB 880-42531/5-A	Method Blank	Total/NA	Solid	8021B	42531
LCS 880-42531/1-A	Lab Control Sample	Total/NA	Solid	8021B	42531
LCSD 880-42531/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	42531
890-3668-1 MS	FS01	Total/NA	Solid	8021B	42531
890-3668-1 MSD	FS01	Total/NA	Solid	8021B	42531

Analysis Batch: 42740

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3668-1	FS01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 42120

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3668-1	FS01	Total/NA	Solid	8015B NM	42124
MB 880-42124/1-A	Method Blank	Total/NA	Solid	8015B NM	42124
LCS 880-42124/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	42124
LCSD 880-42124/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	42124
890-3668-1 MS	FS01	Total/NA	Solid	8015B NM	42124
890-3668-1 MSD	FS01	Total/NA	Solid	8015B NM	42124

Prep Batch: 42124

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3668-1	FS01	Total/NA	Solid	8015NM Prep	
MB 880-42124/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-42124/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-42124/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3668-1 MS	FS01	Total/NA	Solid	8015NM Prep	
890-3668-1 MSD	FS01	Total/NA	Solid	8015NM Prep	

Analysis Batch: 42274

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3668-1	FS01	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 42015

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3668-1	FS01	Soluble	Solid	DI Leach	
MB 880-42015/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-42015/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-42015/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Eurofins Carlsbad

12/27/2022

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QC Association Summary

 Client: Ensolum
 Job ID: 890-3668-1

 Project/Site: PLU 147
 SDG: 03E1558145

HPLC/IC (Continued)

Leach Batch: 42015 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22814-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-22814-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 42050

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3668-1	FS01	Soluble	Solid	300.0	42015
MB 880-42015/1-A	Method Blank	Soluble	Solid	300.0	42015
LCS 880-42015/2-A	Lab Control Sample	Soluble	Solid	300.0	42015
LCSD 880-42015/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	42015
880-22814-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	42015
880-22814-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	42015

Eurofins Carlsbad

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 Client: Ensolum
 Job ID: 890-3668-1

 Project/Site: PLU 147
 SDG: 03E1558145

Client Sample ID: FS01 Lab Sample ID: 890-3668-1

Date Collected: 12/15/22 13:30 Matrix: Solid
Date Received: 12/16/22 09:06

	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	42531	12/22/22 14:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42623	12/27/22 13:24	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42740	12/27/22 15:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			42274	12/19/22 17:46	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	42124	12/19/22 08:43	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42120	12/19/22 10:53	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	42015	12/19/22 10:41	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	42050	12/19/22 19:09	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: 890-3668-1

 Project/Site: PLU 147
 SDG: 03E1558145

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	T104704400-22-25	06-30-23
The following englytes	and the standard the Alete and shall be			
				av include analytee fo
0 ,	• •	it the laboratory is not certifi	ied by the governing authority. This list ma	ay include analytes fo
the agency does not of	• •	ut the laboratory is not certill	led by the governing authority. I his list ma	ay include analytes fo
,	• •	It the laboratory is not certifi Matrix	led by the governing authority. This list ma	ay include analytes fo

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Method Summary

 Client: Ensolum
 Job ID: 890-3668-1

 Project/Site: PLU 147
 SDG: 03E1558145

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: PLU 147 Job ID: 890-3668-1 SDG: 03E1558145

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3668-1	FS01	Solid	12/15/22 13:30	12/16/22 09:06	1

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eurofins Xenco 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) 392-7550, Carlsbad, NM (575) 988-3199 Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300

Work Order No:	
www.xenco.com Page of of	
Work Order Comments	
Program: UST/PST ☐ PRP☐ Brownfields ☐ RRC ☐ Superfund ☐	
State of Project:	
Reporting: Level II Level III PST/UST TRRP Level IV	

		O		В	
		2	100000 31.61	CAM DO	Citit U
Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)
	tors. It assigns standard terms and conditions ses are due to circumstances beyond the control terms will be enforced unless previously negotiated.	, its affiliates and subcontractors. It assigns st irred by the client if such losses are due to circi roo, but not analyzed. These terms will be enfor	client company to Eurofins Xenco ty for any losses or expenses incu sample submitted to Eurofins Xer	amples constitutes a valid purchase order from samples and shall not assume any responsibilities to each project and a charge of \$5 for each	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 negotia
470 / 7471	Ag TI U Hg: 1631 / 245.1 / 7470 / 7471	d Cr Co Cu Pb Mn Mo Ni Se Ag Tl U	TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn		Circle Method(s) and Metal(s) to be analyzed
Sn U V Zn	8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn	d Ca Cr Co Cu Fe Pb Mg Mn	Al Sb As Ba Be B C	8RCRA 13PPM Texas 11	Total 200.7 / 6010 200.8 / 6020:
			1		
			まり、		
API 30-015-31177	API				

Zn Acetate+NaOH: Zn Na₂S₂O₃; NaSO₃ NaHSO4: NABIS

NaOH+Ascorbic Acid: SAPC

Sample Comments

AFE

Cost Center:

1137341001

nAPP2230832832

ncident ID:

SAMPLE RECEIPT

Temp Blank:

Yes

8

Wet ice:

Yes No

Parameters

No No

Thermometer ID:

WOO

0,0

890-3668 Chain of Custody

HCL: HC H₂S0₄: H₂

NaOH: Na HNO3: HN

Cool: Cool None: NO

MeOH: Me

Di Water: H₂O

H₃PO₄: HP

0.0

CHLORIDES (EPA: 300.0)

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Correction Factor:

amples Received Intact:

Cooler Custody Seals:

ample Custody Seals:

Yes Yes

No. S

Corrected Temperature: Temperature Reading:

E 50

Sample Identification

Matrix

Sampled Date

Sampled

Depth

Comp Grab/

Cont # 약

TPH (8015) BTEX (8021)

Time

12/15/22

1,30

Sampler's Name:

Connor Whitman

Due Date:

246

Routine

Rush

Turn Around

ANALYSIS REQUEST

Deliverables: EDD

ADaPT

Preservative Codes

Email: Garrett.Green@ExxonMobil.com

City, State ZIP:

Carlsbad, NM 88220

3104 E. Green St

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

roject Location:

Project Number: Project Name:

03E1558145

PLU 147

Phone:

City, State ZIP:

Carlsbad, NM 88220 303-887-2946

3122 National Parks Hwy

ddress:

Company Name:

Ensolum

Tacoma Morrissey

Bill to: (if different)

Garrett Green

Company Name:

XTO Energy

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-3668-1 SDG Number: 03E1558145

Login Number: 3668 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.	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: 890-3668-1

SDG Number: 03E1558145

Login Number: 3668 **List Source: Eurofins Midland** List Number: 2 List Creation: 12/19/22 09:10 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").

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 178625

CONDITIONS

Operator:	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road	Action Number:
Midland, TX 79707	178625
	Action Type:
	[C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your closure report and final C-141 for Incident #NAPP2230832832 POKER LAKE UNIT 147 TANK BATTERY, thank you. This closure is approved.	5/19/2023