Page 1 of 152 Incident ID NAPP2215947887 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 included in the closure report.
Photographs of the remediated site prior to backfill or photos of t must be notified 2 days prior to liner inspection)	he liner integrity if applicable (Note: appropriate OCD District office
☐ Laboratory analyses of final sampling (Note: appropriate ODC Di	strict 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 and regulations all operators are required to report and/or file certain rel may endanger public health or the environment. The acceptance of a C should their operations have failed to adequately investigate and remedi human health or the environment. In addition, OCD acceptance of a C-compliance with any other federal, state, or local laws and/or regulation restore, reclaim, and re-vegetate the impacted surface area to the condit accordance with 19.15.29.13 NMAC including notification to the OCD Printed Name: Garrett Green	ease notifications and perform corrective actions for releases which -141 report by the OCD does not relieve the operator of liability at contamination that pose a threat to groundwater, surface water, 141 report does not relieve the operator of responsibility for s. The responsible party acknowledges they must substantially tons that existed prior to the release or their final land use in
Signature: Date Sur Da	Environmental Coolumator
Signature: Da	te:11/01/2022
email:garrett.green@exxonmobil.com Tele	ephone:575-200-0729
OCD Only	
Received by: Jocelyn Harimon	Date:11/01/2022
Closure approval by the OCD does not relieve the responsible party of liveremediate contamination that poses a threat to groundwater, surface water party of compliance with any other federal, state, or local laws and/or responsible party of compliance with any other federal, state, or local laws and/or responsible party of liverements.	r, human health, or the environment nor does not relieve the responsible
Closure Approved by: Robert Hamlet	Date:1/11/2023
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	NAPP2215947887
District RP	
Facility ID	
Application ID	

# **Release Notification**

## **Responsible Party**

Responsible Party XTO Energy				OGRID 5	5290	
					elephone 575-200-0729	
	Contact Name Garrett Green  Contact email garrett.green@exxonmobil.com				(assigned by OCD)	
					(assignea by OCD)	
Contact mail	ing address	3104 E. Greene St	reet, Carlsbad, Ne	w Mexico, 88220		
			Location	of Release So	ource	
Latitude 32.1	11019			Longitude	Longitude -103.87932	
Latitude			(NAD 83 in dec	cimal degrees to 5 decim	nal places)	
Site Name	PLU 21 Bru	ıshy Draw 907H		Site Type I	Production Well	
		06/04/ <del>2021</del> 2022		API# (if app	licable)	
Unit Letter	Section	Township	Range	Coun	ity	
P	21	25S	30E	Eddy	·	
Г	21	233	30E			
Surface Owner	r: State	☐ Federal ☐ Tr	ribal 🗷 Private (/	Vame: Janey Pasc	hal)	
			Nature and	l Volume of F	Release	
				calculations or specific	justification for the volumes provided below)	
Crude Oil	1	Volume Release	d (bbls)		Volume Recovered (bbls)	
Produced	Water	Volume Release	d (bbls)		Volume Recovered (bbls)	
Is the concentration of total dissolved solids (TDS in the produced water >10,000 mg/l?		\ /	☐ Yes ☐ No			
Condensa	Condensate Volume Released (bbls)			Volume Recovered (bbls)		
☐ Natural Gas Volume Released (Mcf)			Volume Recovered (Mcf)			
Other (describe) Volume/Weight Released (provide units)		e units)	Volume/Weight Recovered (provide units)			
Produced water w/ FR 15.00 BBLS			10.00 BBLS			
Cause of Release Blender tub was overfilled due to human error, releasing fluids to containment and pad. All free fluids were recovered.  A third-party contractor has been retained for remediation purposes.						

Received by OCD: 11/1/2022/3211351PPM State of New Mexico
Page 2 Oil Conservation Division

State of New Mexico Incident ID NAPP22

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Incident ID	NAPP2215947887	
District RP		
Facility ID		
Application ID		

release as defined by 1915 29.7(A) NMAC?    Yes   No     N/A     N/A     Initial Response	Was this a major	If YES, for what reason(s) does the respo	nsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?    Initial Response   Initial Response		N/A	
Initial Response  Initial Response  The responsible party must undertake the following actions inmediately unless they could create a sufety hazard that would result in injury  The source of the release has been stopped.  The impacted area has been secured to protect human health and the environment.  Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.  All free liquids and recoverable materials have been removed and managed appropriately.  If all the actions described above have not been undertaken, explain why:  NA  Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.  I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for release, 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 containmination that pose a threat to groundwate, surface water, human health and remediations.  Printed Name:  Garrett Green  Title: SSHB Coordinator  Date:  OCD Only  OCD Only	19.15.29.7(A) NMAC?		
Initial Response  The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury   The source of the release has been stopped.  The impacted area has been secured to protect human health and the environment.  Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.  All free liquids and recoverable materials have been removed and managed appropriately.  If all the actions described above have not been undertaken, explain why:  NA  Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.  Thereby 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 does not relieve the operator of the operator of high properties of the environment. The 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  Title:  Signatures  Date:  06/08/2022  Telephone:  575-200-0729  Telephone:	Yes X No		
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and/or regulations.  Printed Name: Garrett Green  Signature: Date: 06/08/2022  email: garret.green@exxonmobil.com  Title: SSHE Coordinator  Date: 06/08/2022  Telephone: 575-200-0729	failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In		
Printed Name: Garrett Green  Signature: Date: 06/08/2022  email: garret.green@exxonmobil.com  Title: SSHE Coordinator  Date: 06/08/2022  Telephone: 575-200-0729  OCD Only		of a C-141 report does not relieve the operator of	responsibility for compliance with any other federal, state, or local laws
Signature:  Date:    Date:   D6/08/2022     Date:   D75-200-0729     DCD Only	Garrett G	reen	SSHE Coordinator
email: garret.green@exxonmobil.com  Telephone: 575-200-0729  OCD Only	Printed Name:		Title:
email: garret.green@exxonmobil.com  Telephone: 575-200-0729  OCD Only	Signature:	16 Dun	Date:
OCD Only	garret.green@exx	onmobil.com	Telephone: 575-200-0729
	Cinaii.		reiephone.
	OCD Only		
Received by: Date: Date:		Harimon	06/09/2022
	Received by:	ı iaiilliUli	Date:U0/U8/ZUZZ

0.00 bbls

10.00 bbls

Location:	PLU 21 Brushy Draw 907H	
Spill Date:	6/4/2022	
	Area 1	
Approximate A	rea = 56.1	.5 cu. Ft.
	VOLUME OF LEAK	
Total Crude Oil	= 0.0	00 bbls
<b>Total Produced</b>	Water = 10.0	00 bbls
	Area 2	-
Approximate Area = 7479.00 sq. ft.		00 sq. ft.
Average Saturation (or depth) of spill = 1.50		0 inches
Average Porosity Factor = 0.03		)3
VOLUME OF LEAK		
Total Crude Oil	= 0.0	00 bbls
Total Produced Water = 5.00		00 bbls
TOTAL VOLUME OF LEAK		
<b>Total Crude Oil</b>	= 0.0	00 bbls
Total Produced Water = 15.00		0 bbls

**TOTAL VOLUME RECOVERED** 

Total Crude Oil =

Total Produced Water =

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 115090

#### **CONDITIONS**

Operator:	OGRID:
XTO ENERGY, INC	5380
,	Action Number:
Midland, TX 79707	115090
	Action Type:
	[C-141] Release Corrective Action (C-141)

#### CONDITIONS

Created By		Condition Date
jharimon	None	6/8/2022

	Page 6 of 1.	<i>52</i>
Incident ID	NAPP2215947887	
District RP		
Facility ID		
Application ID		

# Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>&gt;100</u> (ft bgs)	
Did this release impact groundwater or surface water?	☐ Yes ⊠ No	
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ⊠ No	
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ⊠ No	
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ⊠ No	
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ⊠ No	
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ⊠ No	
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ⊠ No	
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ⊠ No	
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ⊠ No	
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ⊠ No	
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ⊠ No	
Did the release impact areas <b>not</b> 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.		
<ul> <li>Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.</li> <li>Field data</li> <li>□ Data table of soil contaminant concentration data</li> </ul>		

Characterization Report Checklist: Each of the following items must be included in the report.
<ul> <li>Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.</li> <li>Field data</li> <li>Data table of soil contaminant concentration data</li> <li>Depth to water determination</li> <li>Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release</li> <li>Boring or excavation logs</li> <li>Photographs including date and GIS information</li> <li>Topographic/Aerial maps</li> <li>Laboratory data including chain of custody</li> </ul>

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: 11/1/2022 3:11:51 PM Form C-141 State of New Mexico Page 4 Oil Conservation Division

	Page / of 13
Incident ID	NAPP2215947887
District RP	

Facility ID
Application ID

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

Printed Name: \_Garrett Green\_\_\_\_\_\_ Title: \_Environmental Coordinator\_\_\_\_\_\_

Signature: \_\_\_\_\_\_ Date: \_\_\_\_\_\_11/01/2022\_\_\_\_\_

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

OCD Only

Received by: \_Jocelyn Harimon \_\_\_\_\_\_\_ Date: \_\_\_\_\_\_11/01/2022\_\_\_\_\_\_

tate of New Mexico

Incident ID NAPP22150477997

Incident ID	NAPP2215947887
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 included 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 photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)				
☐ Laboratory analyses of final sampling (Note: appropriate OD	OC District office must be notified 2 days prior to final sampling)			
Description of remediation activities				
and regulations all operators are required to report and/or file certar 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	lations. The responsible party acknowledges they must substantially onditions that existed prior to the release or their final land use in OCD when reclamation and re-vegetation are complete.			
Printed Name: _Garrett Green	Title: _Environmental Coordinator			
Signature: Satt Sur	Date:11/01/2022			
email:garrett.green@exxonmobil.com	Telephone:575-200-0729			
OCD Only				
Received by: Jocelyn Harimon	Date:11/01/2022			
	y of liability should their operations have failed to adequately investigate and e water, human health, or the environment nor does not relieve the responsible d/or regulations.			
Closure Approved by:	Date:			
Printed Name:	Title:			



November 1, 2022

#### **New Mexico Oil Conservation Division**

New Mexico Energy, Minerals, and Natural Resources Department 1220 South St. Francis Drive Santa Fe. New Mexico 87505

Re: Closure Request

PLU 21 Brushy Draw 907H Incident Number NAPP2215947887

**Eddy County, New Mexico** 

#### To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared this *Closure Request* to document site assessment and soil sampling activities at the PLU 21 Brushy Draw 907H (Site). The purpose of the site assessment and soil sampling activities was to assess for the presence or absence of impacts to soil following a release of produced water with friction reducer (FR) into a temporary containment and onto the well pad. Based on field observations, field screening activities, and soil sample laboratory analytical results, XTO is submitting this *Closure Request*, describing site assessment and delineation activities that have occurred and requesting no further action for Incident Number NAPP2215947887.

#### SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit P, Section 21, Township 25 South, Range 30 East, in Eddy County, New Mexico (32.11019°N, 103.87932°W) and is associated with oil and gas exploration and production operations on private land owned by Janey Paschal.

On June 4, 2022, a blender tub was overfilled due to human error, resulting in the release of approximately 15 barrels (bbls) of produced water with FR into the temporary containment and onto the pad. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; 10 bbls of released fluids were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on June 8, 2022. The release was assigned Incident Number NAPP2215947887.

Produced water is recycled through filtering and separation, then mixed in a blender with FR and used as hydraulic fracturing (frac) fluid during the well completion process. The safety data sheet (SDS) for FR is provided as an attachment.

#### SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess the applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC).

Ensolum, LLC | Environmental, Engineering & Hydrogeologic Consultants 601 North Marienfield Suite 400 | Midland, TX 79701 | ensolum.com XTO Energy, Inc. Closure Request PLU 21 Brushy Draw 907H



Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization. Potential site receptors are identified on Figure 1.

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is United States Geological Survey (USGS) well 320628103533001, located approximately 4,031 feet southwest of the Site. The groundwater well has a reported depth to groundwater of 264 feet bgs and a total depth of 288 feet bgs. Ground surface elevation at the groundwater well location is 3,217 feet above mean sea level (amsl), which is approximately 61 feet lower in elevation than the Site. There are four additional wells within a 2-mile radius with regional depth to groundwater greater than 100 feet bgs. Two of the wells were recently drilled by XTO. All wells used for depth to groundwater determination are presented on Figure 1. The referenced well records are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is an intermittent riverine, located approximately 533 feet southeast of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is 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 I Closure Criteria (Closure Criteria) apply:

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

#### SITE ASSESSMENT ACTIVITIES AND ANALYTICAL RESULTS

Frac operations continued onsite prohibiting XTO from conducting Site assessment immediately following notification of the release. Between August 31, 2022 and September 8, 2022, Ensolum personnel visited the Site to evaluate the release extent based on information provided on the Form C-141 and information from XTO regarding the location of the former containment. Once Ensolum personnel were able to access the Site, the temporary containment had been removed and the spill extent was not visually obvious for mapping. Six soil samples (SS01 through SS06) were collected within and around the release extent from a depth of approximately 0.5 feet bgs to assess the lateral extent of the impacted soil. The preliminary soil samples were field screened for volatile aromatic hydrocarbons (VOCs) and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. The soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation is included in Appendix B.

XTO Energy, Inc. Closure Request PLU 21 Brushy Draw 907H



The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported at or below 4 degrees Celsius (°C) under strict chain-of-custody procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of the following chemicals of conern (COCs): 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.

Potholes PH01 and PH02 were advanced via backhoe to a depth of 2 feet bgs within the release extent to assess the vertical extent of the release. Delineation soil samples were collected from each pothole at depths of 1-foot and 2 feet bgs. Soil from the delineation potholes was field screened for VOCs and chloride, respectively. Field screening results and observations for the potholes were logged on lithologic/soil sampling logs, which are included in Appendix C. The vertical delineation soil sample locations are depicted on Figure 3.

Laboratory analytical results for all delineation soil samples indicated concentrations of all COCs were compliant with the Site Closure Criteria. In addition, soil samples SS03 through SS06, collected outside of the footprint of the former containment, were compliant with the most stringent Table I Closure Criteria. Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included in Appendix D.

#### **CLOSURE REQUEST**

Site assessment and delineation activities were conducted at the Site to address the June 4, 2022, release of produced water with FR. Laboratory analytical results for the delineation soil samples indicated all COC concentrations were compliant with the Site Closure Criteria. Additionally, the release was laterally delineated to below the most stringent Table I Closure Criteria. Based on the soil sample laboratory analytical results, no further remediation was required.

Depth to groundwater has been estimated to be greater than 100 feet bgs and no other sensitive receptors were identified near the release extent. XTO believes these remedial actions are protective of human health, the environment, and groundwater. As such, XTO respectfully requests closure for Incident Number NAPP2215947887.

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 Ashley L. Ager, M.S., P.G. Program Director

ashley L. ager

cc: Garrett Green, XTO

Mouissey

Shelby Pennington, XTO Bureau of Land Management XTO Energy, Inc. Closure Request PLU 21 Brushy Draw 907H



#### Appendices:

Figure 1 Site Receptor Map

Figure 2 Preliminary Soil Sample Locations
Figure 3 Delineation Soil Sample Locations
Table 1 Soil Sample Analytical Results
Appendix A Referenced Well Records

Appendix B Photographic Log

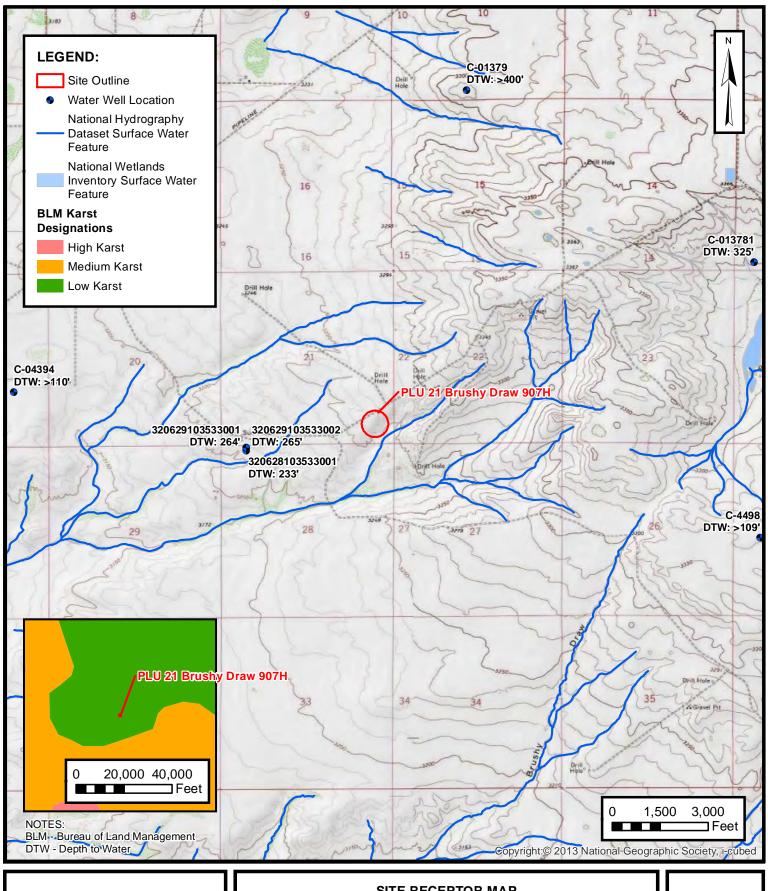
Appendix C Lithologic / Soil Sampling Logs

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

Appendix E NMOCD Notifications



**FIGURES** 





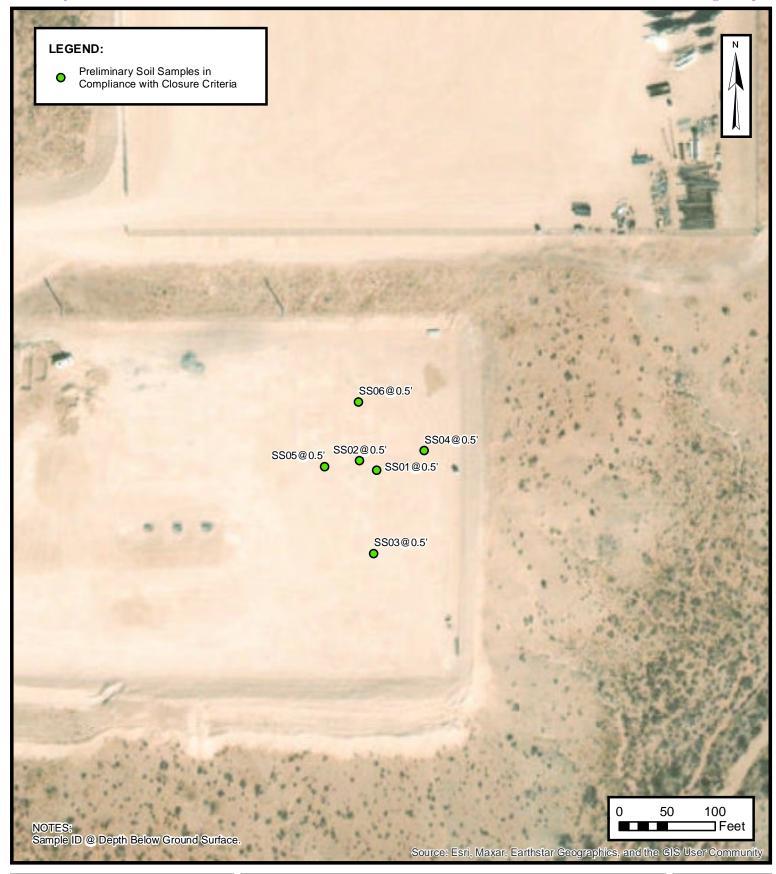
#### SITE RECEPTOR MAP

XTO ENERGY, INC PLU 21 BRUSHY DRAW 907H NAPP2215947887

Unit P, Sec 21, T25S, R30E Eddy County, New Mexico

**FIGURE** 

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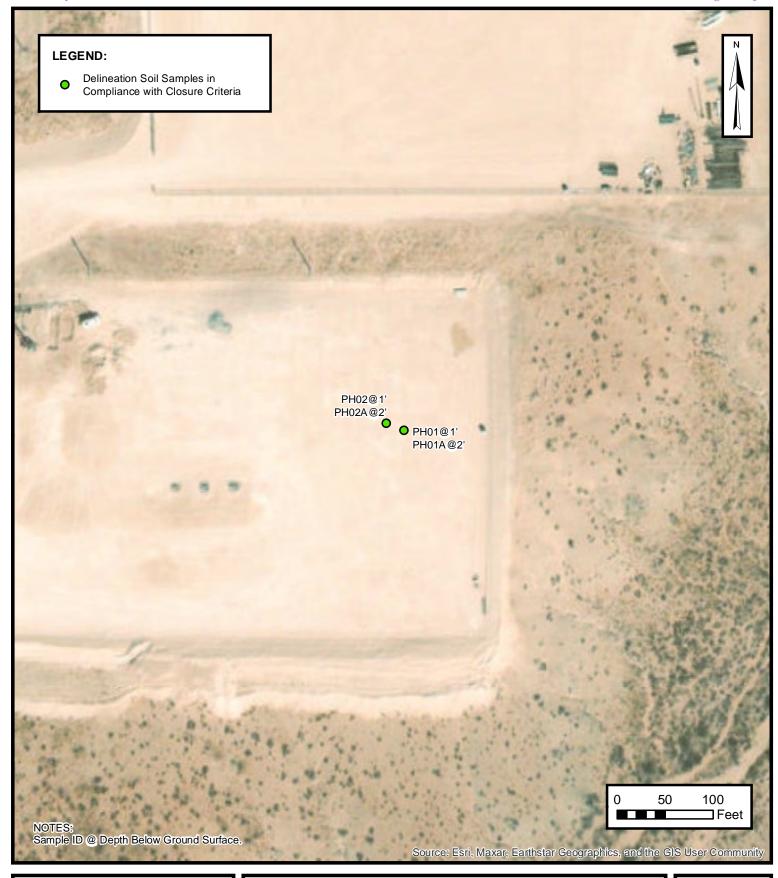




#### PRELIMINARY SOIL SAMPLE LOCATIONS

XTO ENERGY, INC PLU 21 BRUSHY DRAW 907H NAPP2215947887 Unit P, Sec 21, T25S, R30E Eddy County, New Mexico FIGURE

2





#### **DELINEATION SOIL SAMPLE LOCATIONS**

XTO ENERGY, INC PLU 21 BRUSHY DRAW 907H NAPP2215947887 Unit P, Sec 21, T25S, R30E Eddy County, New Mexico **FIGURE** 

3



**TABLES** 



# TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS PLU 21 Brushy Draw 907H 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
				Preli	minary Soil Sai	nples				
SS01	08/31/2022	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	2,280
SS02	08/31/2022	0.5	<0.00200	< 0.00399	51.5	<50.0	<50.0	<50.0	51.5	9,250
SS03	09/08/2022	0.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	181
SS04	09/08/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	79.5
SS05	09/08/2022	0.5	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	125
SS06	09/08/2022	0.5	<0.00200	< 0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	32.8
	Delineation Soil Samples									
PH01	09/08/2022	1	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	706
PH01A	09/08/2022	2	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	1,470
PH02	09/08/2022	1	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	1,850
PH02A	09/08/2022	2	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	871

#### Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

Concentrations in bold exceed the NMOCD Table 1 Closure Criteria or reclamation

standard where applicable.

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

orto: on rungo organios

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

Eddy County, New Mexico

Latitude 32°06'28", Longitude 103°53'30" NAD27 Land-surface elevation 3,207 feet above NAVD88

The depth of the well is 288 feet below land surface.

This well is completed in the Pecos River Basin alluvial aguifer (N100PCSRVR) national aquifer.

This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

	Page 20 of 152
	Output formats
Table of data	
Tab-separated data	
Graph of data	
Reselect period	
Reselect period	

Date \$	Time \$	Water- level & date- time accuracy	Parameter \$ code	Water level, feet below land surface	Water level, feet above \$ specific vertical datum	Referenced vertical \$ datum	Status \$	Method of \$ measurement	Measurin agency
1958-08-21		D	62610		2972.36	NGVD29	1	Z	
1958-08-21		D	62611		2974.00	NAVD88	1	Z	
1958-08-21		D	72019	233.00			1	Z	
1959-02-05		D	62610		2939.26	NGVD29	P	Z	
1959-02-05		D	62611		2940.90	NAVD88	Р	Z	
1959-02-05		D	72019	266.10			P	Z	
1983-02-01		D	62610		2945.48	NGVD29	1	Z	
1983-02-01		D	62611		2947.12	NAVD88	1	Z	
1983-02-01		D	72019	259.88			1	Z	
1998-01-28		D	62610		2940.76	NGVD29	1	S	
1998-01-28		D	62611		2942.40	NAVD88	1	S	
1998-01-28		D /2023 3:27:56 PM	72019	264.60			1	S	



# New Mexico Office of the State Engineer

# **Water Right Summary**



**WR File Number:** C 04394

Subbasin: CUB

**Cross Reference:** -

**Primary Purpose:** MON

MONITORING WELL

**Primary Status:** 

**PMT PERMIT** 

**Total Acres:** 

**Subfile:** 

Header: -

**Total Diversion:** 

Cause/Case: -

Agent:

LT ENVIRONMENTAL INC

Contact:

AIMEE COLE

User:

XTO ENERGY INC

**Contact:** 

KYLE LITTRELL

#### **Documents on File**

Status

From/

**Diversion Consumptive** 

File/Act

PMT APR C 04394 POD1

**Transaction Desc.** 

To Τ

0

#### **Current Points of Diversion**

**POD Number** 

C 04394 POD1

Trn#

(NAD83 UTM in meters)

NA

Well Tag Source 64Q16Q4Sec Tws Rng 3 2 4 19 25S 30E  $\mathbf{X}$ 

602316 3553464

Other Location Desc MW01

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

10/28/22 2:18 PM

WATER RIGHT SUMMARY

Received by OCD: 11/1/2022 3:11:51 PM



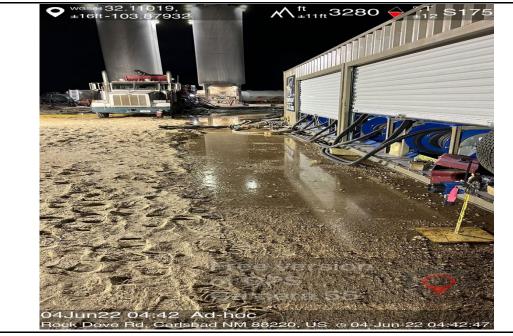
**APPENDIX B** 

Photographic Log



#### **Photographic Log**

XTO Energy, Inc.
PLU 21 Brushy Draw 907H
Incident Number NAPP2215947887



Photograph 1 Date: June 4, 2022

Description: View of initial release area.



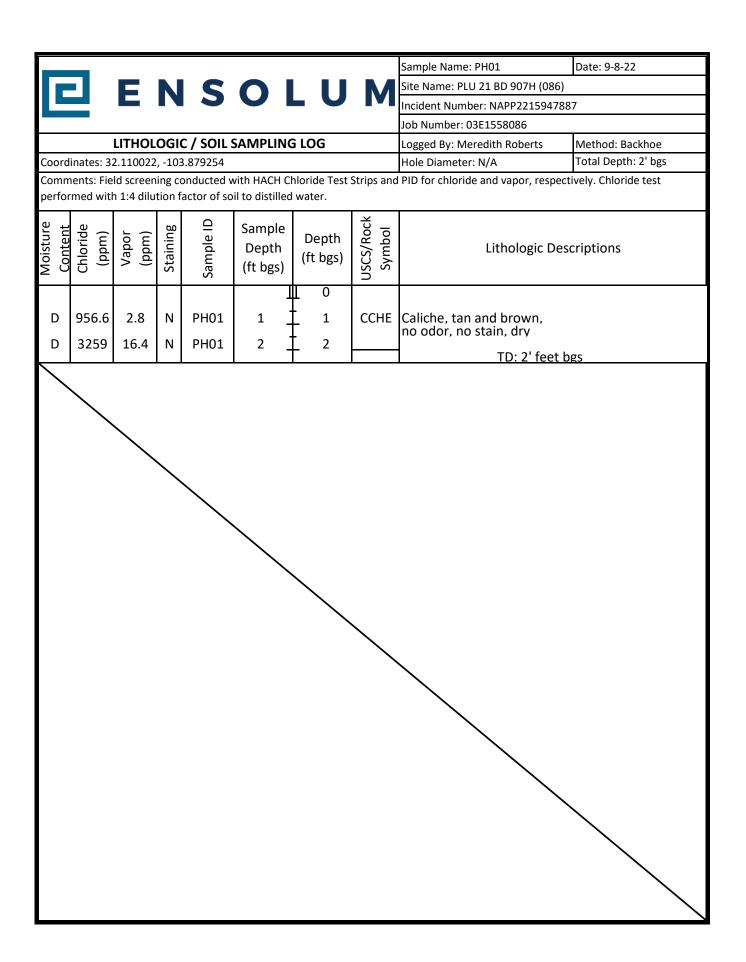
Photograph 2 Date: September 8, 2022

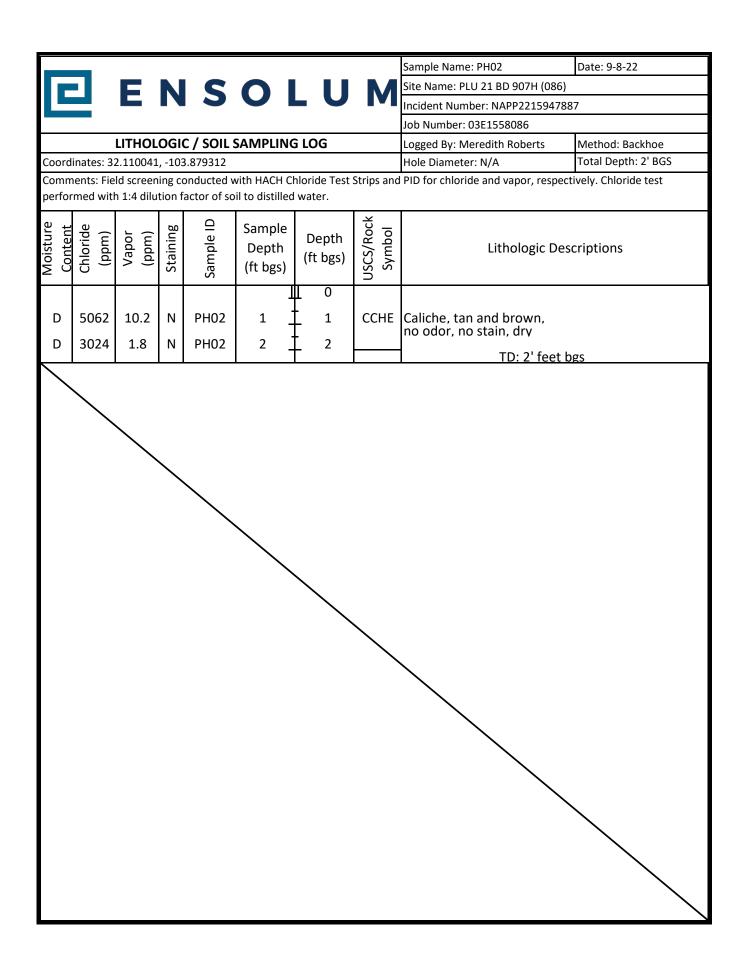
Description: View of area during delineation activities.



APPENDIX C

Lithologic Soil Sampling Logs







APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation



# **Environment Testing America**

# **ANALYTICAL REPORT**

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

Laboratory Job ID: 890-2872-1

Laboratory Sample Delivery Group: 03E1558086

Client Project/Site: PLU 21 BD 907H

For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Kalei Jennings

JURAMER

Authorized for release by: 9/12/2022 9:19:28 AM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

Authorized for releas

Have a Question?

Ask
The
Expert

EOL

····· Links ······

Review your project results through

Visit us at:

www.eurofinsus.com/Env
Released to Imaging: 1/11/2023 3:27-56 PM

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| 4

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

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

Client: Ensolum
Project/Site: PLU 21 BD 907H
Laboratory Job ID: 890-2872-1
SDG: 03E1558086

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	U	

## **Definitions/Glossary**

Client: Ensolum Job ID: 890-2872-1 Project/Site: PLU 21 BD 907H

SDG: 03E1558086

#### **Qualifiers**

GC	VOA
Qual	lifier

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

**Qualifier Description** 

#### **GC Semi VOA**

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

#### **HPLC/IC**

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

#### Glossarv

MCL

MDA

Olossai y	
Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)

MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number

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 above
שמו	Not Detected at the reporting limit	(OF INDE OF EDE II SHOWIT

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

NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit

PRES	Presumptive
QC	Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

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

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

**TNTC** Too Numerous To Count

**Eurofins Carlsbad** 

#### Case Narrative

Client: Ensolum

Project/Site: PLU 21 BD 907H

Job ID: 890-2872-1

SDG: 03E1558086

Job ID: 890-2872-1

**Laboratory: Eurofins Carlsbad** 

Narrative

Job Narrative 890-2872-1

#### Receipt

The samples were received on 9/1/2022 9:21 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.4°C

#### **GC VOA**

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-34107 and analytical batch 880-34153 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

#### GC Semi VOA

Method 8015MOD\_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-33646/2-A) and (LCSD 880-33646/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD NM: Surrogate recovery for the following sample was outside control limits: SS02 (890-2872-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD\_NM: The method blank for preparation batch 880-33646 and analytical batch 880-33680 contained Gasoline Range Organics (GRO)-C6-C10 and Diesel Range Organics (Over C10-C28) above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-33646 and analytical batch 880-33680 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

#### HPLC/IC

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

Matrix: Solid

Lab Sample ID: 890-2872-1

## **Client Sample Results**

 Client: Ensolum
 Job ID: 890-2872-1

 Project/Site: PLU 21 BD 907H
 SDG: 03E1558086

Client Sample ID: SS01

Date Collected: 08/31/22 15:15 Date Received: 09/01/22 09:21

Sample Depth: .5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		09/09/22 12:37	09/11/22 00:58	1
Toluene	<0.00199	U	0.00199	mg/Kg		09/09/22 12:37	09/11/22 00:58	1
Ethylbenzene	< 0.00199	U	0.00199	mg/Kg		09/09/22 12:37	09/11/22 00:58	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		09/09/22 12:37	09/11/22 00:58	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		09/09/22 12:37	09/11/22 00:58	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		09/09/22 12:37	09/11/22 00:58	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		70 - 130			09/09/22 12:37	09/11/22 00:58	1
1,4-Difluorobenzene (Surr)	87		70 - 130			09/09/22 12:37	09/11/22 00:58	1
- Method: Total BTEX - Total BTE)	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			09/12/22 09:52	1
Analyte Total TPH		Qualifier	RL 50.0	Unit mg/Kg	D	Prepared	Analyzed 09/06/22 13:04	Dil Fac
Analyte					<u>D</u>	Prepared	Analyzed	Dil Fac
-	-00.0		00.0	g/tg			00/00/22 10.01	·
Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		09/02/22 11:29	09/04/22 03:54	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		09/02/22 11:29	09/04/22 03:54	1
C10-C28) OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		09/02/22 11:29	09/04/22 03:54	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane		Qualifier	70 - 130			09/02/22 11:29	09/04/22 03:54	
	104					09/02/22 11:29		
o-Terphenyl	106		70 - 130			09/02/22 11:29	09/04/22 03:54	
_								
Method: 300.0 - Anions, Ion Chro								
Method: 300.0 - Anions, Ion Chro		Soluble Qualifier	RL	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 09/09/22 08:19	Dil Fac

Client Sample ID: SS02

Date Collected: 08/31/22 15:30 Date Received: 09/01/22 09:21

Sample Depth: .6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/09/22 12:37	09/11/22 01:19	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/09/22 12:37	09/11/22 01:19	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/09/22 12:37	09/11/22 01:19	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		09/09/22 12:37	09/11/22 01:19	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/09/22 12:37	09/11/22 01:19	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		09/09/22 12:37	09/11/22 01:19	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			09/09/22 12:37	09/11/22 01:19	1

**Eurofins Carlsbad** 

Lab Sample ID: 890-2872-2

Matrix: Solid

2

3

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10

12

13

## **Client Sample Results**

 Client: Ensolum
 Job ID: 890-2872-1

 Project/Site: PLU 21 BD 907H
 SDG: 03E1558086

Client Sample ID: SS02 Lab Sample ID: 890-2872-2

. Matrix: Solid

Date Received: 09/01/22 09:21 Sample Depth: .6

Analyte

Chloride

Date Collected: 08/31/22 15:30

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	87		70 - 130			09/09/22 12:37	09/11/22 01:19	1
Method: Total BTEX - Total BTE	( Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			09/12/22 09:52	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	51.5		50.0	mg/Kg			09/06/22 13:04	1
•								
Method: 8015B NM - Diesel Ranç Analyte	• • •	RO) (GC) Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Analyte</b> Gasoline Range Organics	• • •	Qualifier	RL 50.0	Unit mg/Kg	<u>D</u>	Prepared 09/02/22 11:29	<b>Analyzed</b> 09/04/22 04:15	Dil Fac
	Result	Qualifier			<u>D</u>	<u>·</u>		Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result < 50.0	Qualifier U	50.0	mg/Kg	<u> </u>	09/02/22 11:29	09/04/22 04:15	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <50.0 51.5	Qualifier U	50.0	mg/Kg	<u>D</u>	09/02/22 11:29 09/02/22 11:29	09/04/22 04:15 09/04/22 04:15	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result  <50.0 51.5 <50.0	Qualifier U	50.0 50.0 50.0	mg/Kg	<u>D</u>	09/02/22 11:29 09/02/22 11:29 09/02/22 11:29	09/04/22 04:15 09/04/22 04:15 09/04/22 04:15	

99.4

Unit

mg/Kg

D

Prepared

Analyzed

09/09/22 08:34

Dil Fac

Result Qualifier

9250

**Eurofins Carlsbad** 

## **Surrogate Summary**

 Client: Ensolum
 Job ID: 890-2872-1

 Project/Site: PLU 21 BD 907H
 SDG: 03E1558086

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2865-A-1-C MS	Matrix Spike	85	92	
890-2865-A-1-D MSD	Matrix Spike Duplicate	116	98	
890-2872-1	SS01	90	87	
890-2872-2	SS02	111	87	
LCS 880-34107/1-A	Lab Control Sample	103	107	
LCSD 880-34107/2-A	Lab Control Sample Dup	132 S1+	105	
MB 880-34107/5-A	Method Blank	96	89	

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

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (A
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2870-A-1-D MS	Matrix Spike	85	74	
890-2870-A-1-E MSD	Matrix Spike Duplicate	86	75	
890-2872-1	SS01	104	106	
890-2872-2	SS02	133 S1+	136 S1+	
LCS 880-33646/2-A	Lab Control Sample	150 S1+	151 S1+	
LCSD 880-33646/3-A	Lab Control Sample Dup	147 S1+	152 S1+	
MB 880-33646/1-A	Method Blank	116	121	

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

**Eurofins Carlsbad** 

Job ID: 890-2872-1 Client: Ensolum Project/Site: PLU 21 BD 907H SDG: 03E1558086

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-34107/5-A

**Matrix: Solid** 

Analysis Batch: 34153

Prep Type: Total/NA

Prep Batch: 34107

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/09/22 12:37	09/10/22 19:08	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/09/22 12:37	09/10/22 19:08	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/09/22 12:37	09/10/22 19:08	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		09/09/22 12:37	09/10/22 19:08	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/09/22 12:37	09/10/22 19:08	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		09/09/22 12:37	09/10/22 19:08	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130	09/09/22 12:37	09/10/22 19:08	1
1,4-Difluorobenzene (Surr)	89		70 - 130	09/09/22 12:37	09/10/22 19:08	1

Lab Sample ID: LCS 880-34107/1-A **Client Sample ID: Lab Control Sample** 

**Matrix: Solid** 

**Analysis Batch: 34153** 

Prep Type: Total/NA

Prep Batch: 34107

Spike LCS LCS Analyte Added Result Qualifier Unit %Rec Limits Benzene 0.100 0.08977 mg/Kg 90 70 - 130 Toluene 0.100 0.08000 mg/Kg 80 70 - 130 0.100 0.07969 80 Ethylbenzene mg/Kg 70 - 130 0.200 0.1624 81 70 - 130 m-Xylene & p-Xylene mg/Kg 0.100 0.09238 70 - 130 o-Xylene mg/Kg

LCS LCS

Surrogate	%Recovery Qualifi	er Limits
4-Bromofluorobenzene (Surr)	103	70 - 130
1,4-Difluorobenzene (Surr)	107	70 - 130

Lab Sample ID: LCSD 880-34107/2-A

**Matrix: Solid** 

**Analysis Batch: 34153** 

Client Sample ID: Lab Control Sample Dup	Client Sam	ple ID: Lab	<b>Control San</b>	iple Dup
--	------------	-------------	--------------------	----------

Prep Type: Total/NA

Prep Batch: 34107

RPD LCSD LCSD Spike %Rec Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Benzene 0.100 0.09121 mg/Kg 91 70 - 130 2 35 Toluene 0.100 0.08741 mg/Kg 87 70 - 130 9 35 Ethylbenzene 0.100 0.1010 mg/Kg 101 70 - 130 24 35 0.200 0.2099 m-Xylene & p-Xylene mg/Kg 105 70 - 130 26 35 0.100 0.1206 o-Xylene mg/Kg 121 70 - 130 35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	132	S1+	70 - 130
1.4-Difluorobenzene (Surr)	105		70 - 130

Lab Sample ID: 890-2865-A-1-C MS

**Matrix: Solid** 

Analysis Batch: 34153

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

Prep Batch: 34107

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U F1	0.0998	0.03247	F1	mg/Kg	_	33	70 - 130	
Toluene	<0.00201	U F1	0.0998	0.03634	F1	mg/Kg		36	70 - 130	

**Eurofins Carlsbad** 

1

Prep Batch: 34107

Prep Type: Total/NA

### QC Sample Results

Job ID: 890-2872-1 Client: Ensolum Project/Site: PLU 21 BD 907H SDG: 03E1558086

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

Lab Sample ID: 890-2865-A-1-C MS Client Sample ID: Matrix Spike Prep Type: Total/NA

**Matrix: Solid** 

Analysis Batch: 34153

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylbenzene	<0.00201	U F1 F2	0.0998	0.03705	F1	mg/Kg		37	70 - 130	
m-Xylene & p-Xylene	<0.00402	U F1 F2	0.200	0.07196	F1	mg/Kg		36	70 - 130	
o-Xylene	<0.00201	U F1 F2	0.0998	0.04226	F1	mg/Kg		42	70 - 130	
	MC	ме								

MS Qualifier Limits Surrogate %Recovery 70 - 130 4-Bromofluorobenzene (Surr) 85 1,4-Difluorobenzene (Surr) 92 70 - 130

Lab Sample ID: 890-2865-A-1-D MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid **Analysis Batch: 34153** 

Analysis Batch: 34153									Prep	Batch:	34107
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00201	U F1	0.0996	0.04628	F1	mg/Kg		46	70 - 130	35	35
Toluene	<0.00201	U F1	0.0996	0.04928	F1	mg/Kg		49	70 - 130	30	35
Ethylbenzene	<0.00201	U F1 F2	0.0996	0.05680	F1 F2	mg/Kg		57	70 - 130	42	35
m-Xylene & p-Xylene	<0.00402	U F1 F2	0.199	0.1146	F1 F2	mg/Kg		58	70 - 130	46	35
o-Xylene	<0.00201	U F1 F2	0.0996	0.06608	F1 F2	mg/Kg		66	70 - 130	44	35

MSD MSD Qualifier Limits Surrogate %Recovery 70 - 130 4-Bromofluorobenzene (Surr) 116 1,4-Difluorobenzene (Surr) 98 70 - 130

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

Lab Sample ID: MB 880-33646/1-A Client Sample ID: Method Blank **Matrix: Solid** Prep Type: Total/NA Prep Batch: 33646

Analysis Batch: 33680

MB MB Result Qualifier RL Unit D Prepared Analyzed Dil Fac Analyte <50.0 U 50.0 09/02/22 11:29 09/03/22 20:31 Gasoline Range Organics mg/Kg (GRO)-C6-C10 09/02/22 11:29 09/03/22 20:31 Diesel Range Organics (Over <50.0 U 50.0 mg/Kg C10-C28) Oll Range Organics (Over C28-C36) <50.0 U 50.0 09/02/22 11:29 09/03/22 20:31 mg/Kg

MB MB %Recovery Analyzed Qualifier Limits Prepared Dil Fac Surrogate 1-Chlorooctane 116 70 - 130 09/02/22 11:29 09/03/22 20:31 121 70 - 130 09/02/22 11:29 09/03/22 20:31 o-Terphenyl

Lab Sample ID: LCS 880-33646/2-A Client Sample ID: Lab Control Sample

Analysis Batch: 33680

**Matrix: Solid** 

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit %Rec Limits 1000 87 867.1 70 - 130 Gasoline Range Organics mg/Kg (GRO)-C6-C10

989.5

mg/Kg

99

70 - 130

1000

Diesel Range Organics (Over C10-C28)

**Eurofins Carlsbad** 

Prep Type: Total/NA

Prep Batch: 33646

Job ID: 890-2872-1

SDG: 03E1558086

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

LCS LCS

Lab Sample ID: LCS 880-33646/2-A Client Sample ID: Lab Control Sample

**Matrix: Solid** 

Project/Site: PLU 21 BD 907H

Analysis Batch: 33680

Prep Type: Total/NA

Prep Batch: 33646

Surrogate %Recovery Qualifier Limits 1-Chlorooctane 150 S1+ 70 - 130 o-Terphenyl 151 S1+ 70 - 130

Lab Sample ID: LCSD 880-33646/3-A Client Sample ID: Lab Control Sample Dup

**Matrix: Solid** 

Client: Ensolum

Analysis Batch: 33680

Prep Type: Total/NA

Prep Batch: 33646

Spike LCSD LCSD %Rec RPD Analyte Added Result Qualifier Unit D %Rec Limits RPD Limit 1000 1054 105 70 - 13019 20 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 1053 105 mg/Kg 70 - 1306 20 C10-C28)

LCSD LCSD

Surrogate %Recovery Qualifier Limits 147 S1+ 70 - 130 1-Chlorooctane 152 S1+ 70 - 130 o-Terphenyl

Lab Sample ID: 890-2870-A-1-D MS Client Sample ID: Matrix Spike

**Matrix: Solid** 

**Analysis Batch: 33680** 

Prep Type: Total/NA

Prep Batch: 33646

MS MS Sample Sample Spike Added Analyte Result Qualifier Result Qualifier Unit D %Rec Limits Gasoline Range Organics <49.9 UF1 999 570.6 F1 mg/Kg 55 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over <49.9 U 999 840.3 mg/Kg 82 70 - 130

C10-C28)

MS MS %Recovery Qualifier Surrogate Limits 70 - 130 1-Chlorooctane 85 o-Terphenyl 74 70 - 130

Lab Sample ID: 890-2870-A-1-E MSD Client Sample ID: Matrix Spike Duplicate **Matrix: Solid** 

Analysis Batch: 33680

Prep Type: Total/NA

Prep Batch: 33646

Sample Sample MSD MSD RPD Spike %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit U F1 998 613.1 F1 <del>5</del>9 Gasoline Range Organics <49.9 70 - 130 20 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over <49.9 U 998 847.6 mg/Kg 83 70 - 130 20 C10-C28)

MSD MSD

%Recovery Qualifier Surrogate Limits 1-Chlorooctane 86 70 - 130 75 70 - 130 o-Terphenyl

Job ID: 890-2872-1 Client: Ensolum Project/Site: PLU 21 BD 907H

SDG: 03E1558086

**Prep Type: Soluble** 

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-33691/1-A

Lab Sample ID: LCS 880-33691/2-A

**Matrix: Solid** 

Analysis Batch: 33933

мв мв

Dil Fac Analyte Result Qualifier RL Unit D Prepared Analyzed Chloride <5.00 U 5.00 mg/Kg 09/09/22 02:38

Client Sample ID: Lab Control Sample

Client Sample ID: Method Blank

**Prep Type: Soluble** 

Client Sample ID: SS01

**Prep Type: Soluble** 

**Analysis Batch: 33933** 

**Matrix: Solid** 

Spike LCS LCS %Rec Added Analyte Result Qualifier Unit D %Rec Limits Chloride 250 240.6 mg/Kg 96 90 - 110

Lab Sample ID: LCSD 880-33691/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 33933** 

LCSD LCSD %Rec RPD Spike Analyte Added Result Qualifier Unit %Rec Limits **RPD** Limit Chloride 250 241.4 mg/Kg 90 - 110

Lab Sample ID: 890-2872-1 MS **Client Sample ID: SS01 Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 33933** 

MS MS Sample Sample Spike %Rec Analyte Result Qualifier Added Qualifier Unit %Rec Result Limits 2280 1260 Chloride 3628 107 90 - 110 mg/Kg

Lab Sample ID: 890-2872-1 MSD

**Matrix: Solid** 

Analysis Batch: 33933

Sample Sample Spike MSD MSD %Rec RPD Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 1260 2280 3643 mg/Kg 108 90 - 110 0 20

#### **QC Association Summary**

 Client: Ensolum
 Job ID: 890-2872-1

 Project/Site: PLU 21 BD 907H
 SDG: 03E1558086

**GC VOA** 

Prep Batch: 34107

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2872-1	SS01	Total/NA	Solid	5035	
890-2872-2	SS02	Total/NA	Solid	5035	
MB 880-34107/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-34107/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-34107/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2865-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-2865-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 34153

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2872-1	SS01	Total/NA	Solid	8021B	34107
890-2872-2	SS02	Total/NA	Solid	8021B	34107
MB 880-34107/5-A	Method Blank	Total/NA	Solid	8021B	34107
LCS 880-34107/1-A	Lab Control Sample	Total/NA	Solid	8021B	34107
LCSD 880-34107/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	34107
890-2865-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	34107
890-2865-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	34107

Analysis Batch: 34238

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2872-1	SS01	Total/NA	Solid	Total BTEX	
890-2872-2	SS02	Total/NA	Solid	Total BTEX	

**GC Semi VOA** 

Prep Batch: 33646

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2872-1	SS01	Total/NA	Solid	8015NM Prep	
890-2872-2	SS02	Total/NA	Solid	8015NM Prep	
MB 880-33646/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-33646/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-33646/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2870-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2870-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

**Analysis Batch: 33680** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2872-1	SS01	Total/NA	Solid	8015B NM	33646
890-2872-2	SS02	Total/NA	Solid	8015B NM	33646
MB 880-33646/1-A	Method Blank	Total/NA	Solid	8015B NM	33646
LCS 880-33646/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	33646
LCSD 880-33646/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	33646
890-2870-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	33646
890-2870-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	33646

Analysis Batch: 33850

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2872-1	SS01	Total/NA	Solid	8015 NM	
890-2872-2	SS02	Total/NA	Solid	8015 NM	

**Eurofins Carlsbad** 

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## **QC Association Summary**

 Client: Ensolum
 Job ID: 890-2872-1

 Project/Site: PLU 21 BD 907H
 SDG: 03E1558086

HPLC/IC

Leach Batch: 33691

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2872-1	SS01	Soluble	Solid	DI Leach	
890-2872-2	SS02	Soluble	Solid	DI Leach	
MB 880-33691/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-33691/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-33691/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2872-1 MS	SS01	Soluble	Solid	DI Leach	
890-2872-1 MSD	SS01	Soluble	Solid	DI Leach	

Analysis Batch: 33933

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2872-1	SS01	Soluble	Solid	300.0	33691
890-2872-2	SS02	Soluble	Solid	300.0	33691
MB 880-33691/1-A	Method Blank	Soluble	Solid	300.0	33691
LCS 880-33691/2-A	Lab Control Sample	Soluble	Solid	300.0	33691
LCSD 880-33691/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	33691
890-2872-1 MS	SS01	Soluble	Solid	300.0	33691
890-2872-1 MSD	SS01	Soluble	Solid	300.0	33691

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Job ID: 890-2872-1

SDG: 03E1558086

**Client Sample ID: SS01** 

Project/Site: PLU 21 BD 907H

Client: Ensolum

Lab Sample ID: 890-2872-1

Matrix: Solid

Date Collected: 08/31/22 15:15 Date Received: 09/01/22 09:21

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	34107	09/09/22 12:37	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34153	09/11/22 00:58	MR	EET MID
Total/NA	Analysis	Total BTEX		1			34238	09/12/22 09:52	AJ	EET MID
Total/NA	Analysis	8015 NM		1			33850	09/06/22 13:04	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	33646	09/02/22 11:29	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33680	09/04/22 03:54	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	33691	09/03/22 13:12	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	33933	09/09/22 08:19	CH	EET MID

Lab Sample ID: 890-2872-2

Matrix: Solid

Date Collected: 08/31/22 15:30 Date Received: 09/01/22 09:21

**Client Sample ID: SS02** 

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	34107	09/09/22 12:37	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34153	09/11/22 01:19	MR	EET MID
Total/NA	Analysis	Total BTEX		1			34238	09/12/22 09:52	AJ	EET MID
Total/NA	Analysis	8015 NM		1			33850	09/06/22 13:04	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	33646	09/02/22 11:29	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33680	09/04/22 04:15	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	33691	09/03/22 13:12	KS	EET MID
Soluble	Analysis	300.0		20	50 mL	50 mL	33933	09/09/22 08:34	CH	EET MID

**Laboratory References:** 

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

## **Accreditation/Certification Summary**

Client: Ensolum Job ID: 890-2872-1 Project/Site: PLU 21 BD 907H

SDG: 03E1558086

#### **Laboratory: Eurofins Midland**

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

Authority Texas		rogram	Identification Number	<b>Expiration Date</b>
		ELAP	T104704400-22-24	06-30-23
The following analytes the agency does not of	. ,	ut the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes fo
Analysis Method	Prep Method	Matrix	Analyte	
8015 NM		Solid	Total TPH	

#### **Method Summary**

Client: Ensolum

Project/Site: PLU 21 BD 907H

Job ID: 890-2872-1

SDG: 03E1558086

aboratory	
ET MID	
ET MID	
FT 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 21 BD 907H

Job ID: 890-2872-1

SDG: 03E1558086

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	D
890-2872-1	SS01	Solid	08/31/22 15:15	09/01/22 09:21	.5
890-2872-2	SS02	Solid	08/31/22 15:30	09/01/22 09:21	.6

Work Order No:

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296

Environment Testing Xenco

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Chain of Custody

Page of of	Brownfields ☐ RRC ☐ Superfund ☐		PST/UST TRRP Level IV	ADaPT ☐ Other:	Preservative Codes	None: NO DI Water: H <sub>2</sub> O	Cool: Cool MeOH: Me HCL: HC HNO 3: HN H250 4: H2 NaOH: Na H3FO 4: HP NaHSO 4: NABIS Na 25 20 3: NaSO 3 Zn Acetate+NaOH: Zn NaOH+Ascorbic Acid: SAPC Sample Comments  AMPREZISTATTES  AMPREZIST	TI Sn U V Zn /7470 /7471		e) Date/Time	
www.xenco.com Page	Program: UST/PST □ PRP□ Bro	State of Project:	Reporting: Level II   Level III	Deliverables: EDD ADa	1		of Custody	An Mo Ni K Se Ag SiO <sub>2</sub> Na Sr Tl Sn U V Zn Ag Tl U Hg: 1631/245.1/7470 /7471	nd conditions d the control eviously negotlated.	Received by: (Signature)	
The state of the s	Ener	364 & Ghene St		ensolum con	ANALYSIS REQUEST		B90-2872 Chain of Custody	AI Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K -RA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag TI U	from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions ibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control reach sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negor	Date/Time Relinquished by: (Signature)	9
Company of the state of the sta	Company Name:	Address:	City, State ZIP:	_	fum Around		Due Date:  That starts the day received by the lab, if received by 4:30pm  Wet Ice: Yes No Detto: Ye	A 13PPM Texas 11 AI Sb TCLP / SPLP 6010: 8RCRA SI	order from client company to Eurofi sponsibility for any losses or expens 'S5 for each sample submitted to Eu	ure)	
1000	3	Address: 3127 NATION ON KS	City, State ZIP:	Phone: 27-683-2507 Email:	Project Name: DI 11 71 RD 910714	D 15/55 4086   Elfou	Sampler's Name:  Sampler's Name:  Sampler's Name:  Sampler's Name:  Sample RECEIPT  Sample Received Intact:  Sample Custody Seals:  Total Containers:  Sample Identification  Sample Identification  Matrix  Sample Sample Sampled  Sample Sample Identification  Sample Sample Identification  Matrix  Sample Sample Sampled  Sample Sample Identification  Sample Sample Sampled  Sample Sample Identification  Sample Sample Sample Sampled  Sample Samp	Total 200.7 / 6010 200.8 / 6020: 8RCRA 13P Circle Method(s) and Metal(s) to be analyzed TCLP /	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 labbe 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 \$55.00 will be applied to each project and a charge of \$55 for each sample submitted to Eurofins Xenco. A minimum charge of \$55.00 will be applied to each project and a charge of \$55 for each sample submitted to Eurofins Xenco. Dut not analyzed. These terms will be enforced unless previously negotiated.	Relinquished by: (Signature)  Received by: (Signature)	5

#### **Login Sample Receipt Checklist**

Client: Ensolum Job Number: 890-2872-1 SDG Number: 03E1558086

Login Number: 2872 List Source: Eurofins Carlsbad

List Number: 1 Creator: Clifton, Cloe

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

#### **Login Sample Receipt Checklist**

Client: Ensolum Job Number: 890-2872-1 SDG Number: 03E1558086

**List Source: Eurofins Midland** 

Login Number: 2872

List Number: 2 List Creation: 09/02/22 10:54 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").



# **Environment Testing America**

## **ANALYTICAL REPORT**

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

Laboratory Job ID: 890-2914-1

Laboratory Sample Delivery Group: 03E1558086

Client Project/Site: PLU 21 BD 907H

For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Kalei Jennings

RAMER

Authorized for release by: 9/21/2022 5:14:54 PM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

**Review your project** results through EOL **Have a Question?** 

····· Links ······

Visit us at:

www.eurofinsus.com/Env Released to Imaging: 1/11/2023 3:27:56 PM This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten

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

Client: Ensolum
Project/Site: PLU 21 BD 907H
Laboratory Job ID: 890-2914-1
SDG: 03E1558086

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#### **Definitions/Glossary**

Job ID: 890-2914-1 Client: Ensolum Project/Site: PLU 21 BD 907H

SDG: 03E1558086

#### **Qualifiers**

**GC VOA** 

Qualifier **Qualifier Description** 

Indicates the analyte was analyzed for but not detected.

**GC Semi VOA** 

Qualifier Qualifier Description

Indicates the analyte was analyzed for but not detected.

**HPLC/IC** 

Qualifier **Qualifier Description** 

U Indicates the analyte was analyzed for but not detected.

**Glossary** 

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

¤ Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery CFL Contains Free Liquid Colony Forming Unit CFU **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) Limit of Quantitation (DoD/DOE) LOQ

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

MDL Method Detection Limit MLMinimum Level (Dioxin) MPN Most Probable Number Method Quantitation Limit MQL

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent POS Positive / Present

**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

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

**TNTC** Too Numerous To Count

#### **Case Narrative**

Client: Ensolum Job ID: 890-2914-1 SDG: 03E1558086 Project/Site: PLU 21 BD 907H

Job ID: 890-2914-1

**Laboratory: Eurofins Carlsbad** 

Narrative

Job Narrative 890-2914-1

#### Receipt

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

#### GC VOA

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

#### GC Semi VOA

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

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

**Eurofins Carlsbad** 9/21/2022

Matrix: Solid

Lab Sample ID: 890-2914-1

#### **Client Sample Results**

Client: Ensolum Job ID: 890-2914-1 Project/Site: PLU 21 BD 907H SDG: 03E1558086

**Client Sample ID: SS06** 

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

Sample Depth: 6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/19/22 15:06	09/21/22 07:23	
Toluene	<0.00200	U	0.00200		mg/Kg		09/19/22 15:06	09/21/22 07:23	
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/19/22 15:06	09/21/22 07:23	•
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/19/22 15:06	09/21/22 07:23	
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/19/22 15:06	09/21/22 07:23	,
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/19/22 15:06	09/21/22 07:23	,
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	94		70 - 130				09/19/22 15:06	09/21/22 07:23	
1,4-Difluorobenzene (Surr)	112		70 - 130				09/19/22 15:06	09/21/22 07:23	
- Method: Total BTEX - Total BTEX	( Calculation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			09/21/22 15:17	•
Method: 8015 NM - Diesel Range Analyte	•	O) (GC) Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<49.9	U	49.9		mg/Kg			09/14/22 08:52	
Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/13/22 08:23	09/13/22 10:46	,
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/13/22 08:23	09/13/22 10:46	,
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/13/22 08:23	09/13/22 10:46	•
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1-Chlorooctane	85		70 - 130				09/13/22 08:23	09/13/22 10:46	
o-Terphenyl	94		70 - 130				09/13/22 08:23	09/13/22 10:46	1
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

#### **Surrogate Summary**

Client: Ensolum Job ID: 890-2914-1 Project/Site: PLU 21 BD 907H SDG: 03E1558086

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Re
		BFB1	DFBZ1	_
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2914-1	SS06	94	112	
LCS 880-34858/1-A	Lab Control Sample	91	102	
LCSD 880-34858/2-A	Lab Control Sample Dup	94	103	
MB 880-34692/5-A	Method Blank	102	116	
MB 880-34858/5-A	Method Blank	104	116	
Surrogate Legend				
BFB = 4-Bromofluorobenzene	e (Surr)			
DFBZ = 1,4-Difluorobenzene	(Surr)			

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

Prep Type: Total/NA Matrix: Solid

		Percent Surrogate Recovery (Acceptance Limits)							
		1001	OTPH1						
Lab Sample ID	Client Sample ID	(70-130)	(70-130)						
890-2914-1	SS06	85	94						
890-2914-1 MS	SS06	91	87						
890-2914-1 MSD	SS06	95	91						
LCS 880-34341/2-A	Lab Control Sample	74	84						
LCSD 880-34341/3-A	Lab Control Sample Dup	79	88						
MB 880-34341/1-A	Method Blank	102	114						

1CO = 1-Chlorooctane OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-2914-1 Project/Site: PLU 21 BD 907H SDG: 03E1558086

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-34692/5-A

**Matrix: Solid** Analysis Batch: 34895 Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 34692

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/16/22 16:15	09/20/22 17:37	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/16/22 16:15	09/20/22 17:37	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/16/22 16:15	09/20/22 17:37	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/16/22 16:15	09/20/22 17:37	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/16/22 16:15	09/20/22 17:37	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/16/22 16:15	09/20/22 17:37	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130	09/16/22 16:15	09/20/22 17:37	1
1,4-Difluorobenzene (Surr)	116		70 - 130	09/16/22 16:15	09/20/22 17:37	1

Lab Sample ID: MB 880-34858/5-A

**Matrix: Solid** 

**Matrix: Solid** 

m-Xylene & p-Xylene

Client Sample ID: Method Blank

Prep Type: Total/NA

Analysis Batch: 34895								Prep Batch	า: 34858
	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/19/22 15:06	09/21/22 05:13	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/19/22 15:06	09/21/22 05:13	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/19/22 15:06	09/21/22 05:13	1

	МВ	МВ					
Xylenes, Total	<0.00400	U	0.00400	mg/Kg	09/19/22 15:06	09/21/22 05:13	1
o-Xylene	<0.00200	U	0.00200	mg/Kg	09/19/22 15:06	09/21/22 05:13	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg	09/19/22 15:06	09/21/22 05:13	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg	09/19/22 15:06	09/21/22 05:13	1
Toluene	~0.00200	U	0.00200	mg/kg	09/19/22 13:00	09/21/22 03.13	•

Surrogate	%Recovery	Qualifier	Limit
4-Bromofluorobenzene (Surr)	104		70 - 1

4-Bromofluorobenzene (Surr)	104	70 - 130
1,4-Difluorobenzene (Surr)	116	70 - 130

**Client Sample ID: Lab Control Sample** 

70 - 130

70 - 130

Analyzed

09/21/22 05:13

09/21/22 05:13

Prepared

09/19/22 15:06

09/19/22 15:06

89

89

Prep Type: Total/NA Prep Batch: 34858

**Analysis Batch: 34895** Spike LCS LCS %Rec Analyte Added Result Qualifier Unit %Rec Limits Benzene 0.100 0.09802 mg/Kg 98 70 - 130 Toluene 0.100 0.08583 mg/Kg 86 70 - 130 Ethylbenzene 0.100 0.08534 mg/Kg 85 70 - 130

0.200

0.100

0.1780

0.08903

mg/Kg

mg/Kg

o-Xylene LCS LCS

Surrogate	%Recovery Qualifi	er Limits
4-Bromofluorobenzene (Surr)	91	70 - 130
1,4-Difluorobenzene (Surr)	102	70 - 130

Lab Sample ID: LCSD 880-34858/2-A

Lab Sample ID: LCS 880-34858/1-A

**Matrix: Solid** 

**Analysis Batch: 34895** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 34858

	<b>Spike</b>	LCSD LCSD				%Rec		RPD
Analyte	Added	Result Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09393	mg/Kg		94	70 - 130	4	35

Project/Site: PLU 21 BD 907H

Client: Ensolum

Job ID: 890-2914-1

SDG: 03E1558086

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

Lab Sample ID: LCSD 880-34858/2-A **Matrix: Solid** 

Analysis Batch: 34895

Prep Type: Total/NA Prep Batch: 34858

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene	0.100	0.08451		mg/Kg		85	70 - 130	2	35
Ethylbenzene	0.100	0.08316		mg/Kg		83	70 - 130	3	35
m-Xylene & p-Xylene	0.200	0.1731		mg/Kg		87	70 - 130	3	35
o-Xylene	0.100	0.08797		mg/Kg		88	70 - 130	1	35

LCSD LCSD

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

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

Lab Sample ID: MB 880-34341/1-A

Matrix: Solid

**Analysis Batch: 34338** 

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

Prep Batch: 34341

MB MB MDL Unit Dil Fac Result Qualifier RLD Prepared Analyzed Analyte Gasoline Range Organics <50.0 U 50.0 09/13/22 08:23 09/13/22 09:38 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over <50.0 U 50.0 mg/Kg 09/13/22 08:23 09/13/22 09:38 C10-C28) Oll Range Organics (Over C28-C36) <50.0 U 50.0 09/13/22 08:23 mg/Kg 09/13/22 09:38

MR MR

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	102		70 - 130	09/13/22 08:23	09/13/22 09:38	1
o-Terphenyl	114		70 - 130	09/13/22 08:23	09/13/22 09:38	1

Lab Sample ID: LCS 880-34341/2-A

Matrix: Solid

**Analysis Batch: 34338** 

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 34341

Spike LCS LCS babbA Result Qualifier Analyte Unit D %Rec Limits Gasoline Range Organics 1000 948.0 mg/Kg 95 70 - 130(GRO)-C6-C10 1000 846.8 mg/Kg 85 70 - 130 Diesel Range Organics (Over

C10-C28)

LCS LCS

Surrogate	%Recovery Qualifie	er Limits
1-Chlorooctane	74	70 - 130
o-Terphenyl	84	70 - 130

Lab Sample ID: LCSD 880-34341/3-A

**Matrix: Solid** 

**Analysis Batch: 34338** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 34341

Spike LCSD LCSD %Rec RPD Added Result Qualifier Unit %Rec Limits RPD Limit 1000 893.7 89 70 - 130 6 20 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 800.1 mg/Kg 80 70 - 130 20 C10-C28)

Job ID: 890-2914-1 Client: Ensolum Project/Site: PLU 21 BD 907H SDG: 03E1558086

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

LCSD LCSD

Lab Sample ID: LCSD 880-34341/3-A **Matrix: Solid** 

Analysis Batch: 34338

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

**Client Sample ID: SS06** 

Prep Batch: 34341

%Recovery Qualifier Surrogate Limits 1-Chlorooctane 79 70 - 130 o-Terphenyl 88 70 - 130

Lab Sample ID: 890-2914-1 MS **Client Sample ID: SS06** 

**Matrix: Solid** Prep Type: Total/NA **Analysis Batch: 34338** Prep Batch: 34341

Sample Sample Spike MS MS %Rec Qualifier Analyte Result Qualifier Added Result Unit D %Rec Limits <49.9 U 996 827 2 80 70 - 130Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over <49.9 U 996 738.7 74 mg/Kg 70 - 130C10-C28)

MS MS %Recovery Surrogate Qualifier Limits 91 70 - 130 1-Chlorooctane 87 70 - 130 o-Terphenyl

Lab Sample ID: 890-2914-1 MSD

**Matrix: Solid** 

**Analysis Batch: 34338** 

Prep Type: Total/NA Prep Batch: 34341 Sample Sample Spike MSD MSD

Analyte Result Qualifier hahhA Result Qualifier Unit %Rec I imits RPD Limit D Gasoline Range Organics <49.9 U 999 867.5 mg/Kg 84 70 - 130 5 20 (GRO)-C6-C10 Diesel Range Organics (Over <49.9 U 999 783.4 mg/Kg 78 70 - 130 6 20 C10-C28)

MSD MSD Surrogate %Recovery Qualifier Limits 70 - 130 1-Chlorooctane 95 70 - 130 o-Terphenyl 91

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-34286/1-A Client Sample ID: Method Blank **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 34491** 

мв мв Dil Fac Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Chloride <5.00 U 5.00 mg/Kg 09/14/22 14:13

Lab Sample ID: LCS 880-34286/2-A **Client Sample ID: Lab Control Sample Prep Type: Soluble** 

**Matrix: Solid** 

Analysis Batch: 34491

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	237.4		mg/Kg	_	95	90 - 110	

#### **QC Sample Results**

 Client: Ensolum
 Job ID: 890-2914-1

 Project/Site: PLU 21 BD 907H
 SDG: 03E1558086

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 880-34286/3-A

Client Sample ID: Lab Control Sample Dup
Matrix: Solid

Prep Type: Soluble

Analysis Batch: 34491

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	250	238.4		mg/Kg		95	90 - 110	0	20

132

7

8

10

12

13

114

#### **QC Association Summary**

Client: Ensolum

Project/Site: PLU 21 BD 907H

Job ID: 890-2914-1 SDG: 03E1558086

#### **GC VOA**

#### Prep Batch: 34692

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-34692/5-A	Method Blank	Total/NA	Solid	5035	

#### Prep Batch: 34858

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2914-1	SS06	Total/NA	Solid	5035	
MB 880-34858/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-34858/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-34858/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

#### Analysis Batch: 34895

Lab Sample ID 890-2914-1	Client Sample ID SS06	Prep Type Total/NA	Matrix Solid	Method 8021B	Prep Batch 34858
MB 880-34692/5-A	Method Blank	Total/NA	Solid	8021B	34692
MB 880-34858/5-A	Method Blank	Total/NA	Solid	8021B	34858
LCS 880-34858/1-A	Lab Control Sample	Total/NA	Solid	8021B	34858
LCSD 880-34858/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	34858

#### Analysis Batch: 35085

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2914-1	SS06	Total/NA	Solid	Total BTEX	

#### **GC Semi VOA**

#### Analysis Batch: 34338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2914-1	SS06	Total/NA	Solid	8015B NM	34341
MB 880-34341/1-A	Method Blank	Total/NA	Solid	8015B NM	34341
LCS 880-34341/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	34341
LCSD 880-34341/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	34341
890-2914-1 MS	SS06	Total/NA	Solid	8015B NM	34341
890-2914-1 MSD	SS06	Total/NA	Solid	8015B NM	34341

#### Prep Batch: 34341

<b>Lab Sample ID</b> 890-2914-1	Client Sample ID SS06	Prep Type Total/NA	Matrix Solid	Method 8015NM Prep	Prep Batch
MB 880-34341/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-34341/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-34341/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2914-1 MS	SS06	Total/NA	Solid	8015NM Prep	
890-2914-1 MSD	SS06	Total/NA	Solid	8015NM Prep	

#### **Analysis Batch: 34445**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2914-1	SS06	Total/NA	Solid	8015 NM	

#### HPLC/IC

#### Leach Batch: 34286

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2914-1	SS06	Soluble	Solid	DI Leach	
MB 880-34286/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-34286/2-A	Lab Control Sample	Soluble	Solid	DI Leach	

## **QC Association Summary**

 Client: Ensolum
 Job ID: 890-2914-1

 Project/Site: PLU 21 BD 907H
 SDG: 03E1558086

HPLC/IC (Continued)

Leach Batch: 34286 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-34286/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 34491

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2914-1	SS06	Soluble	Solid	300.0	34286
MB 880-34286/1-A	Method Blank	Soluble	Solid	300.0	34286
LCS 880-34286/2-A	Lab Control Sample	Soluble	Solid	300.0	34286
LCSD 880-34286/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	34286

*OJ 132* 

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#### **Lab Chronicle**

Client: Ensolum Job ID: 890-2914-1 Project/Site: PLU 21 BD 907H SDG: 03E1558086

**Client Sample ID: SS06** Lab Sample ID: 890-2914-1

Matrix: Solid

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

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	34858	09/19/22 15:06	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34895	09/21/22 07:23	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35085	09/21/22 15:17	SM	EET MID
Total/NA	Analysis	8015 NM		1			34445	09/14/22 08:52	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	34341	09/13/22 08:23	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34338	09/13/22 10:46	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	34286	09/12/22 11:45	KS	EET MID
Soluble	Analysis	300.0		1			34491	09/14/22 16:19	CH	EET MID

#### **Laboratory References:**

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

## **Accreditation/Certification Summary**

Client: Ensolum Job ID: 890-2914-1 Project/Site: PLU 21 BD 907H

SDG: 03E1558086

#### **Laboratory: Eurofins Midland**

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

Authority	Pr	ogram	Identification Number	Expiration Date
Texas		ELAP	T104704400-22-24	06-30-23
The following analytes the agency does not of	. ,	ut the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes fo
Analysis Method	Prep Method	Matrix	Analyte	
8015 NM		Solid	Total TPH	

#### **Method Summary**

Client: Ensolum

Project/Site: PLU 21 BD 907H

Job ID: 890-2914-1

SDG: 03E1558086

boratory	
ET MID	
ET MID	
ET 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 21 BD 907H

Job ID: 890-2914-1

SDG: 03E1558086

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2914-1	SS06	Solid	09/08/22 09:55	09/09/22 09:22	6

sed Date: 08/25/2020 Rev. 2020.

1

2

3

4

6

8

10 11

12

14

Superfund NAPP2215947887 DI Water: H2O LevelIV MeOH: Me HNO 3: HN NaOH: Na NaOH+Ascorbic Acid: SAPC Sample Comments 166633100 Preservative Codes Date/Time lost Center Zn Acetate+NaOH: Zn PST/UST TRRP neadent UST/PST | PRP | Brownfields | RRC | Other: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO<sub>2</sub> Na Sr Tl Sn U V Zn VaHSO 4: NABIS Na 25 203: NaSO Hg: 1631 / 245.1 / 7470 / 7471 None: NO H3PO 4: HP 4250 4: H2 Cool: Cool HCL: HC Work Order Comments ADaPT Received by: (Signature) www.xenco.com Work Order No: Reporting: Level II | Level III EDD State of Project: um charge of 885.00 will be applied to each project and a charge of 55 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated Deliverables: 890-2914 Chain of Custody TCLP/SPLP6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U otice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions 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 Program: Relinquished by: (Signature) ANALYSIS REQUEST acisbad, NM 88226 3104 E Greene St Startett Green Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 Kjennings@ensolum.com Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199 Energy Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 3 Chiches 933936 XTO HOT Date/Time BTEX Cont Pres. Code # of Parameters Bill to: (if different) Company Name: Grab/ Comp G City, State ZIP: Meredith Roberts TAT starts the day received by MOON the lab, if received by 4:30pm Kes) No 0.01 0 Rush ,9 7 Address: Depth Turn Around Email: Received by: (Signature) 0955 Routine 32, 11019, 703. BTR32 Due Date: Corrected Temperature: Sampled Wet Ice: Temperature Reading: Time 3122 Natil Parks HWY 88220 **Environment Testing** Correction Factor: Thermometer ID: 9/8/22 HLOB OB 12 MIN Date Sampled Jennings (Yes) No 817-683-2603 Circle Method(s) and Metal(s) to be analyzed 3 MN brasize D 3E1558086 Matrix Xenco Ensolum, S A/A Jemp Blank: N/A 200.8 / 6020: Ves No Yes No Yes No Laici Relinquished by: (Signature) eurofins 💸 Sample Identification Samples Received Intact: Total 200.7 / 6010 sample Custody Seals: Cooler Custody Seals: SAMPLE RECEIPT Project Manager: Project Number: Project Location: Sampler's Name: otal Containers: Company Name: City, State ZIP: Project Name Address: Phone: PO#:

Chain of Custody

#### **Login Sample Receipt Checklist**

Client: Ensolum Job Number: 890-2914-1 SDG Number: 03E1558086

Login Number: 2914 List Source: Eurofins Carlsbad

List Number: 1 Creator: Clifton, Cloe

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

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#### **Login Sample Receipt Checklist**

Client: Ensolum

Job Number: 890-2914-1 SDG Number: 03E1558086

Login Number: 2914
List Source: Eurofins Midland
List Number: 2
List Creation: 09/12/22 09:08 AM

Creator: Rodriguez, Leticia

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

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<6mm (1/4").



# **Environment Testing America**

## **ANALYTICAL REPORT**

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

Laboratory Job ID: 890-2916-1

Laboratory Sample Delivery Group: 03E1558086

Client Project/Site: PLU 21 BD 907H

For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Kalei Jennings

JURAMER

Authorized for release by: 9/22/2022 9:09:24 AM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

LINKS

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Released to Imaging: 1/11/2023 3:27:56 PM

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

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

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Client: Ensolum
Project/Site: PLU 21 BD 907H
Laboratory Job ID: 890-2916-1
SDG: 03E1558086

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## 4

#### **Definitions/Glossary**

Client: Ensolum Job ID: 890-2916-1 Project/Site: PLU 21 BD 907H

SDG: 03E1558086

#### **Qualifiers**

**GC VOA** 

Qualifier **Qualifier Description** 

Indicates the analyte was analyzed for but not detected.

#### GC Semi VOA

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

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

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

Not Detected at the reporting limit (or MDL or EDL if shown) ND

NEG Negative / Absent POS Positive / Present **PQL Practical Quantitation Limit** 

Presumptive **PRES** 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

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

TNTC Too Numerous To Count

#### **Case Narrative**

Client: Ensolum

Project/Site: PLU 21 BD 907H

Job ID: 890-2916-1 SDG: 03E1558086

Job ID: 890-2916-1

**Laboratory: Eurofins Carlsbad** 

Narrative

Job Narrative 890-2916-1

#### Receipt

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

#### **GC VOA**

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

#### GC Semi VOA

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

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

Method 8015MOD\_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-34181 and analytical batch 880-34171 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

#### HPLC/IC

Method 300\_ORGFM\_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-34287 and analytical batch 880-34493 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

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Matrix: Solid

Lab Sample ID: 890-2916-1

## **Client Sample Results**

 Client: Ensolum
 Job ID: 890-2916-1

 Project/Site: PLU 21 BD 907H
 SDG: 03E1558086

Client Sample ID: PH01

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

Sample Depth: 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/19/22 14:33	09/21/22 22:24	1
Toluene	< 0.00199	U	0.00199		mg/Kg		09/19/22 14:33	09/21/22 22:24	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/19/22 14:33	09/21/22 22:24	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/19/22 14:33	09/21/22 22:24	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/19/22 14:33	09/21/22 22:24	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/19/22 14:33	09/21/22 22:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		70 - 130				09/19/22 14:33	09/21/22 22:24	1
1,4-Difluorobenzene (Surr)	88		70 - 130				09/19/22 14:33	09/21/22 22:24	1
Method: Total BTEX - Total BTEX	X Calculation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/22/22 09:55	1
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
	-40.0	1.1	40.0				<u> </u>		
Total TPH - -	<49.8	U	49.8		mg/Kg			09/13/22 10:25	
iotal IPH : : <mark>Method: 8015B NM - Diesel Ran</mark> ţ			49.8		mg/Kg		<u> </u>		
: Method: 8015B NM - Diesel Ran	ge Organics (D	RO) (GC) Qualifier	RL	MDL		D	Prepared		1
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics	ge Organics (D	RO) (GC) Qualifier		MDL			Prepared 09/12/22 08:48	09/13/22 10:25	Dil Fac
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	ge Organics (D	RO) (GC) Qualifier U *1	RL	MDL	Unit	<u>D</u>		09/13/22 10:25  Analyzed	Dil Fac
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10	ge Organics (D Result <49.8	RO) (GC) Qualifier U*1	RL 49.8	MDL	Unit mg/Kg	<u>D</u>	09/12/22 08:48	09/13/22 10:25  Analyzed  09/12/22 17:28	Dil Fac
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	ge Organics (D Result <49.8	RO) (GC) Qualifier U *1 U	RL 49.8	MDL	Unit mg/Kg mg/Kg	<u>D</u>	09/12/22 08:48 09/12/22 08:48	09/13/22 10:25  Analyzed  09/12/22 17:28  09/12/22 17:28	Dil Fac
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	ge Organics (D Result <49.8 <49.8	RO) (GC) Qualifier U *1 U	RL 49.8 49.8 49.8	MDL	Unit mg/Kg mg/Kg	<u>D</u>	09/12/22 08:48 09/12/22 08:48 09/12/22 08:48	09/13/22 10:25  Analyzed 09/12/22 17:28 09/12/22 17:28	Dil Face  1  Dil Face  1  Dil Face
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate	ge Organics (D Result <49.8 <49.8 <49.8	RO) (GC) Qualifier U *1 U	## ## ## ## ## ## ## ## ## ## ## ## ##	MDL	Unit mg/Kg mg/Kg	<u>D</u>	09/12/22 08:48 09/12/22 08:48 09/12/22 08:48 Prepared	09/13/22 10:25  Analyzed 09/12/22 17:28 09/12/22 17:28 09/12/22 17:28 Analyzed	Dil Fac
Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane	ge Organics (D Result <49.8 <49.8 <49.8  %Recovery 92 96  omatography -	RO) (GC) Qualifier U*1 U Qualifier	RL 49.8 49.8 49.8 49.8 Limits 70 - 130	MDL	Unit mg/Kg mg/Kg	<u>D</u>	09/12/22 08:48 09/12/22 08:48 09/12/22 08:48 <b>Prepared</b> 09/12/22 08:48	09/13/22 10:25  Analyzed 09/12/22 17:28  09/12/22 17:28  Analyzed 09/12/22 17:28	Dil Fac
Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl	ge Organics (D Result <49.8 <49.8 <49.8  %Recovery 92 96  omatography -	RO) (GC) Qualifier U*1 U Qualifier	RL 49.8 49.8 49.8 49.8 Limits 70 - 130	MDL	Unit mg/Kg mg/Kg mg/Kg	<u>D</u>	09/12/22 08:48 09/12/22 08:48 09/12/22 08:48 <b>Prepared</b> 09/12/22 08:48	09/13/22 10:25  Analyzed 09/12/22 17:28  09/12/22 17:28  Analyzed 09/12/22 17:28	Dil Fac

**Client Sample ID: PH01A** 

Date Collected: 09/08/22 09:05 Date Received: 09/09/22 09:22

Sample Depth: 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/21/22 22:44	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/21/22 22:44	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/21/22 22:44	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/19/22 14:33	09/21/22 22:44	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/21/22 22:44	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/19/22 14:33	09/21/22 22:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130				09/19/22 14:33	09/21/22 22:44	

**Eurofins Carlsbad** 

Lab Sample ID: 890-2916-2

Matrix: Solid

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Matrix: Solid

Lab Sample ID: 890-2916-2

Job ID: 890-2916-1

Client: Ensolum Project/Site: PLU 21 BD 907H SDG: 03E1558086

Client Sample ID: PH01A

Date Collected: 09/08/22 09:05 Date Received: 09/09/22 09:22

Sample Depth: 2

Method: 8021B - Volatile Organic Compound	s (GC) (Continued)
---	--------------------

Surrogate	%Recovery Qua	alifier Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	86	70 - 130	09/19/22 14:33	09/21/22 22:44	1

Method: Total	RTFX - Tota	I RTFX (	Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	כ	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg		_	09/22/22 09:55	1

ı			
ı	Mothod: 8015 NM -	Diesel Range Organio	e (DRO) (GC)

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0 U	50.0	mg/Kg			09/13/22 10:25	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U *1	50.0		mg/Kg		09/12/22 08:48	09/12/22 17:49	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<50.0	U	50.0		mg/Kg		09/12/22 08:48	09/12/22 17:49	1
C10-C28)									
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/12/22 08:48	09/12/22 17:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac

Surrogate	%Recovery	y Qualifier Limits	Prepared	Analyzea	DII Fac
1-Chlorooctane	93	3 70 - 130	09/12/22 08:48	09/12/22 17:49	
o-Terphenyl	97	7 70 - 130	09/12/22 08:48	09/12/22 17:49	1
o-Terpnenyi	97	7 70 - 130	09/12/22 08:48	09/12/22 17:49	

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1470	25.2	mg/Kg			09/14/22 18:23	5

**Client Sample ID: PH02** Lab Sample ID: 890-2916-3 Matrix: Solid

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

Sample Depth: 1

Mothod: 9021D	Volatila Organia	Compounds (GC)
I WIELIIOU. OUZ ID '	• voiatile Organic	Compounds (GC)

motification could be seen as a		()							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/19/22 14:33	09/21/22 23:05	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/19/22 14:33	09/21/22 23:05	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/19/22 14:33	09/21/22 23:05	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/19/22 14:33	09/21/22 23:05	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/19/22 14:33	09/21/22 23:05	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/19/22 14:33	09/21/22 23:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130				09/19/22 14:33	09/21/22 23:05	1
1,4-Difluorobenzene (Surr)	86		70 - 130				09/19/22 14:33	09/21/22 23:05	1

Method:	Total R	TFY - T	otal RT	FX Calcu	ılation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			09/22/22 09:55	1

Method: 8015 NM - Diese	Range Organics (DRO) (	GCI	
Method. Out 3 MM - Diese	i Kange Organics (DKO) ((	GC)	

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8 U	49.8	mg/Kg			09/13/22 10:25	1

Matrix: Solid

Lab Sample ID: 890-2916-3

Lab Sample ID: 890-2916-4

Matrix: Solid

## **Client Sample Results**

Client: Ensolum Job ID: 890-2916-1 Project/Site: PLU 21 BD 907H SDG: 03E1558086

**Client Sample ID: PH02** 

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

Sample Depth: 1

Analyte	Pocult	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
				WIDE		=			Diriac
Gasoline Range Organics	<49.8	U *1	49.8		mg/Kg		09/12/22 08:48	09/12/22 18:11	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<49.8	U	49.8		mg/Kg		09/12/22 08:48	09/12/22 18:11	1
C10-C28)									
Oll Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/12/22 08:48	09/12/22 18:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	94		70 - 130				09/12/22 08:48	09/12/22 18:11	1
o-Terphenyl	95		70 - 130				09/12/22 08:48	09/12/22 18:11	1
- Method: 300.0 - Anions, Ion Chro	omatography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1850		24.8		mg/Kg			09/14/22 18:30	- 5

Client Sample ID: PH02A

Date Collected: 09/08/22 09:15

Date Received: 09/09/22 09:22

Sample Depth: 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/19/22 14:33	09/21/22 23:25	1
Toluene	< 0.00199	U	0.00199		mg/Kg		09/19/22 14:33	09/21/22 23:25	1
Ethylbenzene	< 0.00199	U	0.00199		mg/Kg		09/19/22 14:33	09/21/22 23:25	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/19/22 14:33	09/21/22 23:25	1
o-Xylene	< 0.00199	U	0.00199		mg/Kg		09/19/22 14:33	09/21/22 23:25	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/19/22 14:33	09/21/22 23:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		70 - 130				09/19/22 14:33	09/21/22 23:25	1
1,4-Difluorobenzene (Surr)	93		70 - 130				09/19/22 14:33	09/21/22 23:25	1
Method: Total BTEX - Total BTE	X Calculation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/22/22 09:55	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/13/22 10:25	1
Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9		mg/Kg		09/12/22 08:48	09/12/22 18:32	1
Diesel Range Organics (Over	<49.9	U	49.9		mg/Kg		09/12/22 08:48	09/12/22 18:32	1
C10-C28) OII Range Organics (Over C28-C36)	<49.9	П	49.9		mg/Kg		09/12/22 08:48	09/12/22 18:32	1
Oli Range Organics (Over C26-C36)	<b>\49.9</b>	U	49.9		mg/Kg		09/12/22 06.46	09/12/22 16.32	'
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane			70 - 130				09/12/22 08:48	09/12/22 18:32	1
o-Terphenyl	116		70 <sub>-</sub> 130				09/12/22 08:48	09/12/22 18:32	1

## **Client Sample Results**

 Client: Ensolum
 Job ID: 890-2916-1

 Project/Site: PLU 21 BD 907H
 SDG: 03E1558086

Client Sample ID: PH02A Lab Sample ID: 890-2916-4

Date Collected: 09/08/22 09:15

Date Received: 09/09/22 09:22

Matrix: Solid

Sample Depth: 2

	Method: 300.0 - Anions, Ion Chrom	atography -	Soluble							
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Į	Chloride	871		5.03		mg/Kg			09/14/22 18:37	1

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# **Surrogate Summary**

Client: Ensolum Job ID: 890-2916-1 Project/Site: PLU 21 BD 907H SDG: 03E1558086

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2915-A-1-C MS	Matrix Spike	115	109	
890-2915-A-1-D MSD	Matrix Spike Duplicate	117	102	
890-2916-1	PH01	116	88	
890-2916-2	PH01A	112	86	
890-2916-3	PH02	107	86	
890-2916-4	PH02A	115	93	
LCS 880-34851/1-A	Lab Control Sample	114	106	
LCSD 880-34851/2-A	Lab Control Sample Dup	115	108	
MB 880-34851/5-A	Method Blank	88	77	
MB 880-34941/5-A	Method Blank	100	93	

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

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

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2907-A-1-C MS	Matrix Spike	98	93	
890-2907-A-1-D MSD	Matrix Spike Duplicate	99	93	
890-2916-1	PH01	92	96	
890-2916-2	PH01A	93	97	
890-2916-3	PH02	94	95	
890-2916-4	PH02A	114	116	
LCS 880-34181/2-A	Lab Control Sample	144 S1+	151 S1+	
LCSD 880-34181/3-A	Lab Control Sample Dup	122	130	
MB 880-34181/1-A	Method Blank	105	109	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-2916-1 SDG: 03E1558086 Project/Site: PLU 21 BD 907H

Method: 8021B - Volatile Organic Compounds (GC)

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

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

Prep Type: Total/NA

Prep Batch: 34851

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

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

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

Matrix: Solid

Analysis Batch: 35013

Prep Type: Total/NA

Prep Batch: 34851

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

LCS LCS

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

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

Matrix: Solid

Analysis Batch: 35013

Client Sample ID: Lab Control Sample Dup	Client Sam	ple ID: Lab	<b>Control Sam</b>	ple Dup
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Prep Type: Total/NA

Prep Batch: 34851

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.09096		mg/Kg		91	70 - 130	6	35	
Toluene	0.100	0.08531		mg/Kg		85	70 - 130	4	35	
Ethylbenzene	0.100	0.08835		mg/Kg		88	70 - 130	6	35	
m-Xylene & p-Xylene	0.200	0.1845		mg/Kg		92	70 - 130	6	35	
o-Xylene	0.100	0.1080		mg/Kg		108	70 - 130	2	35	

LCSD LCSD

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

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

Matrix: Solid

Analysis Batch: 35013

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

Prep Batch: 34851

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

## **QC Sample Results**

 Client: Ensolum
 Job ID: 890-2916-1

 Project/Site: PLU 21 BD 907H
 SDG: 03E1558086

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

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

Matrix: Solid

Analysis Batch: 35013

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 34851

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

MS MS

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

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 34851

Matrix: Solid Analysis Batch: 35013

Lab Sample ID: 890-2915-A-1-D MSD

Sample Sample Spike MSD MSD RPD Result Qualifier Result Qualifier RPD Limit Analyte babbA Unit %Rec Limits Benzene <0.00202 U 0.0996 0.08776 mg/Kg 88 70 - 130 4 35 Toluene <0.00202 U 0.0996 0.08175 mg/Kg 82 70 - 130 35 Ethylbenzene <0.00202 U 0.0996 0.08872 mg/Kg 89 70 - 130 2 35 0.199 89 70 - 130 35 m-Xylene & p-Xylene <0.00403 U 0.1777 mg/Kg 0 0.0996 <0.00202 U 0.1037 70 - 130 o-Xylene mg/Kg 104

MSD MSD

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

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

Matrix: Solid

Analysis Batch: 35013

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 34941

MB MB

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

MB MB

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

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

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

**Matrix: Solid** 

**Analysis Batch: 34171** 

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 34181

 Analyte
 Result
 Qualifier
 RL
 MDL
 Unit
 D
 Prepared
 Analyzed
 Dil Factoria

 Gasoline Range Organics
 <50.0</td>
 U
 50.0
 mg/Kg
 09/12/22 08:48
 09/12/22 10:56
 1

(GRO)-C6-C10

## QC Sample Results

Client: Ensolum Job ID: 890-2916-1 Project/Site: PLU 21 BD 907H SDG: 03E1558086

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

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

Analysis Batch: 34171

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

Prep Batch: 34181

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

MB MB

MB MB

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

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 880-34181/2-A **Matrix: Solid** Prep Type: Total/NA Analysis Batch: 34171 Prep Batch: 34181

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

C10-C28)

LCS LCS

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

Lab Sample ID: LCSD 880-34181/3-A Client Sample ID: Lab Control Sample Dup

**Matrix: Solid** 

Analysis Batch: 34171

Prep Type: Total/NA Prep Batch: 34181

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

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

Lab Sample ID: 890-2907-A-1-C MS Client Sample ID: Matrix Spike

Matrix: Solid

Analysis Batch: 34171									Prep	o Batch: 34181
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	<49.8	U F1 *1	998	611.1	F1	mg/Kg		59	70 - 130	
(GRO)-C6-C10										

859.4

mg/Kg

998

Diesel Range Organics (Over C10-C28)

	MS N	1S	
Surrogate	%Recovery C	Qualifier	Limits
1-Chlorooctane	98		70 - 130
o-Terphenvl	93		70 - 130

<49.8 U

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Prep Type: Total/NA

70 - 130

Client: Ensolum Job ID: 890-2916-1 Project/Site: PLU 21 BD 907H SDG: 03E1558086

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

Lab Sample ID: 890-2907-A-1-D MSD Client Sample ID: Matrix Spike Duplicate

**Matrix: Solid** 

Prep Type: Total/NA Analysis Batch: 34171 Prep Batch: 34181 Comple Comple Chiles Med Med

	Janipie	Janipie	Opike	MISD	MISD				/OIXEC		IXI D
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	<49.8	U F1 *1	995	585.4	F1	mg/Kg		57	70 - 130	4	20
(GRO)-C6-C10											
Diesel Range Organics (Over	<49.8	U	995	865.7		mg/Kg		84	70 - 130	1	20
C10-C28)											

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

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-34287/1-A Client Sample ID: Method Blank **Prep Type: Soluble** 

**Matrix: Solid** 

Analysis Batch: 34493

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Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00 U	5.00	mg/Kg			09/14/22 15:01	1

Lab Sample ID: LCS 880-34287/2-A **Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 34493** 

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	231.1		mg/Kg		92	90 - 110	

Lab Sample ID: LCSD 880-34287/3-A Client Sample ID: Lab Control Sample Dup **Prep Type: Soluble** 

**Matrix: Solid** 

Analysis Batch: 34493

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	250	23/1.5		ma/Ka		0/	90 110		20	

Lab Sample ID: 880-19052-A-1-C MS Client Sample ID: Matrix Spike **Prep Type: Soluble** 

**Matrix: Solid** 

**Analysis Batch: 34493** 

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	476		250	700.4		ma/Ka	_	90	90 110	

Lab Sample ID: 880-19052-A-1-D MSD Client Sample ID: Matrix Spike Duplicate **Matrix: Solid Prep Type: Soluble** 

Analysis Batch: 34493

-	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	476		250	705.2		mg/Kg		92	90 - 110	1	20

# **QC Sample Results**

Client: Ensolum Job ID: 890-2916-1 Project/Site: PLU 21 BD 907H SDG: 03E1558086

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-19054-A-2-B MS Client Sample ID: Matrix Spike **Prep Type: Soluble** 

**Matrix: Solid** 

Analysis Batch: 34493

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	1790	F1	1260	3112		mg/Kg		106	90 - 110	

Lab Sample ID: 880-19054-A-2-C MSD **Client Sample ID: Matrix Spike Duplicate** 

Matrix: Solid **Prep Type: Soluble** 

**Analysis Batch: 34493** 

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	1790	F1	1260	3178	F1	mg/Kg		111	90 - 110	2	20

# **QC Association Summary**

 Client: Ensolum
 Job ID: 890-2916-1

 Project/Site: PLU 21 BD 907H
 SDG: 03E1558086

**GC VOA** 

Prep Batch: 34851

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2916-1	PH01	Total/NA	Solid	5035	
890-2916-2	PH01A	Total/NA	Solid	5035	
890-2916-3	PH02	Total/NA	Solid	5035	
890-2916-4	PH02A	Total/NA	Solid	5035	
MB 880-34851/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-34851/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-34851/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2915-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-2915-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 34941

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

**Analysis Batch: 35013** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2916-1	PH01	Total/NA	Solid	8021B	34851
890-2916-2	PH01A	Total/NA	Solid	8021B	34851
890-2916-3	PH02	Total/NA	Solid	8021B	34851
890-2916-4	PH02A	Total/NA	Solid	8021B	34851
MB 880-34851/5-A	Method Blank	Total/NA	Solid	8021B	34851
MB 880-34941/5-A	Method Blank	Total/NA	Solid	8021B	34941
LCS 880-34851/1-A	Lab Control Sample	Total/NA	Solid	8021B	34851
LCSD 880-34851/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	34851
890-2915-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	34851
890-2915-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	34851

Analysis Batch: 35141

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2916-1	PH01	Total/NA	Solid	Total BTEX	
890-2916-2	PH01A	Total/NA	Solid	Total BTEX	
890-2916-3	PH02	Total/NA	Solid	Total BTEX	
890-2916-4	PH02A	Total/NA	Solid	Total BTEX	

**GC Semi VOA** 

Analysis Batch: 34171

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2916-1	PH01	Total/NA	Solid	8015B NM	34181
890-2916-2	PH01A	Total/NA	Solid	8015B NM	34181
890-2916-3	PH02	Total/NA	Solid	8015B NM	34181
890-2916-4	PH02A	Total/NA	Solid	8015B NM	34181
MB 880-34181/1-A	Method Blank	Total/NA	Solid	8015B NM	34181
LCS 880-34181/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	34181
LCSD 880-34181/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	34181
890-2907-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	34181
890-2907-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	34181

Prep Batch: 34181

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2916-1	PH01	Total/NA	Solid	8015NM Prep	

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# **QC Association Summary**

 Client: Ensolum
 Job ID: 890-2916-1

 Project/Site: PLU 21 BD 907H
 SDG: 03E1558086

GC Semi VOA (Continued)

### Prep Batch: 34181 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2916-2	PH01A	Total/NA	Solid	8015NM Prep	
890-2916-3	PH02	Total/NA	Solid	8015NM Prep	
890-2916-4	PH02A	Total/NA	Solid	8015NM Prep	
MB 880-34181/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-34181/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-34181/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2907-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2907-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 34382

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2916-1	PH01	Total/NA	Solid	8015 NM	
890-2916-2	PH01A	Total/NA	Solid	8015 NM	
890-2916-3	PH02	Total/NA	Solid	8015 NM	
890-2916-4	PH02A	Total/NA	Solid	8015 NM	

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#### Leach Batch: 34287

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2916-1	PH01	Soluble	Solid	DI Leach	
890-2916-2	PH01A	Soluble	Solid	DI Leach	
890-2916-3	PH02	Soluble	Solid	DI Leach	
890-2916-4	PH02A	Soluble	Solid	DI Leach	
MB 880-34287/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-34287/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-34287/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-19052-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-19052-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
880-19054-A-2-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-19054-A-2-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### Analysis Batch: 34493

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2916-1	PH01	Soluble	Solid	300.0	34287
890-2916-2	PH01A	Soluble	Solid	300.0	34287
890-2916-3	PH02	Soluble	Solid	300.0	34287
890-2916-4	PH02A	Soluble	Solid	300.0	34287
MB 880-34287/1-A	Method Blank	Soluble	Solid	300.0	34287
LCS 880-34287/2-A	Lab Control Sample	Soluble	Solid	300.0	34287
LCSD 880-34287/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	34287
880-19052-A-1-C MS	Matrix Spike	Soluble	Solid	300.0	34287
880-19052-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	34287
880-19054-A-2-B MS	Matrix Spike	Soluble	Solid	300.0	34287
880-19054-A-2-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	34287

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Client: Ensolum Job ID: 890-2916-1 Project/Site: PLU 21 BD 907H SDG: 03E1558086

**Client Sample ID: PH01** Lab Sample ID: 890-2916-1 Date Collected: 09/08/22 09:00

Matrix: Solid Date Received: 09/09/22 09:22

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	34851	09/19/22 14:33	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35013	09/21/22 22:24	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35141	09/22/22 09:55	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34382	09/13/22 10:25	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	34181	09/12/22 08:48	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34171	09/12/22 17:28	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	34287	09/12/22 11:48	KS	EET MID
Soluble	Analysis	300.0		5			34493	09/14/22 18:16	CH	EET MID

Client Sample ID: PH01A Lab Sample ID: 890-2916-2 Date Collected: 09/08/22 09:05 Matrix: Solid

Date Received: 09/09/22 09:22

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	34851	09/19/22 14:33	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35013	09/21/22 22:44	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35141	09/22/22 09:55	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34382	09/13/22 10:25	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	34181	09/12/22 08:48	AM	EET MIC
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34171	09/12/22 17:49	SM	EET MIC
Soluble	Leach	DI Leach			4.96 g	50 mL	34287	09/12/22 11:48	KS	EET MIC
Soluble	Analysis	300.0		5			34493	09/14/22 18:23	CH	EET MID

**Client Sample ID: PH02** Lab Sample ID: 890-2916-3 Date Collected: 09/08/22 09:10 **Matrix: Solid** 

Date Received: 09/09/22 09:22

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	34851	09/19/22 14:33	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35013	09/21/22 23:05	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35141	09/22/22 09:55	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34382	09/13/22 10:25	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	34181	09/12/22 08:48	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34171	09/12/22 18:11	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	34287	09/12/22 11:48	KS	EET MID
Soluble	Analysis	300.0		5			34493	09/14/22 18:30	CH	EET MID

Client Sample ID: PH02A Lab Sample ID: 890-2916-4 Date Collected: 09/08/22 09:15 **Matrix: Solid** 

Date Received: 09/09/22 09:22

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	34851	09/19/22 14:33	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35013	09/21/22 23:25	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35141	09/22/22 09:55	AJ	EET MID

**Eurofins Carlsbad** 

Page 17 of 24

### **Lab Chronicle**

Client: Ensolum Job ID: 890-2916-1 Project/Site: PLU 21 BD 907H SDG: 03E1558086

Client Sample ID: PH02A

Date Received: 09/09/22 09:22

Lab Sample ID: 890-2916-4 Date Collected: 09/08/22 09:15

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			34382	09/13/22 10:25	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	34181	09/12/22 08:48	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34171	09/12/22 18:32	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	34287	09/12/22 11:48	KS	EET MID
Soluble	Analysis	300.0		1			34493	09/14/22 18:37	CH	EET MID

Laboratory References:

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

# **Accreditation/Certification Summary**

Client: Ensolum Job ID: 890-2916-1 Project/Site: PLU 21 BD 907H

SDG: 03E1558086

## **Laboratory: Eurofins Midland**

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

Authority		rogram	Identification Number	Expiration Date
Texas	NI	ELAP	T104704400-22-24	06-30-23
The following analytes the agency does not of		ut the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes fo
Analysis Method	Prep Method	Matrix	Analyte	
8015 NM		Solid	Total TPH	
Total BTEX		Solid	Total BTEX	

## **Method Summary**

Client: Ensolum

Project/Site: PLU 21 BD 907H

Job ID: 890-2916-1

SDG: 03E1558086

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 21 BD 907H

Job ID: 890-2916-1

SDG: 03E1558086

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2916-1	PH01	Solid	09/08/22 09:00	09/09/22 09:22	1
890-2916-2	PH01A	Solid	09/08/22 09:05	09/09/22 09:22	2
890-2916-3	PH02	Solid	09/08/22 09:10	09/09/22 09:22	1
890-2916-4	PH02A	Solid	09/08/22 09:15	09/09/22 09:22	2

Date/Time

Received by: (Signature)

Relinquished by: (Signature)

9-9-3-9-3 Date/Time

Received by: (Signature)

Relinquished by: (Signature)

					Ū	nain	Chain of Custody	tody				
eurofins 😽		<b>Environment Testing</b>	5	Mid	louston, TX land, TX (43	(281) 240-	4200, Dallas, 0, San Anton	Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334	Work Order No:	der No:		
	Xenco			급 포	Paso, TX (9	75) 392-75	43, Lubbock, 50, Carlsbad,	EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	O > NUMBER	COO COO MANAGEMENT	Page	<b>-</b>
						(			27.000			
Project Manager:	Kale Jen	sennings	8	Bill to: (if different)	rent)	C	2776	Jarrett Green	Work	Corder C	Work Order Comments	
Company Name:	Ensolum	11C	O	Company Name:	me:	×		Energy	Program: UST/PST   PRP   Brownfields	P□ Bro	ownfields RRC	Superfund
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te ZIP:	ad.	NM 8822	JQ.	City, State ZIP:	Ġ.	S	bedelast	d, NM 88220			PST/UST TRR	PST/UST TRRP L LevelIV
Phone:	817-683-2503	2503	Email:	k je	וחוחם	बु	nsciu	Kjennings@ensciwm.com	Deliverables: EDD	ADa	ADaPT ☐ Other:	
Project Name:	Pu 21 RA	40.34	Turn Around	puno	1			ANALYSIS REQUEST	QUEST		Preservative Codes	ve Codes
Ser:	E15		Moutine	Rush	Pres. Code						None: NO	D! Water: H <sub>2</sub> O
3	32.11019.70	703.87732 Due Date:	Date:								Cool: Cool	MeOH: Me
	Mercalth Roberts		starts the da	TAT starts the day received by							HCL: HC	HNO 3: HN
PO #:			lab, if receiv	the lab, if received by 4:30pm	1						H <sub>2</sub> SO <sub>4</sub> : H <sub>2</sub>	NaOH: Na
SAMPLE RECEIPT	Temp Blank:	(Wes) No We	Wet Ice:	No No	eter						H₃PO₄:HP	
Samples Received Intact:	(Yes) No	Thermometer ID:	3	FOOM	mea	_	ţ				NaHSO 4: NABIS	
Cooler Custody Seals:	Yes No N/A	Correction Factor:		C-0-	Pa		9 }		890-2916 Chain of Custody		Na 25 20 3: Na SO	6
Sample Custody Seals:	Yes No N/A	Temperature Reading:	ding:	1.		>	ر ادر		(none)	1	Zn Acetate+NaOH: Zn	H: Zn
Total Containers:	)	Corrected Temperature:	rature:	0	T	E.	H			_	NaOH+Ascorbic Acid: SAPC	Acid: SAPC
Sample Identification	tion	Date	Time	Depth Gr	Grab/ # of		47				Sample C	Sample Comments
C	S	2	0060	1,1		×	X			-	Incident	**
OH C	0	2/0/2	7000	11	2	X	X				NAPP72	NAPP7215947987
PHOIN	10	9/0/22	2000	1	5.4	X	X					
7707	70	419177	0915	1/2	5.5	X	X			-	Cast Center:	ter:
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Circle Method(s) and Metal(s) to be analyzed	Metal(s) to be an		TCLP / SPI	P 6010 : 8	<b>BRCRA</b>	sb As B	a Be Cd	TCLP/SPLP6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U		1/245.1	Hg: 1631 / 245.1 / 7470 / 7471	
Notice: Stanature of this documen	t and relinquishment of sam	ples constitutes a valid pu	ırchase order	from client con	spany to Euro	fins Xenco,	ts affiliates and	Notice: Stanature 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	erms and conditions			
of service. Eurofins Xenco will be	liable only for the cost of sar arge of \$85.00 will be applie	nples and shall not assum d to each project and a ch	e any respons narge of \$5 for	ibility for any lo each sample si	sses or experubmitted to E	urofins Xen	by the client i	of seryke. 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 enforced unless previously negotiated.	beyond the control sless previously negotiated.			

## **Login Sample Receipt Checklist**

Client: Ensolum

Job Number: 890-2916-1

SDG Number: 03E1558086

List Source: Eurofins Carlsbad

Login Number: 2916 List Number: 1 Creator: Clifton, Cloe

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

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<6mm (1/4").

## **Login Sample Receipt Checklist**

Client: Ensolum Job

Job Number: 890-2916-1 SDG Number: 03E1558086

Login Number: 2916
List Source: Eurofins Midland
List Number: 2
List Creation: 09/12/22 09:08 AM

Creator: Rodriguez, Leticia

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

Euronnis Carisbau

Released to Imaging: 1/11/2023 3:27:56 PM

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<6mm (1/4").



# **Environment Testing America**

# **ANALYTICAL REPORT**

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

Laboratory Job ID: 890-2918-1

Laboratory Sample Delivery Group: 03E1558086

Client Project/Site: PLU 21 BD 907H

For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Kalei Jennings

RAMER

9/22/2022 9:09:24 AM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

Authorized for release by:

**Have a Question?** 

EOL

····· Links ······

**Review your project** results through

Visit us at:

www.eurofinsus.com/Env Released to Imaging: 1/11/2023 3:27:56 PM This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten

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

Client: Ensolum
Project/Site: PLU 21 BD 907H
Laboratory Job ID: 890-2918-1
SDG: 03E1558086

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## **Definitions/Glossary**

Job ID: 890-2918-1 Client: Ensolum Project/Site: PLU 21 BD 907H

SDG: 03E1558086

#### **Qualifiers**

#### **GC VOA**

Qualifier **Qualifier Description** 

Indicates the analyte was analyzed for but not detected.

#### **GC Semi VOA**

Qualifier Qualifier Description

Indicates the analyte was analyzed for but not detected.

**HPLC/IC** 

Qualifier **Qualifier Description** 

U Indicates the analyte was analyzed for but not detected.

## **Glossary**

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid

CFU Colony Forming Unit **CNF** Contains No Free Liquid

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac **Dilution Factor** 

DL Detection Limit (DoD/DOE)

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

Decision Level Concentration (Radiochemistry) DLC

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 Method Quantitation Limit MQL

Not Calculated NC

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)

Reporting Limit or Requested Limit (Radiochemistry) RL

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

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

**TNTC** Too Numerous To Count

#### **Case Narrative**

Client: Ensolum
Project/Site: PLU 21 BD 907H

Job ID: 890-2918-1 SDG: 03E1558086

Job ID: 890-2918-1

**Laboratory: Eurofins Carlsbad** 

Narrative

Job Narrative 890-2918-1

#### Receipt

The sample was received on 9/9/2022 9:22 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was  $1.2^{\circ}$ C

#### GC VOA

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

#### GC Semi VOA

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

#### HPI C/IC

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

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Matrix: Solid

Lab Sample ID: 890-2918-1

Job ID: 890-2918-1

Client: Ensolum Project/Site: PLU 21 BD 907H SDG: 03E1558086

**Client Sample ID: SS05** Date Collected: 09/08/22 09:50

Date Received: 09/09/22 09:22

Sample Depth: 6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/21/22 23:46	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/21/22 23:46	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/21/22 23:46	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/19/22 14:33	09/21/22 23:46	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/21/22 23:46	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/19/22 14:33	09/21/22 23:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130				09/19/22 14:33	09/21/22 23:46	1
1,4-Difluorobenzene (Surr)	92		70 - 130				09/19/22 14:33	09/21/22 23:46	1
Method: Total BTEX - Total BTEX	X Calculation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
		O) (GC)							
Analyte	Result	Qualifier	RL	MDL		<u>D</u>	Prepared	Analyzed	
Total TPH	Result   <49.9	Qualifier U	RL 49.9	MDL	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 09/14/22 08:52	
	Result <49.9  ge Organics (Di	Qualifier U RO) (GC)	49.9		mg/Kg		<u> </u>	09/14/22 08:52	1
Total TPH  Method: 8015B NM - Diesel Rang Analyte	Result <49.9  ge Organics (Di Result	Qualifier U RO) (GC) Qualifier	49.9	MDL	mg/Kg	<u>D</u>	Prepared	09/14/22 08:52  Analyzed	1 Dil Fac
Total TPH  Method: 8015B NM - Diesel Rang	Result <49.9  ge Organics (Di	Qualifier U RO) (GC) Qualifier	49.9		mg/Kg		<u> </u>	09/14/22 08:52	1 Dil Fac
Total TPH  Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics	Result <49.9  ge Organics (Di Result	Qualifier U  RO) (GC) Qualifier U	49.9		mg/Kg		Prepared	09/14/22 08:52  Analyzed	Dil Fac
Total TPH  Method: 8015B NM - Diesel Rang Analyte  Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	ge Organics (D) Result <49.9  49.9	Qualifier U  RO) (GC) Qualifier U	49.9  RL 49.9		mg/Kg  Unit mg/Kg		Prepared 09/13/22 08:23	09/14/22 08:52  Analyzed  09/13/22 17:46	Dil Fac
Total TPH  Method: 8015B NM - Diesel Rang Analyte  Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result   <49.9	Qualifier U  RO) (GC) Qualifier U  U	49.9  RL 49.9  49.9		mg/Kg  Unit mg/Kg  mg/Kg		Prepared 09/13/22 08:23 09/13/22 08:23	09/14/22 08:52  Analyzed 09/13/22 17:46 09/13/22 17:46	1 Dil Fac
Total TPH  Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result   <49.9	Qualifier U  RO) (GC) Qualifier U  U	49.9  RL 49.9  49.9  49.9		mg/Kg  Unit mg/Kg  mg/Kg		Prepared 09/13/22 08:23 09/13/22 08:23	09/14/22 08:52  Analyzed 09/13/22 17:46 09/13/22 17:46	Dil Face 1 1 1 Dil Face
Total TPH  Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate	Result   <49.9	Qualifier U  RO) (GC) Qualifier U  U	49.9  RL 49.9  49.9  49.9  Limits		mg/Kg  Unit mg/Kg  mg/Kg		Prepared 09/13/22 08:23 09/13/22 08:23 09/13/22 08:23 Prepared	09/14/22 08:52  Analyzed 09/13/22 17:46 09/13/22 17:46 09/13/22 17:46  Analyzed	Dil Fac
Total TPH  Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane	Result   <49.9	Qualifier U  RO) (GC) Qualifier U  U  Qualifier	49.9  RL 49.9  49.9  49.9  Limits 70 - 130		mg/Kg  Unit mg/Kg  mg/Kg		Prepared 09/13/22 08:23 09/13/22 08:23 09/13/22 08:23  Prepared 09/13/22 08:23	09/14/22 08:52  Analyzed 09/13/22 17:46  09/13/22 17:46  Analyzed  09/13/22 17:46	Dil Fac
Total TPH  Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl	Result   <49.9	Qualifier U  RO) (GC) Qualifier U  U  Qualifier	49.9  RL 49.9  49.9  49.9  Limits 70 - 130		mg/Kg  Unit mg/Kg mg/Kg mg/Kg		Prepared 09/13/22 08:23 09/13/22 08:23 09/13/22 08:23  Prepared 09/13/22 08:23	09/14/22 08:52  Analyzed 09/13/22 17:46  09/13/22 17:46  Analyzed  09/13/22 17:46	

# **Surrogate Summary**

 Client: Ensolum
 Job ID: 890-2918-1

 Project/Site: PLU 21 BD 907H
 SDG: 03E1558086

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-2915-A-1-C MS	Matrix Spike	115	109
890-2915-A-1-D MSD	Matrix Spike Duplicate	117	102
890-2918-1	SS05	112	92
LCS 880-34851/1-A	Lab Control Sample	114	106
LCSD 880-34851/2-A	Lab Control Sample Dup	115	108
MB 880-34851/5-A	Method Blank	88	77
MB 880-34941/5-A	Method Blank	100	93

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

OTPH = o-Terphenyl

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)	
890-2914-A-1-D MS	Matrix Spike	91	87	
890-2914-A-1-E MSD	Matrix Spike Duplicate	95	91	
890-2918-1	SS05	106	119	
LCS 880-34341/2-A	Lab Control Sample	74	84	
LCSD 880-34341/3-A	Lab Control Sample Dup	79	88	
MB 880-34341/1-A	Method Blank	102	114	
Surrogate Legend				

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## **QC Sample Results**

Client: Ensolum Job ID: 890-2918-1 SDG: 03E1558086 Project/Site: PLU 21 BD 907H

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

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

**Matrix: Solid** 

Analysis Batch: 35013

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 34851

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

MB MB

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

Lab Sample ID: LCS 880-34851/1-A

Matrix: Solid

Analysis Batch: 35013

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 34851

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

LCS LCS

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

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

Matrix: Solid

Analysis Batch: 35013

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

Prep Batch: 34851

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09096		mg/Kg		91	70 - 130	6	35
Toluene	0.100	0.08531		mg/Kg		85	70 - 130	4	35
Ethylbenzene	0.100	0.08835		mg/Kg		88	70 - 130	6	35
m-Xylene & p-Xylene	0.200	0.1845		mg/Kg		92	70 - 130	6	35
o-Xylene	0.100	0.1080		mg/Kg		108	70 - 130	2	35

LCSD LCSD

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

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

Matrix: Solid

Analysis Batch: 35013

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 34851

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

Prep Batch: 34851

Prep Type: Total/NA

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89

104

mg/Kg

mg/Kg

mg/Kg

70 - 130

70 - 130

70 - 130

## QC Sample Results

Job ID: 890-2918-1 Client: Ensolum Project/Site: PLU 21 BD 907H SDG: 03E1558086

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

Lab Sample ID: 890-2915-A-1-C MS Client Sample ID: Matrix Spike Prep Type: Total/NA

**Matrix: Solid** 

Analysis Batch: 35013

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

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

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

**Matrix: Solid Analysis Batch: 35013** 

Prep Batch: 34851 Sample Sample Spike MSD MSD RPD Result Qualifier %Rec RPD Limit Analyte Added Result Qualifier Limits Unit Benzene <0.00202 U 0.0996 0.08776 mg/Kg 88 70 - 130 4 35 Toluene <0.00202 0.0996 0.08175 mg/Kg 82 70 - 130 35

0.08872

0.1777

0.1037

0.0996

0.199

0.0996

70 - 130

MSD MSD Surrogate Qualifier Limits %Recovery 70 - 130 4-Bromofluorobenzene (Surr) 117

<0.00202

<0.00403 U

<0.00202 U

102

U

Ethylbenzene

o-Xylene

m-Xylene & p-Xylene

1,4-Difluorobenzene (Surr)

Lab Sample ID: MB 880-34941/5-A Client Sample ID: Method Blank **Matrix: Solid** Prep Type: Total/NA Analysis Batch: 35013 Prep Batch: 34941 MB MB

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

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

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

Lab Sample ID: MB 880-34341/1-A

**Matrix: Solid** 

Analysis Batch: 34338

Prep Batch: 34341 мв мв Result Qualifier RL MDL Unit Prepared <50.0 U 50.0 09/13/22 08:23 09/13/22 09:38 Gasoline Range Organics mg/Kg

(GRO)-C6-C10

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Prep Type: Total/NA

Client Sample ID: Method Blank

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Client: Ensolum

Job ID: 890-2918-1

SDG: 03E1558086

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

Lab Sample ID: MB 880-34341/1-A **Matrix: Solid** 

Lab Sample ID: LCS 880-34341/2-A

Analysis Batch: 34338

Project/Site: PLU 21 BD 907H

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 34341

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 09:38	1
C10-C28) Oll Range Organics (Over C28-C36)	<50.0	11	50.0		ma/Ka		09/13/22 08:23	09/13/22 09:38	1
Oil Mange Organics (Over 020-030)	<b>\30.0</b>	U	50.0		mg/Kg		09/13/22 00.23	09/13/22 09.30	ı

MB MB

MR MR

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	102		70 - 130	09/13/22 08:23	09/13/22 09:38	1
o-Terphenyl	114		70 - 130	09/13/22 08:23	09/13/22 09:38	1

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 34341

Analysis Batch: 34338 LCS LCS Spike Analyte Added Result Qualifier Unit %Rec Limits Gasoline Range Organics 1000 948.0 95 70 - 130 mg/Kg (GRO)-C6-C10 1000 846.8 Diesel Range Organics (Over mg/Kg 85 70 - 130C10-C28)

LCS LCS

Surrogate	%Recovery Qualifier	Limits
1-Chlorooctane	74	70 - 130
o-Terphenyl	84	70 - 130

Lab Sample ID: LCSD 880-34341/3-A Client Sample ID: Lab Control Sample Dup

**Matrix: Solid** 

**Matrix: Solid** 

Analysis Batch: 34338

Prep Type: Total/NA

Prep Batch: 34341

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics	 1000	893.7		mg/Kg		89	70 - 130	6	20	
(GRO)-C6-C10										
Diesel Range Organics (Over	1000	800.1		mg/Kg		80	70 - 130	6	20	
C10-C28)										

LCSD LCSD %Recovery Qualifier

Surrogate 1-Chlorooctane 79 70 - 130 o-Terphenyl 88 70 - 130

Lab Sample ID: 890-2914-A-1-D MS Client Sample ID: Matrix Spike

Limits

**Matrix: Solid** 

**Analysis Batch: 34338** 

Prep Type: Total/NA Prep Batch: 34341

MS MS Sample Sample Spike %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits <49.9 U 996 827.2 80 70 - 130 Gasoline Range Organics mg/Kg (GRO)-C6-C10 996 738.7 Diesel Range Organics (Over <49.9 U mg/Kg 74 70 - 130

C10-C28)

	IVIS	IVIS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	91		70 - 130
o-Terphenyl	87		70 - 130

Client: Ensolum Job ID: 890-2918-1 Project/Site: PLU 21 BD 907H SDG: 03E1558086

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

Lab Sample ID: 890-2914-A-1-E MSD Client Sample ID: Matrix Spike Duplicate

**Matrix: Solid** 

Prep Type: Total/NA Analysis Batch: 34338 Prep Batch: 34341

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	<49.9	U	999	867.5		mg/Kg		84	70 - 130	5	20
(GRO)-C6-C10											
Diesel Range Organics (Over	<49.9	U	999	783.4		mg/Kg		78	70 - 130	6	20
C10-C28)											

MSD MSD %Recovery Qualifier Limits Surrogate 1-Chlorooctane 70 - 130 95 o-Terphenyl 91 70 - 130

Method: 300.0 - Anions, Ion Chromatography

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

**Matrix: Solid** 

**Analysis Batch: 34499** 

мв мв

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

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

**Matrix: Solid** 

**Analysis Batch: 34499** 

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

Lab Sample ID: LCSD 880-34288/3-A Client Sample ID: Lab Control Sample Dup **Prep Type: Soluble** 

**Matrix: Solid** 

Analysis Batch: 34499

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	250	242.0		mg/Kg		97	90 - 110	0	20	

Lab Sample ID: 890-2913-A-1-C MS Client Sample ID: Matrix Spike **Prep Type: Soluble** 

**Matrix: Solid** 

**Analysis Batch: 34499** 

	Sample	Sample	<b>Бріке</b>	IVIS	IVIS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	22.1		250	276.5		mg/Kg		102	90 - 110	

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

**Matrix: Solid** 

Analysis Batch: 34499

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

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**Prep Type: Soluble** 

Client Sample ID: Matrix Spike Duplicate

# **QC Association Summary**

 Client: Ensolum
 Job ID: 890-2918-1

 Project/Site: PLU 21 BD 907H
 SDG: 03E1558086

**GC VOA** 

Prep Batch: 34851

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2918-1	SS05	Total/NA	Solid	5035	
MB 880-34851/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-34851/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-34851/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2915-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-2915-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 34941

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

Analysis Batch: 35013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2918-1	SS05	Total/NA	Solid	8021B	34851
MB 880-34851/5-A	Method Blank	Total/NA	Solid	8021B	34851
MB 880-34941/5-A	Method Blank	Total/NA	Solid	8021B	34941
LCS 880-34851/1-A	Lab Control Sample	Total/NA	Solid	8021B	34851
LCSD 880-34851/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	34851
890-2915-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	34851
890-2915-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	34851

Analysis Batch: 35142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2918-1	SS05	Total/NA	Solid	Total BTEX	

#### **GC Semi VOA**

Analysis Batch: 34338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2918-1	SS05	Total/NA	Solid	8015B NM	34341
MB 880-34341/1-A	Method Blank	Total/NA	Solid	8015B NM	34341
LCS 880-34341/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	34341
LCSD 880-34341/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	34341
890-2914-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	34341
890-2914-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	34341

Prep Batch: 34341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2918-1	SS05	Total/NA	Solid	8015NM Prep	
MB 880-34341/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-34341/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-34341/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2914-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2914-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

**Analysis Batch: 34448** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2918-1	SS05	Total/NA	Solid	8015 NM	

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# **QC Association Summary**

 Client: Ensolum
 Job ID: 890-2918-1

 Project/Site: PLU 21 BD 907H
 SDG: 03E1558086

HPLC/IC

Leach Batch: 34288

<b>Lab Sample ID</b> 890-2918-1	Client Sample ID SS05	Prep Type Soluble	Matrix Solid	Method DI Leach	Prep Batch
MB 880-34288/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-34288/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-34288/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2913-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2913-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 34499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2918-1	SS05	Soluble	Solid	300.0	34288
MB 880-34288/1-A	Method Blank	Soluble	Solid	300.0	34288
LCS 880-34288/2-A	Lab Control Sample	Soluble	Solid	300.0	34288
LCSD 880-34288/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	34288
890-2913-A-1-C MS	Matrix Spike	Soluble	Solid	300.0	34288
890-2913-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	34288

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### Lab Chronicle

 Client: Ensolum
 Job ID: 890-2918-1

 Project/Site: PLU 21 BD 907H
 SDG: 03E1558086

**Client Sample ID: SS05** 

Lab Sample ID: 890-2918-1

Matrix: Solid

Date Collected: 09/08/22 09:50 Date Received: 09/09/22 09:22

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	34851	09/19/22 14:33	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35013	09/21/22 23:46	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35142	09/22/22 09:55	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34448	09/14/22 08:52	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	34341	09/13/22 08:23	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34338	09/13/22 17:46	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	34288	09/12/22 11:50	KS	EET MID
Soluble	Analysis	300.0		1			34499	09/14/22 23:35	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: 890-2918-1 Project/Site: PLU 21 BD 907H SDG: 03E1558086

## **Laboratory: Eurofins Midland**

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

Authority	Pr	ogram	Identification Number	Expiration Date	
Texas		ELAP	T104704400-22-24	06-30-23	
The following analytes	are included in this report, but	t the laboratory is not certific	ed by the governing authority. This list ma	v include analytes for	
the agency does not of	• •	t the laboratory is not certific	su by the governing authority. This list his	ay include analytes lo	
,	• •	Matrix	Analyte	ay include analytes for	
the agency does not of	fer certification.	,	, , ,	ay include analytes lo	

## **Method Summary**

Client: Ensolum Project/Site: PLU 21 BD 907H Job ID: 890-2918-1

SDG: 03E1558086

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

#### **Protocol References:**

ASTM = ASTM International

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

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

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## **Sample Summary**

Client: Ensolum

Project/Site: PLU 21 BD 907H

Job ID: 890-2918-1

SDG: 03E1558086

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2918-1	SS05	Solid	09/08/22 09:50	09/09/22 09:22	6

d Date 08/25/2020 Rev 2020.

Superfund NAPP2215147887 DI Water: H<sub>2</sub>O Level IV MeOH: Me HNO 3: HN NaOH: Na NaOH+Ascorbic Acid: SAPC Sample Comments Preservative Codes 166633100 Date/Time Chst Center Incident# Zn Acetate+NaOH: Zn PST/UST TRRP RRC Na 25 20 3: NaSO 3 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO<sub>2</sub> Na Sr Tl Sn U V Zn Other: VaHSO 4: NABIS Hg: 1631 / 245.1 / 7470 / 7471 None: NO H3PO 4: HP UST/PST | PRP | Brownfields | H2504: H2 Cool: Cool Page Work Order Comments HCL: HC ADaPT Received by: (Signature) www.xenco.com Work Order No: Reporting: Level II | Level III EDD State of Project: n charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated. Deliverables: 890-2918 Chain of Custody TCLP/SPLP6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U totice: 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 fewore. 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 Relinquished by: (Signature) ANALYSIS REQUEST Energy Carlsby, NM 88220 Garrett Green Greene Gennings Censelum. Com Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 とそろ (T) XTO Chlorides 9.2293 304 Date/Time BIEX Cont # of Code S Parameters Bill to: (if different) Company Name: Comp Grab/ S City, State ZIP: F00 MJ 0.0 TAT starts the day received by the lab, if received by 4:30pm (Yes) No Rush Address: 6" Depth Received by: (Signature) Email: 952 Routine 32.11019,-103.87932 Due Date: Corrected Temperature: Time Wet Ice: 3122 Nat'l Parks Hwy Temperature Reading: 88220 **Environment Testing** Correction Factor: Thermometer ID: 9/18/2 Meredith Ruberts Sampled Yes No Kaler Jennings PLW 21 8D 907H 817. 683.2503 Date 3 Circle Method(s) and Metal(s) to be analyzed Arlsbad, NM 03E1558086 Matrix Enscion, Xenco S N/A Temp Blank: 200.8 / 6020: Yes No SAY SN. Yes No Yes Relinquished by: (Signature) Sample Identification Samples Received Intact: Total 200.7 / 6010 Sample Custody Seals: Cooler Custody Seals: SAMPLE RECEIPT SSOF Project Number: Sampler's Name: Fotal Containers: Project Manager: ompany Name: Project Location: City, State ZIP: Project Name: Address: Phone: PO #:

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

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Chain of Custody

## **Login Sample Receipt Checklist**

Client: Ensolum Job Number: 890-2918-1 SDG Number: 03E1558086

Login Number: 2918 List Source: Eurofins Carlsbad

List Number: 1 Creator: Clifton, Cloe

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

# **Login Sample Receipt Checklist**

Client: Ensolum Job Number: 890-2918-1 SDG Number: 03E1558086

**List Source: Eurofins Midland** 

List Number: 2 Creator: Rodriguez, Leticia

Login Number: 2918

List Creation: 09/12/22 09:08 AM

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

Released to Imaging: 1/11/2023 3:27:56 PM



# **Environment Testing America**

# **ANALYTICAL REPORT**

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

Laboratory Job ID: 890-2919-1

Laboratory Sample Delivery Group: 03E1558086

Client Project/Site: PLU 21 BD 907H

For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Kalei Jennings

RAMER

Authorized for release by: 9/22/2022 11:58:35 AM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

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

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

Client: Ensolum
Project/Site: PLU 21 BD 907H

Laboratory Job ID: 890-2919-1
SDG: 03E1558086

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# **Definitions/Glossary**

Job ID: 890-2919-1 Client: Ensolum Project/Site: PLU 21 BD 907H

SDG: 03E1558086

**Qualifiers** 

**GC VOA** 

Qualifier **Qualifier Description** 

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

**GC Semi VOA** 

Qualifier **Qualifier Description** 

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

%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** 

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

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) Most Probable Number MPN Method Quantitation Limit MQL

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NFG 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)

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

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

**TNTC** Too Numerous To Count

#### **Case Narrative**

Client: Ensolum Job ID: 890-2919-1 Project/Site: PLU 21 BD 907H

SDG: 03E1558086

Job ID: 890-2919-1

**Laboratory: Eurofins Carlsbad** 

Narrative

Job Narrative 890-2919-1

#### Receipt

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

#### **GC VOA**

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

#### GC Semi VOA

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

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

Date Collected: 09/08/22 09:45

Released to Imaging: 1/11/2023 3:27:56 PM

# **Client Sample Results**

Client: Ensolum Job ID: 890-2919-1 Project/Site: PLU 21 BD 907H SDG: 03E1558086

**Client Sample ID: SS04** 

Lab Sample ID: 890-2919-1

Matrix: Solid

Date Received: 09/09/22 09:22 Sample Depth: 6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/20/22 16:00	09/21/22 17:58	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/21/22 13:04	09/22/22 11:59	1
Ethylbenzene	< 0.00199	U	0.00199		mg/Kg		09/20/22 16:00	09/21/22 17:58	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/20/22 16:00	09/21/22 17:58	1
o-Xylene	< 0.00199	U	0.00199		mg/Kg		09/20/22 16:00	09/21/22 17:58	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/20/22 16:00	09/21/22 17:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130				09/20/22 16:00	09/21/22 17:58	1
1,4-Difluorobenzene (Surr)	94		70 - 130				09/20/22 16:00	09/21/22 17:58	1
Method: Total BTEX - Total BTEX	Calculation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/22/22 09:55	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/14/22 08:52	1
Method: 8015B NM - Diesel Rang	e Organics (D	RO) (GC)							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/13/22 08:23	09/13/22 18:07	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/13/22 08:23	09/13/22 18:07	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/13/22 08:23	09/13/22 18:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	116		70 - 130				09/13/22 08:23	09/13/22 18:07	1
o-Terphenyl	127		70 - 130				09/13/22 08:23	09/13/22 18:07	1
Method: 300.0 - Anions, Ion Chro	0 . ,								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	79.5		4.97		mg/Kg			09/14/22 23:40	1

# **Surrogate Summary**

 Client: Ensolum
 Job ID: 890-2919-1

 Project/Site: PLU 21 BD 907H
 SDG: 03E1558086

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Reco
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2919-1	SS04	112	94	
LCS 880-34941/1-A	Lab Control Sample	125	111	
LCS 880-35061/1-A	Lab Control Sample	130	117	
LCSD 880-34941/2-A	Lab Control Sample Dup	112	107	
LCSD 880-35061/2-A	Lab Control Sample Dup	154 S1+	121	
MB 880-34941/5-A	Method Blank	100	93	
MB 880-35060/5-A	Method Blank	86	106	
MB 880-35061/5-A	Method Blank	112	106	
Surrogate Legend				
BFB = 4-Bromofluorobenzen	ne (Surr)			

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
390-2919-1	SS04	116	127	
LCS 880-34341/2-A	Lab Control Sample	74	84	
LCSD 880-34341/3-A	Lab Control Sample Dup	79	88	
MB 880-34341/1-A	Method Blank	102	114	

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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# **QC Sample Results**

 Client: Ensolum
 Job ID: 890-2919-1

 Project/Site: PLU 21 BD 907H
 SDG: 03E1558086

Method: 8021B - Volatile Organic Compounds (GC)

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

Lab Sample ID: LCS 880-34941/1-A

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

Prep Type: Total/NA

Prep Batch: 34941

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

MB MB

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

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Batch: 34941

LCS LCS Spike Analyte Added Result Qualifier Unit %Rec Limits Benzene 0.100 0.09016 mg/Kg 90 70 - 130 Toluene 0.100 0.08354 mg/Kg 84 70 - 130 0.100 0.09804 Ethylbenzene mg/Kg 98 70 - 130 0.200 0.2015 101 70 - 130 m-Xylene & p-Xylene mg/Kg 0.100 0.1140 70 - 130 o-Xylene mg/Kg 114

LCS LCS

Surrogate	%Recovery Q	ualifier	Limits
4-Bromofluorobenzene (Surr)	125		70 - 130
1,4-Difluorobenzene (Surr)	111		70 - 130

**Client Sample ID: Lab Control Sample Dup** 

Matrix: Solid

**Matrix: Solid** 

**Analysis Batch: 35013** 

Analysis Batch: 35013

Lab Sample ID: LCSD 880-34941/2-A

Prep Type: Total/NA Prep Batch: 34941

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.08653		mg/Kg		87	70 - 130	4	35	
Toluene	0.100	0.07902		mg/Kg		79	70 - 130	6	35	
Ethylbenzene	0.100	0.08170		mg/Kg		82	70 - 130	18	35	
m-Xylene & p-Xylene	0.200	0.1706		mg/Kg		85	70 - 130	17	35	
o-Xylene	0.100	0.09761		mg/Kg		98	70 - 130	16	35	

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	112	70 - 130
1,4-Difluorobenzene (Surr)	107	70 - 130

Lab Sample ID: MB 880-35060/5-A

Matrix: Solid

Analysis Batch: 35073

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 35060

	MB	MB						
Analyte	Result	Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/21/22 12:57	09/21/22 16:55	1
Toluene	< 0.00200	U	0.00200	ma/Ka		09/21/22 12:57	09/21/22 16:55	1

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Client: Ensolum

Project/Site: PLU 21 BD 907H

Job ID: 890-2919-1

SDG: 03E1558086

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

Lab Sample ID: MB 880-35060/5-A

Matrix: Solid

**Analysis Batch: 35073** 

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 35060

	IVID	IVID							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/21/22 12:57	09/21/22 16:55	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/21/22 12:57	09/21/22 16:55	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/21/22 12:57	09/21/22 16:55	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/21/22 12:57	09/21/22 16:55	1

MB MB

MR MR

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		70 - 130	09/21/22 12:57	09/21/22 16:55	1
1,4-Difluorobenzene (Surr)	106		70 - 130	09/21/22 12:57	09/21/22 16:55	1

Lab Sample ID: MB 880-35061/5-A

**Matrix: Solid** 

Analysis Batch: 35073

Client Sample ID: Method Blank

Prep Type: Total/NA
Prep Batch: 35061

MB MB

Analyte Result Qualifier MDL Unit Prepared Analyzed Dil Fac Benzene <0.00200 U 0.00200 09/21/22 13:04 09/22/22 03:37 mg/Kg Toluene <0.00200 U 0.00200 09/21/22 13:04 09/22/22 03:37 mg/Kg Ethylbenzene <0.00200 U 0.00200 09/21/22 13:04 09/22/22 03:37 mg/Kg 09/22/22 03:37 m-Xylene & p-Xylene <0.00400 U 0.00400 09/21/22 13:04 mg/Kg o-Xylene <0.00200 U 0.00200 mg/Kg 09/21/22 13:04 09/22/22 03:37 Xylenes, Total <0.00400 U 0.00400 09/21/22 13:04 mg/Kg 09/22/22 03:37

MB MB

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112	70 - 130	09/21/22 13:04	09/22/22 03:37	1
1,4-Difluorobenzene (Surr)	106	70 - 130	09/21/22 13:04	09/22/22 03:37	1

Lab Sample ID: LCS 880-35061/1-A

**Matrix: Solid** 

**Analysis Batch: 35073** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Batch: 35061

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.07370		mg/Kg		74	70 - 130	
Toluene	0.100	0.07810		mg/Kg		78	70 - 130	
Ethylbenzene	0.100	0.08578		mg/Kg		86	70 - 130	
m-Xylene & p-Xylene	0.200	0.1910		mg/Kg		96	70 - 130	
o-Xylene	0.100	0.09680		mg/Kg		97	70 - 130	

LCS LCS

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

Lab Sample ID: LCSD 880-35061/2-A

**Matrix: Solid** 

Analysis Batch: 35073

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 35061

-	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08829		mg/Kg		88	70 - 130	18	35
Toluene	0.100	0.09815		mg/Kg		98	70 - 130	23	35
Ethylbenzene	0.100	0.1069		mg/Kg		107	70 - 130	22	35

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Client: Ensolum

Job ID: 890-2919-1

SDG: 03E1558086

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

Lab Sample ID: LCSD 880-35061/2-A

**Matrix: Solid** 

**Analysis Batch: 35073** 

Project/Site: PLU 21 BD 907H

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 35061

	Spike	LCSD LCSI	)			%Rec		RPD
Analyte	Added	Result Qual	ifier Unit	D	%Rec	Limits	RPD	Limit
m-Xylene & p-Xylene	0.200	0.2382	mg/Kg		119	70 - 130	22	35
o-Xylene	0.100	0.1184	mg/Kg		118	70 - 130	20	35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	154	S1+	70 - 130
1,4-Difluorobenzene (Surr)	121		70 - 130

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

Lab Sample ID: MB 880-34341/1-A

**Matrix: Solid** 

Analysis Batch: 34338

Client Sample ID: Method Blank

Prep Type: Total/NA Prep Batch: 34341

мв мв

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 09:38	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 09:38	1
C10-C28)									
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 09:38	1

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Surrogate	%Recovery Qualifier	Limits	Prepared	l Analyzed	Dil Fac
1-Chlorooctane	102	70 - 130	09/13/22 08	:23 09/13/22 09:38	1
o-Terphenyl	114	70 - 130	09/13/22 08	:23 09/13/22 09:38	1

Lab Sample ID: LCS 880-34341/2-A

**Matrix: Solid** 

Analysis Batch: 34338

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Batch: 34341

	Spike	LCS	LCS				%Rec		
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics	1000	948.0		mg/Kg		95	70 - 130		_
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	846.8		mg/Kg		85	70 - 130		
C10-C28)									

LCS LCS

Surrogate	%Recovery Qualifier	Limits
1-Chlorooctane	74	70 - 130
o-Terphenyl	84	70 - 130

Lab Sample ID: LCSD 880-34341/3-A

Matrix: Solid

Analysis Batch: 34338

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

Prep Type: Total/NA

Prep Batch: 34341

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics	 1000	893.7		mg/Kg		89	70 - 130	6	20	
(GRO)-C6-C10										
Diesel Range Organics (Over	1000	800.1		mg/Kg		80	70 - 130	6	20	
C10-C28)										

# QC Sample Results

Client: Ensolum Job ID: 890-2919-1 Project/Site: PLU 21 BD 907H SDG: 03E1558086

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

Lab Sample ID: LCSD 880-34341/3-A

**Matrix: Solid** Analysis Batch: 34338 Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Client Sample ID: Method Blank

**Client Sample ID: Lab Control Sample** 

Client Sample ID: Lab Control Sample Dup

Prep Batch: 34341

**Prep Type: Soluble** 

**Prep Type: Soluble** 

**Prep Type: Soluble** 

LCSD LCSD

Surrogate %Recovery Qualifier Limits 1-Chlorooctane 79 70 - 130 o-Terphenyl 88 70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-34288/1-A

**Matrix: Solid** 

**Analysis Batch: 34499** 

MB MB

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

Lab Sample ID: LCS 880-34288/2-A

**Matrix: Solid** 

Analysis Batch: 34499

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

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

**Matrix: Solid** 

**Analysis Batch: 34499** 

LCSD LCSD RPD Spike %Rec Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 250 242.0 97 90 - 110 20 mg/Kg

# **QC Association Summary**

Client: Ensolum

Project/Site: PLU 21 BD 907H

Job ID: 890-2919-1 SDG: 03E1558086

2

# **GC VOA**

# Prep Batch: 34941

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2919-1 MB 880-34941/5-A	SS04 Method Blank	Total/NA Total/NA	Solid Solid	5035 5035	
LCS 880-34941/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-34941/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

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Analysis Batch: 35013

<b>Lab Sample ID</b> 890-2919-1	Client Sample ID SS04	Prep Type Total/NA	Matrix Solid	Method 8021B	Prep Batch 34941
MB 880-34941/5-A	Method Blank	Total/NA	Solid	8021B	34941
LCS 880-34941/1-A	Lab Control Sample	Total/NA	Solid	8021B	34941
LCSD 880-34941/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	34941

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Prep Batch: 35060

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-35060/5-A	Method Blank	Total/NA	Solid	5035	

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Prep Batch: 35061

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2919-1	SS04	Total/NA	Solid	5035	
MB 880-35061/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-35061/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-35061/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

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**Analysis Batch: 35073** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2919-1	SS04	Total/NA	Solid	8021B	35061
MB 880-35060/5-A	Method Blank	Total/NA	Solid	8021B	35060
MB 880-35061/5-A	Method Blank	Total/NA	Solid	8021B	35061
LCS 880-35061/1-A	Lab Control Sample	Total/NA	Solid	8021B	35061
LCSD 880-35061/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	35061

Analysis Batch: 35139

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2919-1	SS04	Total/NA	Solid	Total BTEX	

# GC Semi VOA

# Analysis Batch: 34338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2919-1	SS04	Total/NA	Solid	8015B NM	34341
MB 880-34341/1-A	Method Blank	Total/NA	Solid	8015B NM	34341
LCS 880-34341/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	34341
LCSD 880-34341/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	34341

Prep Batch: 34341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2919-1	SS04	Total/NA	Solid	8015NM Prep	
MB 880-34341/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-34341/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-34341/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

# **QC Association Summary**

Client: Ensolum

Project/Site: PLU 21 BD 907H

Job ID: 890-2919-1 SDG: 03E1558086

# GC Semi VOA

#### Analysis Batch: 34449

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2919-1	SS04	Total/NA	Solid	8015 NM	

4

# HPLC/IC

#### Leach Batch: 34288

<b>Lab Sample ID</b> 890-2919-1	Client Sample ID SS04	Prep Type Soluble	Matrix Solid	Method P	rep Batch
MB 880-34288/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-34288/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-34288/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

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# Analysis Batch: 34499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2919-1	SS04	Soluble	Solid	300.0	34288
MB 880-34288/1-A	Method Blank	Soluble	Solid	300.0	34288
LCS 880-34288/2-A	Lab Control Sample	Soluble	Solid	300.0	34288
LCSD 880-34288/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	34288

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# **Lab Chronicle**

Client: Ensolum Job ID: 890-2919-1 Project/Site: PLU 21 BD 907H SDG: 03E1558086

**Client Sample ID: SS04** Lab Sample ID: 890-2919-1 Date Collected: 09/08/22 09:45

Matrix: Solid

Date Received: 09/09/22 09:22

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	35061	09/21/22 13:04	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35073	09/22/22 11:59	MR	EET MID
Total/NA	Prep	5035			5.03 g	5 mL	34941	09/20/22 16:00	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35013	09/21/22 17:58	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35139	09/22/22 09:55	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34449	09/14/22 08:52	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	34341	09/13/22 08:23	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34338	09/13/22 18:07	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	34288	09/12/22 11:50	KS	EET MID
Soluble	Analysis	300.0		1			34499	09/14/22 23:40	CH	EET MID

#### Laboratory References:

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

# **Accreditation/Certification Summary**

 Client: Ensolum
 Job ID: 890-2919-1

 Project/Site: PLU 21 BD 907H
 SDG: 03E1558086

#### **Laboratory: Eurofins Midland**

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

Authority	Pr	ogram	Identification Number	<b>Expiration Date</b>	
Texas		ELAP	T104704400-22-24	06-30-23	
The fellowing analytes			and the contract of the contra		
the agency does not of		at the laboratory is not certific	ed by the governing authority. This list ma	ay include analytes for	
0 ,		Matrix	ed by the governing authority. This list ma	ay include analytes for	
the agency does not of	fer certification.	•	, , ,	ay include analytes for	

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# **Method Summary**

Client: Ensolum

Project/Site: PLU 21 BD 907H

Job ID: 890-2919-1 SDG: 03E1558086

Method	Method Description	Protocol	Laboratory
3021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
3015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
3015B 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
3015NM Prep	Microextraction	SW846	EET MID
OI 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 21 BD 907H

Job ID: 890-2919-1

SDG: 03E1558086

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2919-1	SS04	Solid	09/08/22 09:45	09/09/22 09:22	6

eurofins

Xenco

**Environment Testing** 

Address: Company Name: Project Manager:

Kalei

ennings

Bill to: (if different) Company Name:

XTO

Energy Greene

> State of Project: Program:

UST/PST PRP Brownfields

RRC \_

Superfund [

Work Order Comments

www.xenco.com

Page

Garrett Green

Ensolum, LLC

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# 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

Address:	3127 Nat'l Parks Hwy	arks Hwy Address:	C)	Sip4 E Greene St	State of Project:	
te ZIP:	Particod, NM	88220		M	Reporting: Level II Level III PST/UST TRRP	ST/UST TRRP Level IV
	817-683-2503	Email: K	conings	conings Ocosolum. com	Deliverables: EDD ADaPT	T ☐ Other:
Project Name:	PLW 21 BD 907H	Turn Around		ANALYSIS REQUEST	ST	Preservative Codes
er:	031-1558086	■ Routine Rush	Pres. Code			None: NO DI Water: H <sub>2</sub> O
Project Location:	32-110A, -1038	-103 8793 Due Date:				Cool: Cool MeOH: Me
	1	TAT starts the day received by	dby			
PO #:	•	the lab, if received by 4:30pm		_	-	H <sub>2</sub> SO <sub>4</sub> : H <sub>2</sub> NaOH: Na
SAMPLE RECEIPT	Temp Blank: Yes	Yes No Wet Ice: (Yes) No	eter			H <sub>3</sub> PO <sub>4</sub> : HP
Samples Received Intact:	Lyes) No	Thermometer ID: INM OO	Y	)		NaHSO 4: NABIS
Cooler Custody Seals:	Yes No NA	Correction Factor:	Pa	e <sup>c</sup>		Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub>
Sample Custody Seals:	Yes No (N/A) Tem	Temperature Reading:		id	of Custody	Zn Acetate+NaOH: Zn
Total Containers:	Corr	Corrected Temperature:	E	4		NaOH+Ascorbic Acid: SAPC
Sample Identification	Matrix	Date Time Depth	Grab/ # of Comp Cont	TPI		Sample Comments
2504	lb S	918/220945 6"	- X	×		Incident #:
				-> puc		NAPP2215947887
						Cost Center:
						1666 331001
	\					
\						
1						
Total 200.7 / 6010	200.8 / 6020:	8RCR,	s 11 Al Sb As Ba Be	Ba Be B Cd Ca Cr Co Cu Fe Pb Mg	Mn Mo Ni K Se	TI Sn U V Zn
Circle Method(s) an	Circle Method(s) and Metal(s) to be analyzed		: SKCKA SD AS	ICLP/SPLP 6010 : 8RCRA SD AS BA BE CO CT CO CU PD MIT MO NI SE	19. 1031/243.1//4/0//4/1	/4/0 / /4/
Notice: Signature of this docum of service. Eurofins Xenco will b of Eurofins Xenco. A minimum o	ent and relinquishment of samples con: be liable only for the cost of samples and charge of \$85.00 will be applied to each	stitutes a valid purchase order from client d shall not assume any responsibility for an n project and a charge of \$5 for each samp	company to Eurofins Xer ny losses or expenses incu se submitted to Eurofins	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. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	and conditions and the control previously negotiated.	
Relinquished by: (Signature)	signature) / Rec	Received by: (Signature)	Dat	Date/Time Relinquished by: (Signature)	e) Received by: (Signature)	Date/Time
Phoos	00	ECTO	9.9.22	22 923		
3				is		
S				6		Revised Date: 08/25/2020 Rev. 2020 2

# **Login Sample Receipt Checklist**

 Client: Ensolum
 Job Number: 890-2919-1

 SDG Number: 03E1558086

Login Number: 2919 List Source: Eurofins Carlsbad

List Number: 1 Creator: Clifton, Cloe

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

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# **Login Sample Receipt Checklist**

Client: Ensolum

Job Number: 890-2919-1

SDG Number: 03E1558086

List Source: Eurofins Midland List Creation: 09/12/22 09:08 AM

List Number: 2 Creator: Rodriguez, Leticia

Login Number: 2919

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

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<6mm (1/4").

# **Environment Testing America**

# **ANALYTICAL REPORT**

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

Laboratory Job ID: 890-2920-1

Laboratory Sample Delivery Group: 03E1558086

Client Project/Site: PLU 21 BD 907H

For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Kalei Jennings

MRAMER

Authorized for release by: 9/22/2022 9:10:13 AM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

LINKS .....

Review your project results through

**Have a Question?** 



Visit us at:

www.eurofinsus.com/Env
Released to Imaging: 1/11/2023 3:27-56 PM

signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

This report has been electronically signed and authorized by the signatory. Electronic

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 Client: Ensolum
 Laboratory Job ID: 890-2920-1

 Project/Site: PLU 21 BD 907H
 SDG: 03E1558086

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# **Definitions/Glossary**

Job ID: 890-2920-1 Client: Ensolum Project/Site: PLU 21 BD 907H

SDG: 03E1558086

#### **Qualifiers**

#### **GC VOA**

Qualifier **Qualifier Description** 

Indicates the analyte was analyzed for but not detected.

#### **GC Semi VOA**

Qualifier Qualifier Description

Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier **Qualifier Description** 

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.
n	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CEL	Contains Free Liquid

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

Decision Level Concentration (Radiochemistry) DLC

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 Method Quantitation Limit MQL

Not Calculated NC

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)

Reporting Limit or Requested Limit (Radiochemistry) RL

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

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

**TNTC** Too Numerous To Count

#### **Case Narrative**

Client: Ensolum
Project/Site: PLU 21 BD 907H
SD0

Job ID: 890-2920-1 SDG: 03E1558086

Job ID: 890-2920-1

**Laboratory: Eurofins Carlsbad** 

Narrative

Job Narrative 890-2920-1

#### Receipt

The sample was received on 9/9/2022 9:22 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was  $1.2^{\circ}$ C

#### **GC VOA**

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

#### GC Semi VOA

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

#### HPI C/IC

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

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# **Client Sample Results**

Client: Ensolum Job ID: 890-2920-1 Project/Site: PLU 21 BD 907H SDG: 03E1558086

**Client Sample ID: SS03** Date Collected: 09/08/22 09:40

Lab Sample ID: 890-2920-1

Matrix: Solid

Sample Depth: 6

Date Received: 09/09/22 09:22

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/19/22 14:33	09/22/22 00:06	1
Toluene	< 0.00201	U	0.00201		mg/Kg		09/19/22 14:33	09/22/22 00:06	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/19/22 14:33	09/22/22 00:06	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/19/22 14:33	09/22/22 00:06	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/19/22 14:33	09/22/22 00:06	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/19/22 14:33	09/22/22 00:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		70 - 130				09/19/22 14:33	09/22/22 00:06	1
1,4-Difluorobenzene (Surr)	84		70 - 130				09/19/22 14:33	09/22/22 00:06	1
Method: Total BTEX - Total BTE	X Calculation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			09/22/22 09:55	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH -	<49.9	U	49.9		mg/Kg			09/14/22 08:58	1
Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/13/22 08:25	09/13/22 10:46	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/13/22 08:25	09/13/22 10:46	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/13/22 08:25	09/13/22 10:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
	95		70 - 130				09/13/22 08:25	09/13/22 10:46	1
1-Chlorooctane			70 400				09/13/22 08:25	09/13/22 10:46	1
1-Chlorooctane o-Terphenyl	96		70 - 130						,
		Soluble	70 - 130						,
o-Terphenyl	omatography -	Soluble Qualifier	70 - 130	MDL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac

# **Surrogate Summary**

Client: Ensolum Job ID: 890-2920-1 Project/Site: PLU 21 BD 907H SDG: 03E1558086

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2920-1	SS03	115	84	
LCS 880-34851/1-A	Lab Control Sample	114	106	
LCSD 880-34851/2-A	Lab Control Sample Dup	115	108	
MB 880-34851/5-A	Method Blank	88	77	
MB 880-34941/5-A	Method Blank	100	93	
Surrogate Legend				
BFB = 4-Bromofluorobe	nzene (Surr)			
DFBZ = 1.4-Difluoroben	zene (Surr)			

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

Prep Type: Total/NA Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2920-1	SS03	95	96	
890-2920-1 MS	SS03	107	95	
890-2920-1 MSD	SS03	108	97	
LCS 880-34342/2-A	Lab Control Sample	85	92	
LCSD 880-34342/3-A	Lab Control Sample Dup	87	94	
MB 880-34342/1-A	Method Blank	103	106	

1CO = 1-Chlorooctane OTPH = o-Terphenyl

**Eurofins Carlsbad** 

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# QC Sample Results

Client: Ensolum Job ID: 890-2920-1 Project/Site: PLU 21 BD 907H SDG: 03E1558086

Method: 8021B - Volatile Organic Compounds (GC)

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

Lab Sample ID: LCS 880-34851/1-A

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

Prep Type: Total/NA

Prep Batch: 34851

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

MB MB

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

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Batch: 34851

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

LCS LCS

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

Lab Sample ID: LCSD 880-34851/2-A Client Sample ID: Lab Control Sample Dup

**Matrix: Solid** 

Matrix: Solid

**Analysis Batch: 35013** 

Analysis Batch: 35013

Prep Type: Total/NA Prep Batch: 34851

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09096		mg/Kg		91	70 - 130	6	35
Toluene	0.100	0.08531		mg/Kg		85	70 - 130	4	35
Ethylbenzene	0.100	0.08835		mg/Kg		88	70 - 130	6	35
m-Xylene & p-Xylene	0.200	0.1845		mg/Kg		92	70 - 130	6	35
o-Xylene	0.100	0.1080		mg/Kg		108	70 - 130	2	35

LCSD LCSD

, ,	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	115	70 - 130
1,4-Difluorobenzene (Surr)	108	70 - 130

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

**Matrix: Solid** 

**Analysis Batch: 35013** 

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 34941

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/20/22 12:51	09/21/22 10:04	1
Toluene	< 0.00200	U	0.00200		mg/Kg		09/20/22 12:51	09/21/22 10:04	1

Client: Ensolum

Job ID: 890-2920-1

SDG: 03E1558086

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

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

**Matrix: Solid** 

Analysis Batch: 35013

Project/Site: PLU 21 BD 907H

Prep Type: Total/NA

Prep Batch: 34941

	МВ	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/20/22 12:51	09/21/22 10:04	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/20/22 12:51	09/21/22 10:04	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/20/22 12:51	09/21/22 10:04	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/20/22 12:51	09/21/22 10:04	1
	MB	MB							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130				09/20/22 12:51	09/21/22 10:04	1
1,4-Difluorobenzene (Surr)	93		70 - 130				09/20/22 12:51	09/21/22 10:04	1

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

Lab Sample ID: MB 880-34342/1-A

**Matrix: Solid** 

Analysis Batch: 34336

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 34342

	IVID	IVID							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/13/22 08:25	09/13/22 09:38	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/13/22 08:25	09/13/22 09:38	,
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/13/22 08:25	09/13/22 09:38	,
	MD	MD							

	MB	MB					
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130	09	0/13/22 08:25	09/13/22 09:38	1
o-Terphenyl	106		70 - 130	09	)/13/22 08:25	09/13/22 09:38	1

Lab Sample ID: LCS 880-34342/2-A

**Matrix: Solid** 

Analysis Batch: 34336

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

Prep Batch: 34342

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	897.2		mg/Kg		90	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	840.2		mg/Kg		84	70 - 130	
C10-C28)								

LCS LCS

Surrogate	%Recovery Qualifier	Limits
1-Chlorooctane	85	70 - 130
o-Terphenvl	92	70 - 130

Lab Sample ID: LCSD 880-34342/3-A

**Matrix: Solid** 

Analysis Batch: 34336

Client Sample	ID:	Lab (	Control	Samp	le C	)up
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Prep Type: Total/NA

Prep Batch: 34342

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	923.4		mg/Kg		92	70 - 130	3	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	857.9		mg/Kg		86	70 - 130	2	20
C10-C28)									

Client: Ensolum Job ID: 890-2920-1 Project/Site: PLU 21 BD 907H SDG: 03E1558086

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

Lab Sample ID: LCSD 880-34342/3-A **Matrix: Solid** 

Analysis Batch: 34336

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 34342

LCSD LCSD

%Recovery Qualifier Surrogate Limits 1-Chlorooctane 87 70 - 130 o-Terphenyl 94 70 - 130

Lab Sample ID: 890-2920-1 MS

**Matrix: Solid** 

Analysis Batch: 34336

Client Sample ID: SS03
Prep Type: Total/NA
Prep Batch: 34342

Sample	Sample	Spike	MS	MS				%Rec	
Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
<49.9	U	996	1179		mg/Kg		117	70 - 130	
<49.9	U	996	878.6		mg/Kg		84	70 - 130	
	Result   <49.9	Sample         Sample           Result         Qualifier           <49.9	Result         Qualifier         Added           <49.9	Result         Qualifier         Added         Result           <49.9	Result <49.9QualifierAddedResult 996Qualifier1179	Result <49.9Qualifier UAdded 996Result 1179Qualifier mg/Kg	Result     Qualifier     Added     Result     Qualifier     Unit     D       <49.9	Result 49.9         Qualifier Qualifier         Added Public Publi	Result 49.9         Qualifier Unit Qualifier Punit P

C10-C28)

	IVIS			
Surrogate	%Recovery	Qualifier	Limits	
1-Chlorooctane	107		70 - 130	
o-Terphenyl	95		70 - 130	

Lab Sample ID: 890-2920-1 MSD

**Matrix: Solid** 

Analysis Batch: 34336

Client S	ample	ID: SS03
Prep	Type:	Total/NA

Prep Batch: 34342

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	1187		mg/Kg		117	70 - 130	1	20
Diesel Range Organics (Over	<49.9	U	999	891.5		mg/Kg		86	70 - 130	1	20

	MISD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	108		70 - 130
o-Terphenyl	97		70 - 130

Method: 300.0 - Anions, Ion Chromatography

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

Analysis Batch: 34499

мв мв

MSD MSD

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00 U	5.00	ma/Ka			09/14/22 22:32	1

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

Matrix: Solid

Analysis Batch: 34499

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

# **QC Sample Results**

 Client: Ensolum
 Job ID: 890-2920-1

 Project/Site: PLU 21 BD 907H
 SDG: 03E1558086

Method: 300.0 - Anions, Ion Chromatography (Continued)

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

Client Sample ID: Lab Control Sample Dup
Matrix: Solid

Prep Type: Soluble

Analysis Batch: 34499

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	250	242.0		mg/Kg		97	90 - 110	0	20

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# **QC Association Summary**

Client: Ensolum

Project/Site: PLU 21 BD 907H

Job ID: 890-2920-1 SDG: 03E1558086

# **GC VOA**

#### Prep Batch: 34851

Lab Sample ID 890-2920-1	Client Sample ID SS03	Prep Type Total/NA	Matrix Solid	Method 5035	Prep Batch
MB 880-34851/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-34851/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-34851/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Prep Batch: 34941

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

Analysis Batch: 35013

Lab Sample ID 890-2920-1	Client Sample ID SS03	Prep Type Total/NA	Matrix Solid	Method 8021B	Prep Batch 34851
MB 880-34851/5-A	Method Blank	Total/NA	Solid	8021B	34851
MB 880-34941/5-A	Method Blank	Total/NA	Solid	8021B	34941
LCS 880-34851/1-A	Lab Control Sample	Total/NA	Solid	8021B	34851
LCSD 880-34851/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	34851

**Analysis Batch: 35143** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2920-1	SS03	Total/NA	Solid	Total BTEX	

#### **GC Semi VOA**

#### Analysis Batch: 34336

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2920-1	SS03	Total/NA	Solid	8015B NM	34342
MB 880-34342/1-A	Method Blank	Total/NA	Solid	8015B NM	34342
LCS 880-34342/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	34342
LCSD 880-34342/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	34342
890-2920-1 MS	SS03	Total/NA	Solid	8015B NM	34342
890-2920-1 MSD	SS03	Total/NA	Solid	8015B NM	34342

#### Prep Batch: 34342

<b>Lab Sample ID</b> 890-2920-1	Client Sample ID SS03	Prep Type Total/NA	Matrix Solid	Method 8015NM Prep	Prep Batch
MB 880-34342/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-34342/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-34342/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2920-1 MS	SS03	Total/NA	Solid	8015NM Prep	
890-2920-1 MSD	SS03	Total/NA	Solid	8015NM Prep	

#### **Analysis Batch: 34458**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2920-1	SS03	Total/NA	Solid	8015 NM	

#### HPLC/IC

#### Leach Batch: 34288

Г	_				
	Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method Prep Batch
	890-2920-1	SS03	Soluble	Solid	DI Leach
	MB 880-34288/1-A	Method Blank	Soluble	Solid	DI Leach
	LCS 880-34288/2-A	Lab Control Sample	Soluble	Solid	DI Leach

# **QC Association Summary**

 Client: Ensolum
 Job ID: 890-2920-1

 Project/Site: PLU 21 BD 907H
 SDG: 03E1558086

# **HPLC/IC** (Continued)

# Leach Batch: 34288 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-34288/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

#### Analysis Batch: 34499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2920-1	SS03	Soluble	Solid	300.0	34288
MB 880-34288/1-A	Method Blank	Soluble	Solid	300.0	34288
LCS 880-34288/2-A	Lab Control Sample	Soluble	Solid	300.0	34288
LCSD 880-34288/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	34288

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# Lab Chronicle

 Client: Ensolum
 Job ID: 890-2920-1

 Project/Site: PLU 21 BD 907H
 SDG: 03E1558086

Client Sample ID: 890-2920-1

Matrix: Solid

Date Collected: 09/08/22 09:40 Date Received: 09/09/22 09:22

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	34851	09/19/22 14:33	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35013	09/22/22 00:06	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35143	09/22/22 09:55	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34458	09/14/22 08:58	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	34342	09/13/22 08:25	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34336	09/13/22 10:46	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	34288	09/12/22 11:50	KS	EET MID
Soluble	Analysis	300.0		5			34499	09/14/22 23:45	CH	EET MID

#### Laboratory References:

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

# **Accreditation/Certification Summary**

Client: Ensolum Job ID: 890-2920-1 Project/Site: PLU 21 BD 907H

SDG: 03E1558086

# **Laboratory: Eurofins Midland**

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

Authority	Pr	ogram	Identification Number	Expiration Date
Texas	NI	ELAP	T104704400-22-24	06-30-23
The following analytes	are included in this report, bu	ut the laboratory is not certifi	ed by the governing authority. This list ma	av include analytes fo
the agency does not of	fer certification.		, , ,	,
the agency does not of Analysis Method	fer certification . Prep Method	Matrix	Analyte	
0 ,		Matrix Solid	Analyte Total TPH	

# **Method Summary**

Client: Ensolum

Project/Site: PLU 21 BD 907H

Job ID: 890-2920-1

SDG: 03E1558086

ory	

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 21 BD 907H

Job ID: 890-2920-1

SDG: 03E1558086

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2920-1	SS03	Solid	09/08/22 09:40	09/09/22 09:22	6

Page

Work Order No:

Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334

**Environment Testing** 

eurofins

Xenco

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

Chain of Custody

Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296

nsed Date: 08/25/2020 Rev 2020.

-9-23992

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Superfund NABP2215147687 DI Water: H2O Level IV HNO 3: HN MeOH: Me NaOH: Na NaOH+Ascorbic Acid: SAPC Sample Comments 1006331001 Preservative Codes Cost Center: Date/Time Acadent #: Zn Acetate+NaOH: Zn PST/UST TRRP UST/PST BRP Brownfields RRC Na 2 S 2 O 3: Na SO 3 K Se Ag SiO<sub>2</sub> Na Sr TI Sn U V Zn Other: NaHSO 4: NABIS Hg: 1631 / 245.1 / 7470 / 7471 H,PO ,: HP None: NO H2SO 4: H2 Cool: Cool HCL: HC Work Order Comments ADaPT Received by: (Signature) www.xenco.com Reporting: Level II | Level III | EDD State of Project: of service. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated. Deliverables: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni 890-2920 Chain of Custody TCLP/SPLP6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Program: totice. 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 fservice. 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 Relinquished by: (Signature) ANALYSIS REQUEST 88220 Jarrett Green 3104 E Greene St Kjennings Wenschum. com Energy Jarlshad, NM 253 N-IN Date/Time BTEX # of Cont Pres. Code Parameters Bill to: (if different) NAMOO 1 Comp Company Name: Grab/ 5 City, State ZIP: TAT starts the day received by the lab, if received by 4:30pm Yes No Rush Address: Depth o. Received by: (Signature) Email: 0460 子 Carlsbad, NM 88220 Routine 32.11019,-103.87932 Due Date: Time Corrected Temperature: Wet Ice: Temperature Reading: Thermometer ID: Correction Factor: 3122 Natil Parks 918122 Mereclith Roberts PLU 21 BD 907H Sampled 817-683.2503 Kalei Jennings Date Circle Method(s) and Metal(s) to be analyzed 03E1558086 Enscham, LL Matrix iv? Temp Blank: 200.8 / 6020: S N **P** Yes No Yes No Relinquished by: (Signature) Sample Identification Samples Received Intact: Total 200.7 / 6010 Sample Custody Seals: Cooler Custody Seals: SAMPLE RECEIPT 550 Project Number: Project Manager: Company Name: Project Location: Sampler's Name: Fotal Containers: City, State ZIP: Project Name Address: Phone: PO #:

Work Order No:

Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334

**Environment Testing Xenco** 

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

Chain of Custody

Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296

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				www.xenco.com	n Page Lof
Project Manager:	raici de la	Bill to: (if different)	Garrett Green	Work Order Comments	comments
Company Name:	1	Company Name:	XTO Energy	Program: UST/PST ☐ PRP ☐ Bro	Brownfields ☐ RRC ☐ Superfund ☐
Address		Address:		State of Project:	
City, State ZIP:	Nad. N	City, State ZIP:	Carkba, NM 88220	Reporting: Level II Level III	PST/UST TRRP Level IV
Phone:				Deliverables: EDD ADa	ADaPT ☐ Other:
Droject Name	PW 21 RD 9071	Turn Around	ANALYSIS REQUEST	EST	Preservative Codes
Project Number:	. C. Trout	Rush	Pres. Code		None: NO DI Water: H <sub>2</sub> O
Project Location:	32.110H, -103.8'793'Due Date:				0
Sampler's Name:	Pobert	TAT starts the day received by			HCL: HC HNO 3: HN
PO #:			ers		
Sample Receipt	Temp Blank: (Yes) No Wet Ice:	IN MONO	19ms		NaHSO 4: NABIS
Cooler Custody Seals:	Yes No NY	0.0			Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub>
Sample Custody Seals:	: Yes No N/A Temperature Reading:	+ -		in of Custody	Zn Acetate+NaOH: Zn
Total Containers:	Corrected Temperature:	0	1		NaOH+Ascorbic Acid: SAPC
Sample Identification	ification Matrix Sampled Sampled	Depth Grab/	#of Tri		Sample Comments
4000	S 918120 0945	19	× × ×		Incident #:
		Н			NAPP221594788
		\			Cosr Center:
					1666 331001
\					
/					
Total 200.7 / 6010 Circle Method(s) ar	200.8 / 6020: 8RCR. nd Metal(s) to be analyzed	8RCRA 13PPM Texas 11 AI S TCLP / SPLP 6010 : 8RCRA	AI Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K CRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag TI U	Se Ag SiO <sub>2</sub> Hg: 1631	Na Sr TI Sn U V Zn /245.1/7470 /7471
Notice: Signature of this dox of service. Eurofins Xenco w of Eurofins Xenco. A minim	ument and relinquishment of samples constitutes a valid purchas fill be liable only for the cost of samples and shall not assume any um charge of \$85.00 will be applied to each project and a charge.	NIChase order from client company to any responsibility for any losses or harge of \$5 for each sample submitte	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 bosses 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. A minimum charge of \$85.00 will be enforced unless previously negoritated.	is and conditions ond the control previously negotiated.	
Relinquished by: (Signature)	r. (Signature) Received by: (Signature)	ture)	Date/Time Relinquished by: (Signature)	re) Received by: (Signature)	e) Date/Time
- Los	720 URCUD		9.9.33 938		
,	-		4		

# **Login Sample Receipt Checklist**

 Client: Ensolum
 Job Number: 890-2920-1

 SDG Number: 03E1558086

Login Number: 2920 List Source: Eurofins Carlsbad

List Number: 1 Creator: Clifton, Cloe

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

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# **Login Sample Receipt Checklist**

Client: Ensolum

Job Number: 890-2920-1 SDG Number: 03E1558086

List Source: Eurofins Midland
List Number: 2
List Creation: 09/12/22 09:08 AM

List Number: 2
Creator: Rodriguez, Leticia

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

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<6mm (1/4").



APPENDIX E

**NMOCD Notifications** 

From: Hamlet, Robert, EMNRD To: Collins, Melanie

Cc: DelawareSpills /SM; Kalei Jennings; Green, Garrett J; Pennington, Shelby G; Bratcher, Mike, EMNRD; Nobui,

Jennifer, EMNRD; Harimon, Jocelyn, EMNRD

Subject: (Extension Approval) PLU 21 Brushy Draw 907H (Incident Number NAPP2215947887)

Date: Thursday, September 1, 2022 2:32:10 PM

Attachments: image002.jpg

image003.png

# [\*\*EXTERNAL EMAIL\*\*]

RE: Incident #NAPP2215947887

#### Melanie,

Your request for an extension to November 1st, 2022 is approved. Please include this e-mail correspondence in the remediation and/or closure report.

Robert Hamlet • Environmental Specialist - Advanced

**Environmental Bureau** EMNRD - Oil Conservation Division 811 S. First Street | Artesia. NM 88210 575.909.0302 | robert.hamlet@state.nm.us

http://www.emnrd.state.nm.us/OCD/



From: Collins, Melanie <melanie.collins@exxonmobil.com>

Sent: Thursday, September 1, 2022 11:50 AM

To: Enviro, OCD, EMNRD < OCD.Enviro@state.nm.us>; Bratcher, Mike, EMNRD

<mike.bratcher@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>

Cc: DelawareSpills /SM <DelawareSpills@exxonmobil.com>; Kalei Jennings

<kjennings@ensolum.com>; Green, Garrett J <garrett.green@exxonmobil.com>; Pennington, Shelby G <shelby.g.pennington@exxonmobil.com>

Subject: [EXTERNAL] PLU 21 Brushy Draw 907H (Incident Number NAPP2215947887)

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

All,

XTO is requesting an extension for the current deadline of September 2, 2022 for submitting a remediation work plan or closure report required in 19.15.29.12.B.(1) NMAC at the PLU 21 Brushy Draw 907H (Incident Number NAPP2215947887). The release occurred on June 4, 2022. Initial assessment of the release could not be completed due to ongoing operations. XTO operations

provided a status update once the Site was cleared and initial Site assessment activities were completed this week. XTO anticipates completing delineation of the release by the end of the week. XTO is requesting a 60-day extension to complete delineation and excavation of the impacted soil. In order to complete the field activities and submit a remediation work plan or closure report, XTO requests an extension until November 1, 2022.

Thank you

# Melanie Collins



Environmental Technician melanie.collins@exxonmobil.com 432-556-3756

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

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

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

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 155376

#### **CONDITIONS**

Operator:	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road	Action Number:
Midland, TX 79707	155376
	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 #NAPP2215947887 PLU 21 BRUSHY DRAW 907H, thank you. This closure is approved. Please be aware that any contaminants left on pad above reclamation standards will need to be addressed at the time the site/facility is plugged and abandoned.	1/11/2023