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Oil Conservation Division

Incident ID	NAPP2231551182
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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 ODC District office must be notified 2 days prior to final sampling)				
Description of remediation activities				
I hereby certify that the information given above is true and complete to the 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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete. Printed Name: _Garrett Green Title: _Environmental Coordinator Signature: Date:01/25/2023 email:garrett.green@exxonmobil.com Telephone:575-200-0729				
OCD Only				
Received by: Jocelyn Harimon Date: 01/30/2023				
Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.				
Closure Approved by: <u>Robert Hamlet</u> Date: <u>5/2/2023</u>				
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

)

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Incident ID	NAPP2231551182
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Release Notification

Responsible Party

Responsible Party XTO Energy	OGRID 5380	
Contact Name Garrett Green	Contact Telephone 575-200-0729	
Contact email garrett.green@exxonmobil.com	Incident # (assigned by OCD)	
Contact mailing address 3104 E. Greene Street, Carlsbad, New Mexico, 88220		

Location of Release Source

Latitude 32.20597

(NAD 83 in decimal degrees to 5 decimal places)

-103.83001

Site Name PLU 13 Dog Town Draw	Site Type Central Tank Battery
Date Release Discovered 10/30/2022	API# (if applicable)

l	Unit Letter	Section	Township	Range	County
	G	24	24S	30E	Eddy

Surface Owner: State 🗵 Federal 🗌 Tribal 🗌 Private (Name: _

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)				
Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)		
× Produced Water	Volume Released (bbls) 31.60	Volume Recovered (bbls) 30.00		
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	Yes X No		
Condensate	Volume Released (bbls)	Volume Recovered (bbls)		
🗌 Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)		
Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)		
Cause of Release Internal corrosion caused a 6" produced water line to release fluids to pad. All free fluids were recovered. A third-party contractor has been retained for remediation purposes.				

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NA

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Was this a major release as defined by 19.15.29.7(A) NMAC?	If YES, for what reason(s) does the responsible party consider this a major release? A release equal to or greater than 25 barrels.
Yes, by Melanie Collins to	otice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? o ocd.enviro (ocd.enviro@emnrd.nm.gov); Bratcher, Michael, Nobui, Jennifer, Hamlet, Robert, Harimon, d on 10/31/2022 via email.

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

 \checkmark 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 <u>not</u> been undertaken, explain why:

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

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

Title: SSHE Coordinator
Date:
Telephone:
Date: 11/14/2022

.

Location:	PLU 13 DTD CTB		
Spill Date:	10/30/2022		
	Area 1		
Approximate A	rea =	355.01	sq. ft.
Average Satura	tion (or depth) of spill =	0.25	inches
Average Porosi	ty Factor =	0.03	
	VOLUME OF LEAK		
Total Crude Oil	=	0.00	bbls
Total Produced	Water =	31.60	bbls
	TOTAL VOLUME OF LEAK		
Total Crude Oi	=	0.00	bbls
Total Produced	l Water =	31.60	bbls
	TOTAL VOLUME RECOVERED		
Total Crude Oi	=	0.00	bbls
Total Produced	Water =	30.00	bbls

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

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

District III

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

District IV 1220 S. St Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3470 Fax: (505) 476-3462

State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division 1220 S. St Francis Dr. Santa Fe, NM 87505

CONDITIONS

Operator: X	TO ENERGY, INC	OGRID: 5380	
	401 Holiday Hill Road idland, TX 79707	Action Number: 158237	
		Action Type: [C-141] Release Corrective Action (C-141)	
CONDITIONS			
Created By	Condition		Condition Date

Created By Condition jharimon None

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Action 158237

11/14/2022

Received by OCD: 1/25/2023 1:28:40 PM Form C-141 State of New Mexico

Oil Conservation Division

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

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

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

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- \square Depth to water determination
- Determination of water sources and significant watercourses within ¹/₂-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

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

Received by OCD: 1/25/2	023 1:28:40 PM State of New Mexico			Page 7 of 12
			Incident ID	NAPP2231551182
Page 4	Oil Conservation Division		District RP	
			Facility ID	
			Application ID	
regulations all operators ar public health or the environ failed to adequately investi addition, OCD acceptance and/or regulations. Printed Name: _Garrett Signature:	D	ations and perform co D does not relieve the to groundwater, surfa ponsibility for comp ironmental Coordin Date:01/25/202	prrective actions for rele e operator of liability she ice water, human health liance with any other fee nator	eases which may endanger ould their operations have or the environment. In deral, state, or local laws
OCD Only Received by: Joce	alyn Harimon	Date: <u>01/3</u>	30/2023	

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Incident ID	NAPP2231551182
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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.

<u>Closure Report Attachment Checklist</u>: Each of the following items m	nust be included in the closure report.						
A scaled site and sampling diagram as described in 19.15.29.11 NMA	AC						
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 ODC Distri	ict office must be notified 2 days prior to final sampling)						
Description of remediation activities							
	se notifications and perform corrective actions for releases which I report by the OCD does not relieve the operator of liability contamination that pose a threat to groundwater, surface water, I report does not relieve the operator of responsibility for The responsible party acknowledges they must substantially s that existed prior to the release or their final land use in						
OCD Only Received by: Jocelyn Harimon	Date: 01/30/2023						
	Date: 01/30/2023						
Closure approval by the OCD does not relieve the responsible party of liable remediate contamination that poses a threat to groundwater, surface water, h party of compliance with any other federal, state, or local laws and/or regu	numan health, or the environment nor does not relieve the responsible						
Closure Approved by:	Date:						
Printed Name:	Title:						

ENSOLUM

January 25, 2023

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

Re: Closure Request PLU 13 Dog Town Draw Incident Number NAPP2231551182 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 assessment and soil sampling activities at the PLU 13 Dog Town Draw (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 at the Site. Based on Site assessment activities and soil sample laboratory analytical results, XTO is submitting this *Closure Request*, describing remediation activities that have occurred and requesting no further action for Incident Number NAPP2231551182.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit G, Section 24, Township 24 South, Range 30 East, in Eddy County, New Mexico (32.20597°, -103.83001°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On October 30, 2022, internal corrosion of a produced water pipeline caused a release of approximately 31.6 barrels (bbls) of produced water onto the well pad and around active production equipment. A vacuum truck was immediately dispatched to the Site, which recovered 30.0 bbls. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) via email on October 31, 2022 and submitted a Release Notification Form C-141 (Form C-141) on November 10, 2022. The release was assigned Incident Number NAPP2231551182.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

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

Depth to groundwater at the Site is estimated to be greater than 100 below ground surface (bgs) based on a recent soil boring drilled for determination of regional groundwater depth. On November 24, 2020, a soil boring (New Mexico Office of the State Engineer (NM OSE) file number C-4483) was drilled approximately 0.29 miles northwest of the Site utilizing a truck-mounted hollow-stem auger rig. Soil boring C-4483 was drilled to a depth of 110 feet bgs. A field geologist logged and described soils continuously. No moisture or groundwater was encountered during drilling activities. The borehole was XTO Energy, Inc Closure Request PLU 13 Dog Town Draw

left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period without observing groundwater, it was confirmed that groundwater beneath the Site is greater than 110 feet bgs. The borehole was properly abandoned with drill cuttings and hydrated bentonite chips. The Well Log is included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is a freshwater emergent wetland, located approximately 4,338 feet west of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake, and is greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet from 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). Potential 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 AND DELINEATION ACTIVITIES

On November 17, 2022, Site assessment activities were conducted to evaluate the release extent based on information provided on the Form C-141 and visual observations. Six delineation soil samples (SS01 through SS06) were collected within and around the release extent at a depth of 0.5 feet bgs. Delineation soil samples SS01 and SS02 were collected within the release extent and samples SS03 through SS06 were collected around the release extent to determine lateral definition of the release. The delineation soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach[®] chloride QuanTab[®] test strips. The release extent and soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of the following contaminants of concern (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. Soil samples delivered to the laboratory the same day they were collected may not have equilabrated to 6 degrees Celcius required for shipment and long term storage, but are considered to have been received in acceptable condition by the laboratory.

On December 1, 2022, Ensolum personnel returned to the Site to complete additional delineation activities. Two boreholes (BH01 and BH02) were advanced via hand auger to assess the vertical extent of the release. Boreholes BH01 and BH02 were advanced in the vicinity of SS01 and SS02, respectively. Discrete delineation soil samples were collected from BH01 at a depth of 1-foot bgs and from BH02 at

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XTO Energy, Inc Closure Request PLU 13 Dog Town Draw

depths of 1-foot and 2.5 feet bgs. Field screening results and observations for the boreholes were logged on lithologic/soil sampling logs and are included in Appendix B. The delineation soil samples were handled and analyzed as described above. Photographic documentation was conducted during the Site visit and a photographic log is included in Appendix C.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results indicated COC concentrations for all delineation soil samples were in compliance with the Site Closure Criteria. Additionally, the release extent is delineated to the strictest Table I Closure Criteria, which includes vertical definition by soil sample concentrations indicated in BH01 and BH02A, and lateral definition by soil samples SS03 through SS06. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included in Appendix D.

CLOSURE REQUEST

Site assessment and delineation activities were conducted at the Site to assess for the presence or absence of impacted soil from the October 30, 2022 release of produced water. Laboratory analytical results indicated COC concentrations for all delineation soil samples were in compliance with the Site Closure Criteria.

Depth to groundwater has been estimated to be greater than 100 feet bgs and no other sensitive receptors were identified near the release extent. Based on laboratory analytical results compliant with Closure Criteria, no further remediation appears to be required. As such, XTO respectfully requests closure for Incident Number NAPP2231551182.

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

Sincerely, Ensolum, LLC

Muan g

Meredith Roberts Field Geologist

Ashley L. aver

Ashley L. Ager, P.G. Principal

cc: Garrett Green, XTO Shelby Pennington, XTO BLM

Appendices:

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

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FIGURES





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TABLES

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ENSOLUM

TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS PLU 13 Dog Town Draw XTO Energy, Inc Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I CI	osure Criteria (I	NMAC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	20,000
				Delir	neation Soil Sa	nples	•			
SS01	11/17/2022	0.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	2,270
BH01	12/01/2022	1	<0.00199	<0.00398	<49.9	95.2	<49.9	95.2	95.2	599
SS02	11/17/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	8,120
BH02	12/01/2022	1	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	8,360
BH02A	12/01/2022	2.5	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	260
SS03	11/17/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	55.7
SS04	11/17/2022	0.5	<0.00200	<0.00401	<49.8	<49.8	<49.8	<49.8	<49.8	25.4
SS05	11/17/2022	0.5	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	25.2
SS06	11/17/2022	0.5	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	20.7

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation requirement where applicable.

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

NMAC: New Mexico Administrative Code

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APPENDIX A

Referenced Well Records

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1



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

NO	OSE POD NO. POD1 (BH		0.)		WELL TAG ID NO. n/a			OSE FILE NO(S C-4483	5).		
OCATI	WELL OWNER NAME(S) XTO Energy (Kyle Littrell)								DNAL)		
MELL L	well owne 6401 Holid							CITY Midland		state TX 79707	ZIP
GENERAL AND WELL LOCATION	WELL LOCATION (FROM GPS	5)	ATITUDE	egrees 32° -104°	MINUTES 12' 50'	SECON 31.7 0.72	7" N	ACCURACY REQUIRED: ONE TENTH OF A SECOND ADATUM REQUIRED: WGS 84			
1. GENE	LONGITUDE 104 50 0.72 w DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHJIP, RANGE) WHERE AVAILABLE NW NW NE Sec. 24 T24S R30E										
	LICENSE NO. NAME OF LICENSED DRILLER NAME OF WELL DRILLING COMPANY 1249 Jackie D. Atkins Atkins Engineering Associates, Inc.										
	DRILLING ST 11/24/2		DRILLING ENDED 11/24/2020		MPLETED WELL (FI rary well materia			le depth (ft) 110	DEPTH WATER FIR:	ST ENCOUNTERED (FT) n/a	
N	COMPLETED	WELL IS		DRY HOI	DRY HOLE SHALLOW (UNCONFINED)				STATIC WATER LEV	EL IN COMPLETED WE n/a	LL (FT)
ATIC	DRILLING FL	.UID:	🗹 AIR	MUD	MUD ADDITIVES – SPECIFY:						
DRM	DRILLING METHOD: ROTARY HAMMER CABLE TOOL I OTHER - SPECIFY:							Hollow Stem Auger			
2. DRILLING & CASING INFORMATION	DEPTH (feet bgl) BORE HOLE FROM TO DIAM (inches) (inches)		(include	(include each casing string, and			ASING NECTION TYPE ling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)	
& C	0	110	±8.5		Boring- HSA			-			-
,ING											
RILI				<u> </u>							
2. D]											
											_
					<u> </u>						
I	DEPTH		BORE HOLE DIAM. (inches)		ST ANNULAR SE VEL PACK SIZE-						
CRIA	FROM	то			VELTACK SIZE	-1011101					
IATE											
AR N											
ANNULAR MATERIAL									OSE DIL DEG	<u>17 2020 PK3:2</u>	3
3. AN											
TOD			P					11/12 0	O WELL RECORD	A 1 00 01 0(/2	0/17)

FOR USE INTERNAL USE		WR-20 WELL RECORD & LOG (Ver	sion 00/30/17]
FILE NO. C-4483	POD NO.	TRN NO. 679344	
LOCATION 2 3	T245 R30E Sed4	WELL TAG ID NO. NA	PAGE 1 OF 2

.

	DEPTH (f	eet bgl)	THICKNESS	COLOR AND TYPE OF MATERIAL ENCOUNTERED -	WATER	ESTIMATED YIELD FOR
	FROM	то	(feet)	INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	BEARING? (YES / NO)	WATER- BEARING ZONES (gpm)
	0	24	24	Sand, Fine-grained, poorly-graded, with caliche, Tan-Off-White	Y VN	
	24	34	10	te Y 🖌 N		
	34	51	Y √N			
	51	54	rowi Y ✓N			
	54	76	22	Y √N		
Ţ	76	101	25	Sand, Fine-grained, poorly-graded, Light-Brown, dry	Y VN	
WEI	101	110	9	Sand, Fine-grained, poorly-graded, with gravel, Light-Brown, dry-moist	Y √N	
4. HYDROGEOLOGIC LOG OF WELL					Y N	
00					Y N	
ICI					Y N	
Log					Y N	
GEO					Y N	
RO					Y N	
UXB					Y N	
4					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
	METHOD U	SED TO ES	TIMATE YIELD	OF WATER-BEARING STRATA:	TOTAL ESTIMATED	
	D PUM	P 🔲 A	IR LIFT	BAILER OTHER – SPECIFY:	WELL YIELD (gpm):	0.00
NOISL	WELL TES	T TEST STAR	RESULTS - ATT T TIME, END TI	ACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCL ME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER	UDING DISCHARGE N THE TESTING PERIO	IETHOD, D.
ISIV	MISCELLA	NEOUS INI	ORMATION: T	emporary well materials removed and the soil boring backfilled using	drill cuttings from tot	al denth to ten
TEST; RIG SUPERV			fe	et below ground surface, then hydrated bentonite chips from ten feet		
G SU			L	ogs adapted from LTE on-site geologist.		
R						
TEST	PRINT NAM	1E(S) OF D	RILL RIG SUPE	VISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONST	TRUCTION OTHER TH	AN LICENSEE:
5.1	Shane Eldri					
RE	CORRECT I	RECORD O	F THE ABOVE I	FIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL THE DO DAYS AFTER COMPLETION OF WELL DRILLING:	F, THE FOREGOING I	SATRUE AND
ATU						
6. SIGNATURE	Jack A	tkins		Jackie D. Atkins	E DIT DE C2/17/2020	PM3:29
3		SIGNAT	URE OF DRILLI	BR / PRINT SIGNEE NAME	DATE	
FO	R OSE INTER			WD_20 WRI 1	LRECORD & LOG (Ver	sion 06/30/2017)
	E NO.	- 448	{ }	POD NO. / TRN NO.	629344	<u>() () () () () () () () () () () () () (</u>
LO	CATION	12 3	5 724	SR30E Ser 24 WELL TAGIDNO.	 //A	PAGE 2 OF 2

WELL TAG ID NO.

John R. D Antonio, Jr., P.E. State Engineer



KOSWELL OFFICE 1900 WEST SECOND STREET ROSWELL, NM 88201

STATE OF NEW MEXICO OFFICE OF THE STATE ENGINEER

Trn Nbr: 679344 File Nbr: C 04483 Well File Nbr: C 04483 POD1

Jan. 22, 2021

TACOMA MORRISSEY LT ENVIRONMENTAL INC 508 WEST STEVENS CARLSBAD, NM 88220

Greetings:

The above numbered permit was issued in your name on 09/29/2020.

The Well Record was received in this office on 12/17/2020, stating that it had been completed on 11/24/2020, and was a dry well. The well is to be plugged according to 19.27.4.30 NMAC.

Please note that another well can be drilled under this permit if the well is completed and the well log filed on or before 09/29/2021.

If you have any questions,/please feel free to contact us.

Sincerelv

Andrew Dennis (575)622-6521

drywell



APPENDIX B

Lithologic / Soil Sampling Logs

•

								Sample Name: BH01	Date: 12/01/2022	
				8				Site Name: PLU 13 DTD	Date: 12/01/2022	
		E	N	5	OL		M	Incident Number: NAPP22315511	82	
								Job Number: 03C1558147		
			איפר		AMPLING					
Coordi	inates: 32.2			-		100		Logged By: MR Hole Diameter: 4"	Method: Hand Auger Total Depth: 1'	
						orida Tast St	rins and P	ID for chloride and vapor, respectiv		
								tor is included in all chloride scree		
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic De		
					L -	L 0	CCHE	0-0.5' CALICHE w/ med. Sar round gravel, no staining, n	nd, dry, tan, some sub- o odor, fill.	
N	3,091	0.6	N	SS01	0.5	0.5	SP	0.5-1', SAND w/ some calich no odor, no staining.	ne gravel, red, moist,	
м	364	0.0	Ν	BH01	1	- 1				
					-	-	TD	Total Depth @ 1'		
					_	-				
					_	-				
					-	-				
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								Sample Name: BH02	Date: 12/01/2022	
							Site Name: PLU 13 DTD	Date: 12/01/2022		
		E	N	5		Incident Number: NAPP2231551182				
						Job Number: 03C1558147				
			OGIC		AMPLING	LOG		Logged By: MR	Method: Hand Auger	
Coord	inates: 32.2					200		Hole Diameter: 4"	Total Depth: 2.5'	
					h HACH Chlo	oride Test St		ID for chloride and vapor, respectiv		
			-					tor is included in all chloride screen	-	
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions		
					L - -	0 	CCHE	0-0.5' CALICHE w/ med. san round gravel, no staining, no	d, dry, tan, some sub- o odor, fill.	
N	10,046	0.7	Ν	SS02	0.5	0.5 		0.5-2', CALICHE w/ medium rounded gravel, moist, no	sand, tan, some sub- odor, no staining.	
М	9,520	0.6	Ν	BH02	1	1				
М	644	0.0	Ν		-	2	SP	2-2.5' SAND w/ small amour red/brown, moist, no sta	nt of caliche gravel, ining, no odor.	
м	358.4	0.0	Ν	BH02A	2.5	2.5	TD	Total Depth @ 2.5' bgs.		
					-	-				
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APPENDIX C

Photographic Log



Photographic Log XTO Energy, Inc. PLU 13 Dog Town Draw NAPP2231551182





APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

Received by OCD: 1/25/2023 1:28:40 PM



Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ben Belill Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701 Generated 11/29/2022 8:58:03 AM

JOB DESCRIPTION

PLU 13 DTD CTB SDG NUMBER 03E1558147

JOB NUMBER

890-3525-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

See page two for job notes and contact information.



5 6

Received by OCD: 1/25/2023 1:28:40 PM

Eurofins Carlsbad

Job Notes

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

Authorization

RAMER

Generated 11/29/2022 8:58:03 AM

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

1

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

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Method Summary	17
Sample Summary	18
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	Definitions/Glossary		
Client: Ensoli Project/Site:	um PLU 13 DTD CTB	Job ID: 890-3525-1 SDG: 03E1558147	
Qualifiers			
GC VOA Qualifier	Qualifier Description		ī
S1- U	Surrogate recovery exceeds control limits, low biased. Indicates the analyte was analyzed for but not detected.		
GC Semi VO Qualifier	A Qualifier Description		
*1 F1	LCS/LCSD RPD exceeds control limits. MS and/or MSD recovery exceeds control limits.		
S1+ U	Surrogate recovery exceeds control limits, high biased. Indicates the analyte was analyzed for but not detected.		
HPLC/IC Qualifier	Qualifier Description		
U Glossary	Indicates the analyte was analyzed for but not detected.		1
Abbreviation	These commonly used abbreviations may or may not be present in this report.		
¤ %R	Listed under the "D" column to designate that the result is reported on a dry weight basis Percent Recovery		

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

Job ID: 890-3525-1 SDG: 03E1558147

Job ID: 890-3525-1

Client: Ensolum

Laboratory: Eurofins Carlsbad

Project/Site: PLU 13 DTD CTB

Narrative

Job Narrative 890-3525-1

Receipt

The samples were received on 11/18/2022 8:20 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.2°C

GC VOA

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-40465 and analytical batch 880-40503 was outside the upper control limits.

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

GC Semi VOA

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-40343 and analytical batch 880-40262 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-40343/2-A) and (LCSD 880-40343/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: SS01 (890-3525-1), SS02 (890-3525-2), (890-3525-A-1-C MS) and (890-3525-A-1-D MSD). 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 880-40343 and analytical batch 880-40262 contained Gasoline Range Organics (GRO)-C6-C10 above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-40343 and analytical batch 880-40262 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10.

Method 8015MOD_NM: The matrix spike duplicate (MSD) recoveries for preparation batch 880-40343 and analytical batch 880-40262 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

HPLC/IC

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

RL

Unit

D

Prepared

Job ID: 890-3525-1 SDG: 03E1558147

Client Sample ID: SS01

Project/Site: PLU 13 DTD CTB

Date Collected: 11/17/22 10:00 Date Received: 11/18/22 08:20

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

Result Qualifier

Sample Depth: 0.5

Analyte

Client: Ensolum

SDG: 03E1558

Lab Sample ID: 890-3525-1

Analyzed

Matrix: Solid

Dil Fac

5

Analyte	Result	Qualifier	RL	Unit	U	Prepared	Analyzed	DIIFac
Benzene	<0.00201	U	0.00201	mg/Kg		11/28/22 12:47	11/29/22 05:43	1
Toluene	<0.00201	U	0.00201	mg/Kg		11/28/22 12:47	11/29/22 05:43	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		11/28/22 12:47	11/29/22 05:43	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		11/28/22 12:47	11/29/22 05:43	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		11/28/22 12:47	11/29/22 05:43	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		11/28/22 12:47	11/29/22 05:43	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130			11/28/22 12:47	11/29/22 05:43	1
1,4-Difluorobenzene (Surr)	100		70 - 130			11/28/22 12:47	11/29/22 05:43	1
Method: TAL SOP Total BTEX - T	otal BTEX Cal	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			11/29/22 09:39	1
Method: SW846 8015 NM - Diese	I Range Organ	ics (DRO) (G	iC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			11/28/22 11:40	1
Method: SW846 8015B NM - Dies	el Range Orga	nics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9	mg/Kg		11/23/22 15:04	11/23/22 21:50	1
Diesel Range Organics (Over	<49.9	U F1	49.9	mg/Kg		11/23/22 15:04	11/23/22 21:50	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		11/23/22 15:04	11/23/22 21:50	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	113		70 - 130			11/23/22 15:04	11/23/22 21:50	1
o-Terphenyl	142	S1+	70 - 130			11/23/22 15:04	11/23/22 21:50	1
Method: MCAWW 300.0 - Anions	, Ion Chromato	ography - So	luble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2270		25.1	mg/Kg			11/23/22 21:13	5
lient Sample ID: SS02						Lab San	nple ID: 890-	3525-2
ate Collected: 11/17/22 10:05								ix: Solid
ate Received: 11/18/22 08:20								
ample Depth: 0.5								
Method: SW846 8021B - Volatile	Organic Comp	ounds (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199		0.00199	mg/Kg		11/28/22 12:47	11/29/22 06:10	1
Toluene	<0.00199		0.00199	mg/Kg		11/28/22 12:47	11/29/22 06:10	1
Ethylbenzene	<0.00199		0.00199	mg/Kg		11/28/22 12:47	11/29/22 06:10	1
m-Xylene & p-Xylene	<0.00398		0.00398	mg/Kg		11/28/22 12:47	11/29/22 06:10	
,	0.00000							

Ethylb m-Xylene & p-Xylene :0.00398 L 0.00398 mg/Kg 11/28/22 12:47 11/29/22 06:10 o-Xylene <0.00199 U 0.00199 mg/Kg 11/28/22 12:47 11/29/22 06:10 1 Xylenes, Total <0.00398 U 0.00398 11/28/22 12:47 11/29/22 06:10 mg/Kg 1 %Recovery Qualifier Limits Prepared Dil Fac Surrogate Analyzed 4-Bromofluorobenzene (Surr) 107 70 - 130 11/28/22 12:47 11/29/22 06:10 1

Eurofins Carlsbad

Released to Imaging: 5/2/2023 2:29:51 PM

Client Sample Results

Job ID: 890-3525-1 SDG: 03E1558147

Matrix: Solid

5

Lab Sample ID: 890-3525-2

Client Sample ID: SS02

Project/Site: PLU 13 DTD CTB

Date Collected: 11/17/22 10:05 Date Received: 11/18/22 08:20

Sample Depth: 0.5

Client: Ensolum

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

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	100		70 - 130			11/28/22 12:47	11/29/22 06:10	1
Method: TAL SOP Total BTEX - T	otal BTEX Calo	ulation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			11/29/22 09:39	1
Method: SW846 8015 NM - Diese	I Range Organ	ics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			11/28/22 11:40	1
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9	mg/Kg		11/23/22 15:04	11/23/22 22:55	
Method: SW846 8015B NM - Dies Analyte		nics (DRO) Qualifier	(GC) RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over	<49.9	U	49.9	mg/Kg		11/23/22 15:04	11/23/22 22:55	1
C10-C28)	10.0	0	10.0	mg/rtg		11/20/22 10:01		
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		11/23/22 15:04	11/23/22 22:55	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	129		70 - 130			11/23/22 15:04	11/23/22 22:55	1
o-Terphenyl	155	S1+	70 - 130			11/23/22 15:04	11/23/22 22:55	1
Method: MCAWW 300.0 - Anions	, Ion Chromato	graphy - So	oluble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	8120		50.0	mg/Kg			11/23/22 21:21	10

Job ID: 890-3525-1 SDG: 03E1558147

Prep Type: Total/NA

Prep Type: Total/NA

12 13

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)		
880-21770-A-1-G MS	Matrix Spike	93	108		
880-21770-A-1-H MSD	Matrix Spike Duplicate	90	98		
890-3525-1	SS01	95	100		
890-3525-2	SS02	107	100		
LCS 880-40465/1-A	Lab Control Sample	87	108		
LCSD 880-40465/2-A	Lab Control Sample Dup	90	108		
MB 880-40465/5-A	Method Blank	62 S1-	92		
Surrogate Legend					

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		
890-3525-1	SS01	113	142 S1+		
890-3525-1 MS	SS01	145 S1+	159 S1+		
890-3525-1 MSD	SS01	147 S1+	164 S1+		
890-3525-2	SS02	129	155 S1+		
LCS 880-40343/2-A	Lab Control Sample	175 S1+	217 S1+		
LCSD 880-40343/3-A	Lab Control Sample Dup	200 S1+	240 S1+		
MB 880-40343/1-A	Method Blank	155 S1+	184 S1+		

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Method: 8021B - Volatile Organic Compounds (GC)

Method: 0021D - Volatile (organic compe		1						
Lab Sample ID: MB 880-4046 Matrix: Solid	5/5-A					Client Sa	mple ID: Metho Prep Type: 1	Fotal/NA	
Analysis Batch: 40503	МВ	МВ					Prep Batch	n: 40465	5
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	<0.00200	U	0.00200	mg/Kg		11/28/22 12:47	11/28/22 20:27	1	
Toluene	<0.00200	U	0.00200	mg/Kg		11/28/22 12:47	11/28/22 20:27	1	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/28/22 12:47	11/28/22 20:27	1	7
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		11/28/22 12:47	11/28/22 20:27	1	_
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/28/22 12:47	11/28/22 20:27	1	8
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		11/28/22 12:47	11/28/22 20:27	1	
	МВ	MB							9

	IVID	IVID	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	62	S1-	70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

Lab Sample ID: LCS 880-40465/1-A Matrix: Solid

Analysis Batch: 40503

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09543		mg/Kg		95	70 - 130	
Toluene	0.100	0.09266		mg/Kg		93	70 - 130	
Ethylbenzene	0.100	0.08841		mg/Kg		88	70 - 130	
m-Xylene & p-Xylene	0.200	0.1754		mg/Kg		88	70 - 130	
o-Xylene	0.100	0.08922		mg/Kg		89	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	87		70 - 130
1,4-Difluorobenzene (Surr)	108		70 - 130

Lab Sample ID: LCSD 880-40465/2-A

Matrix: Solid

Analysis Batch: 40503							Prep	Batch:	40465
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.1066		mg/Kg		107	70 - 130	11	35
Toluene	0.100	0.09978		mg/Kg		100	70 - 130	7	35
Ethylbenzene	0.100	0.09260		mg/Kg		93	70 - 130	5	35
m-Xylene & p-Xylene	0.200	0.1838		mg/Kg		92	70 - 130	5	35
o-Xylene	0.100	0.09332		mg/Kg		93	70 - 130	4	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	90		70 - 130
1,4-Difluorobenzene (Surr)	108		70 - 130

Lab Sample ID: 880-21770-A-1-G MS

Matrix: Solid

Analysis Batch: 40503	s Batch: 40503									Prep Batch: 40465			
	Sample	Sample	Spike	MS	MS				%Rec				
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits				
Benzene	<0.00200	U	0.0996	0.08481		mg/Kg		85	70 - 130				
Toluene	<0.00200	U	0.0996	0.08454		mg/Kg		85	70 - 130				

Eurofins Carlsbad

Prep Type: Total/NA

Client Sample ID: Matrix Spike

Prepared

11/28/22 12:47

11/28/22 12:47

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Job ID: 890-3525-1

SDG: 03E1558147

QC Sample Results

Job ID: 890-3525-1 SDG: 03E1558147

Lab Sample ID: 880-21770-A-' Matrix: Solid Analysis Batch: 40503	1-G MS									Client S	Sample ID: Prep Ty Prep		tal/NA
	Sample	Sam	ole	Spike	MS	MS					%Rec		
Analyte	Result			Added		Qualifier	Unit		D	%Rec	Limits		
Ethylbenzene		U		0.0996	0.07697		mg/Kg		—	77	70 - 130		
m-Xylene & p-Xylene	<0.00401	 U		0.199	0.1546		mg/Kg			78	70 - 130		
p-Xylene	<0.00200			0.0996	0.07769		mg/Kg			78	70 - 130		
	MS	MS											
Surrogate	%Recovery	Qual	ifier	Limits									
4-Bromofluorobenzene (Surr)	93			70 - 130									
1,4-Difluorobenzene (Surr)	108			70 - 130									
Lab Sample ID: 880-21770-A- [,]	1-H MSD							Clier	nt Sa	mple ID:	Matrix Sp	ike Dur	olicate
Matrix: Solid											Prep Ty		
Analysis Batch: 40503												Batch:	
	Sample	Sam	ple	Spike	MSD	MSD					%Rec		RP
Analyte	Result			Added	Result	Qualifier	Unit		D	%Rec	Limits	RPD	Lim
Benzene	<0.00200			0.0994	0.08061		mg/Kg			81	70 - 130	5	3
Toluene	<0.00200			0.0994	0.07752		mg/Kg			78	70 - 130	9	3
Ethylbenzene	<0.00200			0.0994	0.06982		mg/Kg			70	70 - 130	10	3
n-Xylene & p-Xylene	<0.00401			0.199	0.1390		mg/Kg			70	70 - 130	11	3
o-Xylene	<0.00200			0.0994	0.07102		mg/Kg			71	70 - 130	9	3
	MSD	MSD											
Surrogate	%Recovery	Qual		Limits									
4-Bromofluorobenzene (Surr)	90			70 - 130									
1,4-Difluorobenzene (Surr)	98			70 - 130									
lethod: 8015B NM - Diese	el Range O	rgan	ics (DR	(GC)									
Lab Sample ID: MB 880-40343	8/1 -A									Client Sa	mple ID: M		
Matrix: Solid											Prep Ty	ype: To	tal/N/
Analysis Batch: 40262											Prep	Batch:	4034
		MB	MB										
Analyte			Qualifier		RL	Unit		<u>D</u>		epared	Analyze		Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<	<50.0	U	50	0.0	mg/ł	Kg		11/23	3/22 15:04	11/23/22 2	0:46	
Diesel Range Organics (Over C10-C28)	<	<50.0	U	50	0.0	mg/ł	Кg		11/23	3/22 15:04	11/23/22 2	0:46	
Oll Range Organics (Over C28-C36)	<	<50.0	U	50	0.0	mg/ł	٢g		11/23	8/22 15:04	11/23/22 2	0:46	
			МВ										
		MB	INIB										
Surrogate	%Reco		мв Qualifier	Limits					Pi	epared	Analyze	ed	Dil Fa

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

11/23/22 20:46

11/23/22 15:04

Analysis Batch: 40262 Prep Batch: 40343 LCS LCS %Rec Spike Analyte Added Result Qualifier Unit D %Rec Limits 1000 949.0 95 70 - 130 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 1030 mg/Kg 103 70 - 130 C10-C28)

70 - 130

184 S1+

Eurofins Carlsbad

Lab Sample ID: LCS 880-40343/2-A

o-Terphenyl

Matrix: Solid

1
Client: Ensolum Project/Site: PLU 13 DTD CTB

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

metriod. 0013D Nm - Dieser	Nange O	iganics (i		Jonunue	,u)							
Lab Sample ID: LCS 880-40343/2	2-A						Client	Sampl	e ID: Lab Co			
Matrix: Solid										Гуре: То		
Analysis Batch: 40262									Prep	Batch:	40343	
	LCS	LCS										5
Surrogate	%Recovery	Qualifier	Limits									
1-Chlorooctane	175	S1+	70 - 130									
o-Terphenyl	217	S1+	70 - 130									
— Г							_				_	7
Lab Sample ID: LCSD 880-40343	8/3-A					Clie	nt Sam	ple ID:	Lab Contro			
Matrix: Solid										Type: To		8
Analysis Batch: 40262										Batch:		
A we had			Spike		LCSD	1114	_	0/ D	%Rec		RPD	9
Analyte			Added	1193	Qualifier	Unit	<u>D</u>	%Rec	Limits 70 - 130	 	Limit 20	
Gasoline Range Organics (GRO)-C6-C10			1000	1193	I	mg/Kg		119	70 - 130	23	20	
Diesel Range Organics (Over			1000	1169		mg/Kg		117	70 - 130	13	20	
C10-C28)						0 0						
	1050	LCSD										
Surrogate	%Recovery		Limits									
1-Chlorooctane		S1+	70 - 130									
o-Terphenyl	240	S1+	70 - 130									13
Lab Sample ID: 890-3525-1 MS									Client Sa	mple ID:	SS01	
Matrix: Solid										Гуре: То		
Analysis Batch: 40262										Batch:	40343	
	-	Sample	Spike		MS				%Rec			
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits			
Gasoline Range Organics (GRO)-C6-C10	<49.9	0 "1	999	1143		mg/Kg		114	70 - 130			
Diesel Range Organics (Over	<49.9	U F1	999	1303		mg/Kg		130	70 - 130			
C10-C28)						0 0						
	MS	MS										
Surrogate	%Recovery		Limits									
1-Chlorooctane		S1+	70 - 130									
o-Terphenyl	159	S1+	70 - 130									
Lab Sample ID: 890-3525-1 MSD									Client Sa	mple ID:	SS01	
Matrix: Solid									Prep 1	Гуре: То	tal/NA	
Analysis Batch: 40262										Batch:		
	-	Sample	Spike		MSD				%Rec		RPD	
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics	<49.9	U *1	998	1103		mg/Kg		111	70 - 130	4	20	
(GRO)-C6-C10 Diesel Range Organics (Over	<49.9	U F1	998	1360	F1	mg/Kg		136	70 - 130	4	20	
C10-C28)	.5.0	- · ·								•	_5	

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	147	S1+	70 - 130
o-Terphenyl	164	S1+	70 - 130

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Job ID: 890-3525-1

SDG: 03E1558147

Project/Site: PLU 13 DTD CTB

Client: Ensolum

QC Sample Results

Job ID: 890-3525-1 SDG: 03E1558147

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-40010/1-A										Client S	ample ID:		
Matrix: Solid											Prep	Type: S	oluble
Analysis Batch: 40325													
• • •	_	MB						_	_				
Analyte Chloride		<5.00	Qualifier		RL		Jnit	D	Pr	epared	Analyz		Dil Fac
-	•	\$5.00	U		5.00	п	ng/Kg				11/23/22	19:11	1
- Lab Sample ID: LCS 880-40010/2-4	4							Cli	ent	Sample	ID: Lab Co	ontrol S	ample
Matrix: Solid												Type: S	
Analysis Batch: 40325													
· · ·				Spike	LCS	LCS					%Rec		
Analyte				Added	Resu	t Qualifi	er Unit		D	%Rec	Limits		
Chloride				250	243.)	mg/Kg			98	90 - 110		
Lab Sample ID: LCSD 880-40010/3	-Δ						CI	ient S	am	nle ID: I	_ab Contro	l Samol	e Dun
Matrix: Solid	~											Type: S	
Analysis Batch: 40325												.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
· · · · · · · · · · · · · · · · · · ·				Spike	LCSI	LCSD					%Rec		RPD
Analyte				Added	Resu	t Qualifi	er Unit		D	%Rec	Limits	RPD	Limit
Chloride				250	246.3	3	mg/Kg			99	90 - 110	1	20
Lab Sample ID: 890-3519-A-1-B M	S									Client	Sample ID	: Matrix	Spike
Matrix: Solid												Type: S	
Analysis Batch: 40325													
Analysis Batch: 40325	Sample	Sam	ple	Spike	M	6 MS					%Rec		
-	Sample Result			Spike Added		6 MS t Qualifi	er Unit		D	%Rec	%Rec Limits		
-						t Qualifi	er Unit mg/Kg		<u>D</u>	%Rec 90			
Analyte Chloride	Result 57.9			Added	Resu	t Qualifi	mg/Kg	Client		90	Limits 90 - 110		
Analyte	Result 57.9			Added	Resu	t Qualifi	mg/Kg	Client		90	Limits 90 - 110 : Matrix Sp		
Analyte Chloride Lab Sample ID: 890-3519-A-1-C M Matrix: Solid	Result 57.9			Added	Resu	t Qualifi	mg/Kg	Client		90	Limits 90 - 110 : Matrix Sp	Dike Dup Type: Se	
Analyte Chloride Lab Sample ID: 890-3519-A-1-C MS	Result 57.9	Qual	lifier	Added	Resul 281.	t Qualifi	mg/Kg			90	Limits 90 - 110 : Matrix Sp		oluble
Analyte Chloride Lab Sample ID: 890-3519-A-1-C MS Matrix: Solid	Result 57.9	Qual	jifier	Added 249	Resul 281.4 MSI	t Qualifi	mg/Kg	Client		90	Limits 90 - 110 Matrix Sp Prep		

QC Association Summary

Client: Ensolum Project/Site: PLU 13 DTD CTB

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8 9

Job ID: 890-3525-1 SDG: 03E1558147

GC VOA

Prep Batch: 40465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3525-1	SS01	Total/NA	Solid	5035	
890-3525-2	SS02	Total/NA	Solid	5035	
MB 880-40465/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-40465/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-40465/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-21770-A-1-G MS	Matrix Spike	Total/NA	Solid	5035	
880-21770-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 40503

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3525-1	SS01	Total/NA	Solid	8021B	40465
890-3525-2	SS02	Total/NA	Solid	8021B	40465
MB 880-40465/5-A	Method Blank	Total/NA	Solid	8021B	40465
_CS 880-40465/1-A	Lab Control Sample	Total/NA	Solid	8021B	40465
_CSD 880-40465/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	40465
880-21770-A-1-G MS	Matrix Spike	Total/NA	Solid	8021B	40465
880-21770-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	40465

Analysis Batch: 40578

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3525-1	SS01	Total/NA	Solid	Total BTEX	
890-3525-2	SS02	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 40262

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3525-1	SS01	Total/NA	Solid	8015B NM	40343
890-3525-2	SS02	Total/NA	Solid	8015B NM	40343
MB 880-40343/1-A	Method Blank	Total/NA	Solid	8015B NM	40343
LCS 880-40343/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	40343
LCSD 880-40343/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	40343
890-3525-1 MS	SS01	Total/NA	Solid	8015B NM	40343
890-3525-1 MSD	SS01	Total/NA	Solid	8015B NM	40343

Prep Batch: 40343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3525-1	SS01	Total/NA	Solid	8015NM Prep	
890-3525-2	SS02	Total/NA	Solid	8015NM Prep	
MB 880-40343/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-40343/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-40343/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3525-1 MS	SS01	Total/NA	Solid	8015NM Prep	
890-3525-1 MSD	SS01	Total/NA	Solid	8015NM Prep	

Analysis Batch: 40444

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-3525-1	SS01	Total/NA	Solid	8015 NM	
890-3525-2	SS02	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum Project/Site: PLU 13 DTD CTB Job ID: 890-3525-1

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SDG: 03E1558147

HPLC/IC

Leach Batch: 40010

ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
390-3525-1	SS01	Soluble	Solid	DI Leach	
390-3525-2	SS02	Soluble	Solid	DI Leach	
MB 880-40010/1-A	Method Blank	Soluble	Solid	DI Leach	
_CS 880-40010/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
_CSD 880-40010/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
390-3519-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3519-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
nalysis Batch: 40325		Colubic			
nalysis Batch: 40325					Deve Detek
nalysis Batch: 40325 Lab Sample ID		Prep Type Soluble	Matrix Solid	Method	Prep Batch 40010
	Client Sample ID	Ргер Туре	Matrix	Method	_ <u> </u>
nalysis Batch: 40325 Lab Sample ID 390-3525-1	Client Sample ID SS01	Prep Type Soluble	Matrix Solid	<u>Method</u> 300.0	40010
nalysis Batch: 40325 Lab Sample ID 390-3525-1 390-3525-2	Client Sample ID SS01 SS02	Prep Type Soluble Soluble	Matrix Solid Solid	Method 300.0 300.0	40010
nalysis Batch: 40325 Lab Sample ID 390-3525-1 390-3525-2 MB 880-40010/1-A	Client Sample ID SS01 SS02 Method Blank	Prep Type Soluble Soluble Soluble	Matrix Solid Solid Solid	Method 300.0 300.0 300.0	40010 40010 40010
nalysis Batch: 40325 Lab Sample ID 390-3525-1 390-3525-2 MB 880-40010/1-A _CS 880-40010/2-A	Client Sample ID SS01 SS02 Method Blank Lab Control Sample	Prep Type Soluble Soluble Soluble Soluble	Matrix Solid Solid Solid Solid	Method 300.0 300.0 300.0 300.0 300.0	40010 40010 40010 40010

Analysis Batch: 40325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-3525-1	SS01	Soluble	Solid	300.0	40010	
890-3525-2	SS02	Soluble	Solid	300.0	40010	
MB 880-40010/1-A	Method Blank	Soluble	Solid	300.0	40010	
LCS 880-40010/2-A	Lab Control Sample	Soluble	Solid	300.0	40010	
LCSD 880-40010/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	40010	
890-3519-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	40010	
890-3519-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	40010	

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Released to Imaging: 5/2/2023 2:29:51 PM

Job ID: 890-3525-1 SDG: 03E1558147

Lab Sample ID: 890-3525-1 Matrix: Solid

Lab Sample ID: 890-3525-2

Matrix: Solid

Date Collected: 11/17/22 10:00 Date Received: 11/18/22 08:20

Client Sample ID: SS01

Project/Site: PLU 13 DTD CTB

Client: Ensolum

	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	40465	11/28/22 12:47	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40503	11/29/22 05:43	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			40578	11/29/22 09:39	SM	EET MID
Total/NA	Analysis	8015 NM		1			40444	11/28/22 11:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	40343	11/23/22 15:04	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40262	11/23/22 21:50	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	40010	11/20/22 12:21	СН	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	40325	11/23/22 21:13	СН	EET MID

Client Sample ID: SS02

Date Collected: 11/17/22 10:05 Date Received: 11/18/22 08:20

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	40465	11/28/22 12:47	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40503	11/29/22 06:10	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			40578	11/29/22 09:39	SM	EET MID
Total/NA	Analysis	8015 NM		1			40444	11/28/22 11:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	40343	11/23/22 15:04	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40262	11/23/22 22:55	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	40010	11/20/22 12:21	СН	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	40325	11/23/22 21:21	СН	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Laboratory: Eurofins Midland

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

thority cas		rogram	Identification Number	Expiration Date
		IELAP	T104704400-22-24	06-30-23
The following analytes	are included in this report, b	out the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes for
the agency does not o		Matrix	Δnalvte	
Analysis Method	fer certification. Prep Method	Matrix	Analyte	
0,		Matrix Solid	Analyte Total TPH	

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Job ID: 890-3525-1

SDG: 03E1558147

Client: Ensolum Project/Site: PLU 13 DTD CTB Job ID: 890-3525-1 SDG: 03E1558147

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 80158 NM Diesel Range Organics (DRO) (GC) SW846 EET MID 80158 NM Diesel Range Organics (DRO) (GC) SW846 EET MID 800.0 Anions, Ion Chromatography MCAWW EET MID 5035 Closed System Purge and Trap SW846 EET MID 8015NM Prep Microextraction SW846 EET MID 8015NM Prep Microextraction SW846 EET MID 8015NM Prep Microextraction SW846 EET MID Protocol References: ASTM ASTM EET MID 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 Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions. SW846 = "Test Methods For Chemical Analysis Of Water And Wastes", Third Edition, November 1986 And Its Updates. TAL SOP = TestAmerica Laboratories, Standard Operating Procedure EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-54	Method	Method Description	Protocol	Laboratory
8015 NMDiesel Range Organics (DRO) (GC)SW846EET MID8015 NMDiesel Range Organics (DRO) (GC)SW846EET MID300.0Anions, Ion ChromatographyMCAWWEET MID5035Closed System Purge and TrapSW846EET MID8015 NM PrepMicroextractionSW846EET MIDDI LeachDeionized Water Leaching ProcedureSW846EET MIDASTM = 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 ProcedureSUR Hermitianal Laboratory References:SUR Hermitianal Standard Operating Procedure	8021B	Volatile Organic Compounds (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 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: Laboratory References: Standard Operating Procedure	Total BTEX	Total BTEX Calculation	TAL SOP	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 8015NM 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:	8015 NM	Diesel Range Organics (DRO) (GC)	SW846	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:	8015B NM	Diesel Range Organics (DRO) (GC)	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:	300.0	Anions, Ion Chromatography	MCAWW	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 Chemical Analysis Of Water, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates. TAL SOP = TestAmerica Laboratories, Standard Operating Procedure Laboratory References:	5035	Closed System Purge and Trap	SW846	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:	8015NM Prep	Microextraction	SW846	EET MID
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:	DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID
	SW846 = "	"Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edi	•	
EET MID = Eurolins Midland, 1211 W. Florida Ave, Midland, 1X 79701, TEL (432)704-5440	,			
		- Euroins Midiand, 1211 W. Fionda Ave, Midiand, 1A 79701, 1EL (432)/04-3440		

Protocol References:

Laboratory References:

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Jo S

Client: Ensolum Project/Site: PLU 13 DTD CTB

ob I	D: 890-3525-	1
SDG	: 03E155814	7

Client: Ensolum					Job ID: 890-3525-1	
Project/Site: PL	U 13 DTD CTB				SDG: 03E1558147	
Lab Sample ID	Client Sample ID	Matrix	Collected	Received		
890-3525-1		Solid	<u>11/17/22 10:00</u>	11/18/22 08:20	- Depth 0.5	
890-3525-2	SS02	Solid	11/17/22 10:00	11/18/22 08:20		
J90-3323-2	3302	Oolid	11/11/22 10.00	11/10/22 00.20		
						5
						8
						C
						9
						2
						1

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	Xenco	00		EL Pa Hobbs	EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	bad, NM (575) 988-3199	W	www.xenco.com Page_	[] of
Project Manager Ber	Ben Belill			Bill to: (if different)	() Garrett Green			Work Order Comments	
	Ensolum			Company Name:			Program: UST/PST	Program: UST/PST PRP Brownfields RRC	RC Superfund
	3122 National Parks Hwy	arks Hwy		Address:			State of Project:]	1
te ZIP:	Carlsbad, NM 88220	220		City, State ZIP:	Carlsbad, NM 88220	220	Reporting: Level II	Reporting: Level II Level III PST/UST TRRP	
	303-887-2946		-	Email: Garrett.Green@ExxonMobil.com	@ExxonMobil.com		Deliverables: EDD	ADaPT U Ot	Other
Project Name:	PLU 13	PLU 13 DTD CTB		Turn Around		ANALYSIS RI	IS REQUEST	Prese	Preservative Codes
Project Number:	03E1	03E1558147	Capoutine	utine 🗌 Rush	Code			None: NO	DI Water: H ₂ O
Project Location:			Due Date:	ate:				Cool: Cool	MeOH: Me
Sampler's Name:	Connor	Connor Whitman	TAT st	TAT starts the day received by				HCL: HC	HNO3: HN
PO #:			the lat	the lab, if received by 4:30pm	ens			H ₂ SO ₄ : H ₂	NaCH: Na
SAMPLE RECEIPT	Temp Blank:		Tes No Wet Ice:	Ice: Yes No	nete			H ₃ PO ₄ HP	
Samples Received Intact:	-		er ID	-				NaHSO4: NABIS	IABIS
Cooler Custody Seals:	×	NIA Corre	Correction Factor:	0.0				Na2S2O3: NaSO3	JaSO ₃
Sample Custody Seals:	Yes No	NUX Temp	Temperature Reading:	4.4	_	890-3525 Chair	Chain of Custody	Zn Acetate+NaOH: Zn	Zn Acetate+NaOH: Zn
Total Containers:		D	Date Time	le north Grab	** 9, LORIDI H (8015 EX (802			Samp	Sample Comments
110-			Line outpice	2				Incident ID:	יי ויי
~~~~-		2 11/1	11/20 1012	2 2				nAPP2231551182	ß
1 march		-						Cost Center	ler:
		-						2	2191711001
								AFE:	
		/							
					2				
					Ţ				
Total 200.7 / 6010	200.8 / 6020:	20:	8RCRA	13PPM Texas 11	AI Sb As Ba Be B	Cd Ca Cr Co Cu Fe Pb		Ag SiO ₂ Na Sr Ti	
Circle Method(s) and Metal(s) to be analyzed	Metal(s) to be	analyzed	TCL	TCLP / SPLP 6010: BRCRA	Sb As Ba Be	Cd Cr Co Cu Pb Mn Mo Ni Se Ag	to Ni Se Ag TI U	Hg: 1631 / 245.1 / 7470	170 / 7471
Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcom 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 in Eurofins Xenco. A minimum charge of \$55.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. The	ment and relinquis Il be fiable only for a charge of \$85.00	hment of samp the cost of sam will be applied	les constitutes a va nples and shall not to each project and	liid purchase order from cl assume any responsibility d a charge of \$5 for each s	ient company to Eurofins Xen for any losses or expenses in ample submitted to Eurofins X	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 service. Eurofins Xenco A minimum charge of \$55.00 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 to for each sample submitted to Eurofins Xenco.	tractors. It assigns standard terms and conditions losses are due to circumstances beyond the contro se terms will be enforced unless previously negoti	id conditions nd the control iously negotiated.	
Relinquished by: (Signature)	Signature)	R	Received by: (Signature)	ignature)	Date/Time	Relinquished by: (Sigr	(Signature) Receive	Received by: (Signature)	Date/Time
1 Citito		P	mal	a Shit	Sceptilli	(Jest			
	~			1		4			



12 13

Chain of Custody

## Login Sample Receipt Checklist

Client: Ensolum

Login Number: 3525 List Number: 1 Creator: Clifton, Cloe

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

#### Job Number: 890-3525-1 SDG Number: 03E1558147

List Source: Eurofins Carlsbad

Eurofins Carlsbad Released to Imaging: 5/2/2023 2:29:51 PM

## Login Sample Receipt Checklist

Client: Ensolum

Login Number: 3525 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	

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

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Job Number: 890-3525-1 SDG Number: 03E1558147

List Source: Eurofins Midland List Creation: 11/21/22 08:46 AM

Received by OCD: 1/25/2023 1:28:40 PM



**Environment Testing** 

# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Ben Belill Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701 Generated 12/1/2022 12:54:11 PM

# JOB DESCRIPTION

PLU 13 DTD CTB SDG NUMBER 03E1558147

## **JOB NUMBER**

890-3523-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

See page two for job notes and contact information.

Received by OCD: 1/25/2023 1:28:40 PM

1

## **Eurofins Carlsbad**

Job Notes

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

## Authorization

RAMER

Generated 12/1/2022 12:54:11 PM

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

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

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QC Association Summary	12
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Certification Summary	15
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Sample Summary	17
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Receipt Checklists	19

## **Definitions/Glossary**

Client: Ensolum Project/Site: PLU 13 DTD CTB Job ID: 890-3523-1 SDG: 03E1558147

Project/Site: PL	SDG: 03E1558147	
Qualifiers		3
GC VOA		
Qualifier	Qualifier Description	
F1	MS and/or MSD recovery exceeds control limits.	
U	Indicates the analyte was analyzed for but not detected.	5
GC Semi VOA		
Qualifier	Qualifier Description	
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.	
HPLC/IC		8
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	9
Glossary		
Abbreviation	These commonly used abbreviations may or may not be present in this report.	
<u>n</u>	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)	15
Dil Fac	Dilution Factor	
DL	Detection Limit (DoD/DOE)	
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision Level Concentration (Radiochemistry)	
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	
LOQ	Limit of Quantitation (DoD/DOE)	
MCL	EPA recommended "Maximum Contaminant Level"	
MDA	Minimum Detectable Activity (Radiochemistry)	
MDC	Minimum Detectable Concentration (Radiochemistry)	
MDL	Method Detection Limit	
ML	Minimum Level (Dioxin)	
MPN	Most Probable Number	
MQL	Method Quantitation Limit	
NC	Not Calculated	
ND	Not Detected at the reporting limit (or MDL or EDL if shown)	
NEG	Negative / Absent	
POS	Positive / Present	
PQL	Practical Quantitation Limit	
PRES	Presumptive	
QC	Quality Control	
RER	Relative Error Ratio (Radiochemistry)	
RL	Reporting Limit or Requested Limit (Radiochemistry)	
RPD	Relative Percent Difference, a measure of the relative difference between two points	

Eurofins Carlsbad

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

TEF

TEQ

TNTC

#### Job ID: 890-3523-1 SDG: 03E1558147

#### Job ID: 890-3523-1

Client: Ensolum

#### Laboratory: Eurofins Carlsbad

Project/Site: PLU 13 DTD CTB

#### Narrative

Job Narrative 890-3523-1

#### Receipt

The sample was received on 11/18/2022 8:20 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 4.2°C

#### **Receipt Exceptions**

The following sample was received and analyzed from an unpreserved bulk soil jar: SS05 (890-3523-1).

#### GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-40588 and analytical batch 880-40656 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

#### GC Semi VOA

Method 8015MOD NM: The surrogate recovery for the blank associated with preparation batch 880-40341 and analytical batch 880-40260 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-40341/2-A) and (LCSD 880-40341/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD NM: Surrogate recovery for the following samples were outside control limits: (890-3498-A-1-B) and (890-3498-A-1-C MS). 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 880-40341 and analytical batch 880-40260 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 / sample duplicate (MS/MSD/DUP) precision for preparation batch 880-40341 and analytical batch 880-40260 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

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

#### HPLC/IC

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

Job ID: 890-3523-1 SDG: 03E1558147

## **Client Sample ID: SS05**

Project/Site: PLU 13 DTD CTB

Client: Ensolum

Lab Sample ID: 890-3523-1

					Lab San			
Organic Comp	ounds (GC	·)						5
		RL	Unit	D	Prepared	Analyzed	Dil Fac	
<0.00201	U	0.00201	mg/Kg		11/29/22 10:58	11/30/22 18:18	1	
<0.00201	U	0.00201	mg/Kg		11/29/22 10:58	11/30/22 18:18	1	
<0.00201	U	0.00201	mg/Kg		11/29/22 10:58	11/30/22 18:18	1	
<0.00402	U	0.00402	mg/Kg		11/29/22 10:58	11/30/22 18:18	1	
<0.00201	U	0.00201	mg/Kg		11/29/22 10:58	11/30/22 18:18	1	8
<0.00402	U	0.00402	mg/Kg		11/29/22 10:58	11/30/22 18:18	1	
%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	9
97		70 - 130			11/29/22 10:58	11/30/22 18:18	1	
110		70 - 130			11/29/22 10:58	11/30/22 18:18	1	
Result	Qualifier		Unit	<u>D</u>	Prepared	Analyzed	Dil Fac	
<0.00402	U	0.00402	mg/Kg			12/01/22 12:55	1	
I Range Organ	ics (DRO) (	(GC)						44
Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
<49.8	U	49.8	mg/Kg			11/28/22 12:39	1	
		RL	Unit	D	Prepared	Analyzed	Dil Fac	
		49.8	mg/Kg		11/23/22 14:58	11/24/22 03:57	1	
<49.8	U	49.8	mg/Kg		11/23/22 14:58	11/24/22 03:57	1	
<49.8	U	49.8	mg/Kg		11/23/22 14:58	11/24/22 03:57	1	
%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
111		70 - 130			11/23/22 14:58	11/24/22 03:57	1	
115		70 - 130			11/23/22 14:58	11/24/22 03:57	1	
	Result           <0.00201	Result         Qualifier           <0.00201	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Result         Qualifier         RL         Unit           <0.00201	Result         Qualifier         RL         Unit         D $<0.00201$ U         0.00201         mg/Kg         mg/Kg $<0.00402$ U         0.00201         mg/Kg         mg/Kg $<0.00402$ U         0.00201         mg/Kg         mg/Kg $<0.00402$ U         0.00402         mg/Kg         mg/Kg	Organic Compounds (GC)         Unit         D         Prepared $<0.00201$ U         0.00201         mg/Kg         11/29/22 10:58 $<0.00402$ U         0.00402         mg/Kg         11/29/22 10:58           otal BTEX Calculation         Prepared         11/29/22 10:58         11/29/22 10:58           otal BTEX Calculation         Mit         D         Prepared $<0.00402$ U         0.00402         mg/Kg         11/29/22 10:58           otal BTEX Calculation         Mit         D         Prepared         11/29/22 10:58           rel Rang	Organic Compounds (GC)         Number of the second se	$\begin{array}{c c c c c c c c c c c c c c c c c c c $

Method: MCAWW 300.0 - Anions, I	on Chromato	graphy - So	oluble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	25.2		4.97	mg/Kg			11/23/22 20:24	1

#### Job ID: 890-3523-1 SDG: 03E1558147

Prep Type: Total/NA

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

Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		5
880-21976-A-1-E MS	Matrix Spike	99	116		
880-21976-A-1-F MSD	Matrix Spike Duplicate	102	120		6
890-3523-1	SS05	97	110		
LCS 880-40588/1-A	Lab Control Sample	88	115		
LCSD 880-40588/2-A	Lab Control Sample Dup	92	117		
MB 880-40588/5-A	Method Blank	84	101		8
Surrogate Legend BFB = 4-Bromofluorober	nzene (Surr)				9
	( )				

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) 890-3498-A-1-C MS Matrix Spike 131 S1+ 128 890-3498-A-1-D MSD Matrix Spike Duplicate 118 118 890-3523-1 SS05 115 111 LCS 880-40341/2-A Lab Control Sample 126 141 S1+ Lab Control Sample Dup LCSD 880-40341/3-A 122 136 S1+ MB 880-40341/1-A Method Blank 140 S1+ 149 S1+

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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

Lab Sample ID: MB 880-40588 Matrix: Solid	/5-A					Client Sa	mple ID: Metho Prep Type: ⁻	
Analysis Batch: 40656							Prep Batcl	
Analyte		MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		11/29/22 10:58	11/30/22 11:46	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/29/22 10:58	11/30/22 11:46	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/29/22 10:58	11/30/22 11:46	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		11/29/22 10:58	11/30/22 11:46	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/29/22 10:58	11/30/22 11:46	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		11/29/22 10:58	11/30/22 11:46	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		70 - 130			11/29/22 10:58	11/30/22 11:46	1
1,4-Difluorobenzene (Surr)	101		70 - 130			11/29/22 10:58	11/30/22 11:46	1

#### Lab Sample ID: LCS 880-40588/1-A Matrix: Solid

## Analysis Batch: 40656

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1178		mg/Kg		118	70 - 130	
Toluene	0.100	0.09961		mg/Kg		100	70 - 130	
Ethylbenzene	0.100	0.09377		mg/Kg		94	70 - 130	
m-Xylene & p-Xylene	0.200	0.1903		mg/Kg		95	70 - 130	
o-Xylene	0.100	0.09180		mg/Kg		92	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	88		70 - 130
1,4-Difluorobenzene (Surr)	115		70 - 130

#### Lab Sample ID: LCSD 880-40588/2-A

#### Matrix: Solid

Analysis Batch: 40656							Prep	Batch:	40588
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.1187		mg/Kg		119	70 - 130	1	35
Toluene	0.100	0.09880		mg/Kg		99	70 - 130	1	35
Ethylbenzene	0.100	0.09425		mg/Kg		94	70 - 130	1	35
m-Xylene & p-Xylene	0.200	0.1919		mg/Kg		96	70 - 130	1	35
o-Xylene	0.100	0.09325		mg/Kg		93	70 - 130	2	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	92		70 - 130
1,4-Difluorobenzene (Surr)	117		70 - 130

## Lab Sample ID: 880-21976-A-1-E MS

#### Matrix: Solid alvaia Rataby 40656

Analysis Batch: 40656									Prep	Batch: 40588
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00199	U	0.0996	0.08295		mg/Kg		83	70 - 130	
Toluene	<0.00199	U F1	0.0996	0.06828	F1	mg/Kg		68	70 - 130	

**Eurofins Carlsbad** 

Prep Type: Total/NA

**Client Sample ID: Matrix Spike** 

Job ID: 890-3523-1 SDG: 03E1558147

## **Client Sample ID: Lab Control Sample**

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 40588

Prep Type: Total/NA

Client: Ensolum Project/Site: PLU 13 DTD CTB

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

5

7

Lab Sample ID: 880-21976-4 Matrix: Solid Analysis Batch: 40656	A-1-E MS							Client		: Matrix Type: To Batch:	tal/NA
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Ethylbenzene	<0.00199	U F1	0.0996	0.06277	F1	mg/Kg		63	70 - 130		
m-Xylene & p-Xylene	<0.00398	U F1	0.199	0.1265	F1	mg/Kg		63	70 - 130		
o-Xylene	<0.00199	U F1	0.0996	0.06159	F1	mg/Kg		61	70 - 130		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	99		70 - 130								
Lab Sample ID: 880-21976-A Matrix: Solid	116 <b>A-1-F MSD</b>		70 <u>-</u> 130			CI	ient Sa	ample ID		oike Dup Type: To Batch:	tal/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-21976-4 Matrix: Solid Analysis Batch: 40656	A-1-F MSD	Sample	70 <u>-</u> 130 Spike	MSD	MSD	CI	ient Sa	ample ID	Prep 1	Type: To	tal/NA 40588
Lab Sample ID: 880-21976-4 Matrix: Solid Analysis Batch: 40656	A-1-F MSD Sample	Sample Qualifier			MSD Qualifier	CI	ient Sa D	ample ID %Rec	Prep 1 Prep	Type: To	tal/NA 40588 RPD
Lab Sample ID: 880-21976-A Matrix: Solid Analysis Batch: 40656 Analyte	A-1-F MSD Sample	Qualifier	Spike					-	Prep 1 Prep %Rec	Type: To Batch:	tal/NA 40588 RPC Limit
Lab Sample ID: 880-21976-A Matrix: Solid Analysis Batch: 40656 Analyte Benzene	A-1-F MSD Sample Result	Qualifier	Spike Added	Result	Qualifier	Unit		%Rec	Prep 1 Prep %Rec Limits	Batch:	tal/NA 40588 RPD Limit
Lab Sample ID: 880-21976-4 Matrix: Solid Analysis Batch: 40656 Analyte Benzene Toluene	A-1-F MSD Sample Result <0.00199	Qualifier U U F1	Spike Added 0.0996	<b>Result</b> 0.08634	Qualifier F1	_ <mark>Unit</mark> mg/Kg		%Rec 87	Prep 7 Prep %Rec Limits 70 - 130	Type: To       Batch:       RPD       4	tal/NA 40588 RPD Limit 35 35
Lab Sample ID: 880-21976-4 Matrix: Solid Analysis Batch: 40656 Analyte Benzene Toluene Ethylbenzene	A-1-F MSD Sample 	Qualifier U U F1 U F1	Spike Added 0.0996 0.0996	<b>Result</b> 0.08634 0.06778	<b>Qualifier</b> F1 F1	– <mark>Unit</mark> mg/Kg mg/Kg		%Rec 87 67	Prep 7 Prep 7 %Rec Limits 70 - 130 70 - 130	Type: To Batch: RPD 4 1	tal/NA 40588 RPD Limit 35 35
Lab Sample ID: 880-21976-4 Matrix: Solid Analysis Batch: 40656 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	A-1-F MSD Sample Result <0.00199 <0.00199 <0.00199	Qualifier U U F1 U F1 U F1	Spike Added 0.0996 0.0996 0.0996	Result 0.08634 0.06778 0.06442	Qualifier F1 F1 F1	Unit mg/Kg mg/Kg mg/Kg		%Rec 87 67 65	Prep 7 Prep %Rec Limits 70 - 130 70 - 130 70 - 130	Type: ToBatch:RPD413	tal/NA 40588 RPD Limit 35 35 35 35
Lab Sample ID: 880-21976-A Matrix: Solid	A-1-F MSD Sample Result <0.00199 <0.00199 <0.00199 <0.00398 <0.00199	Qualifier U U F1 U F1 U F1	Spike Added 0.0996 0.0996 0.0996 0.199	Result 0.08634 0.06778 0.06442 0.1253	Qualifier F1 F1 F1	Unit mg/Kg mg/Kg mg/Kg mg/Kg		<b>%Rec</b> 87 67 65 63	Prep 7 Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130	Type: To Batch: <u>RPD</u> 4 1 3 1	tal/NA 40588 RPD Limit 35 35 35 35
Lab Sample ID: 880-21976-4 Matrix: Solid Analysis Batch: 40656 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	A-1-F MSD Sample Result <0.00199 <0.00199 <0.00199 <0.00398 <0.00199	<b>Qualifier</b> U U F1 U F1 U F1 U F1 U F1 <i>MSD</i>	Spike Added 0.0996 0.0996 0.0996 0.199	Result 0.08634 0.06778 0.06442 0.1253	Qualifier F1 F1 F1	Unit mg/Kg mg/Kg mg/Kg mg/Kg		<b>%Rec</b> 87 67 65 63	Prep 7 Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130	Type: To Batch: <u>RPD</u> 4 1 3 1	tal/NA
Lab Sample ID: 880-21976-4 Matrix: Solid Analysis Batch: 40656 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene	A-1-F MSD Sample Result <0.00199 <0.00199 <0.00199 <0.00398 <0.00199 MSD	<b>Qualifier</b> U U F1 U F1 U F1 U F1 U F1 <i>MSD</i>	<b>Spike</b> <b>Added</b> 0.0996 0.0996 0.199 0.0996	Result 0.08634 0.06778 0.06442 0.1253	Qualifier F1 F1 F1	Unit mg/Kg mg/Kg mg/Kg mg/Kg		<b>%Rec</b> 87 67 65 63	Prep 7 Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130	Type: To Batch: <u>RPD</u> 4 1 3 1	tal/NA 40588 RPD Limit 35 35 35 35

#### Lab Sample ID: MB 880-40341/1-A Matrix: Solid Analysis Batch: 40260

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		11/23/22 14:58	11/23/22 20:46	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		11/23/22 14:58	11/23/22 20:46	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/23/22 14:58	11/23/22 20:46	1
	MB	MB						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	140	S1+	70 - 130			11/23/22 14:58	11/23/22 20:46	1

70 - 130

149 S1+

## Lab Sample ID: LCS 880-40341/2-A Matrix: Solid

o-Terphenyl

#### Analysis Batch: 40260 Prep Batch: 40341 LCS LCS %Rec Spike Analyte Added Result Qualifier Unit D %Rec Limits 1000 981.4 98 70 - 130 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 1013 mg/Kg 101 70 - 130 C10-C28)

**Eurofins Carlsbad** 

Prep Type: Total/NA

**Client Sample ID: Method Blank** 

11/23/22 20:46

**Client Sample ID: Lab Control Sample** 

11/23/22 14:58

Prep Type: Total/NA Prep Batch: 40341

1

Client: Ensolum Project/Site: PLU 13 DTD CTB

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

Lab Sample ID: LCS 880-403	341/2-A						Client	Sample	D: Lab C		
Matrix: Solid										Туре: То	
Analysis Batch: 40260									Prep	Batch:	40341
	LCS	LCS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	126		70 - 130								
o-Terphenyl	141	S1+	70 - 130								
											_
Lab Sample ID: LCSD 880-4	0341/3-A					Clier	nt Sam	iple ID:	Lab Contro		-
Matrix: Solid										Type: To	
Analysis Batch: 40260										Batch:	
			Spike		LCSD				%Rec		RPD
Analyte			Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1015		mg/Kg		101	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	978.2		mg/Kg		98	70 - 130	3	20
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane			70 - 130								
o-Terphenyl		S1+	70 - 130								
Lab Sample ID: 890-3498-A-	1-C MS							Client	Sample ID	: Matrix	Spike
Matrix: Solid									Prep 1	Type: To	tal/NA
Analysis Batch: 40260									Prep	Batch:	40341
-	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.8	U F2	997	1247		mg/Kg		121	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.8	U	997	1161		mg/Kg		116	70 - 130		
010-020)											
<b>-</b>		MS									
Surrogate	%Recovery		Limits								
1-Chlorooctane		S1+	70 - 130								
o-Terphenyl 	128		70 - 130								
 Lab Sample ID: 890-3498-A-	1-D MSD					CI	ient Sa	ample IC	): Matrix S	pike Dup	olicate
Matrix: Solid										Type: To	
Analysis Batch: 40260										Batch:	
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	<49.8	U F2	996	924.4		mg/Kg		89	70 - 130	30	20
(GRO)-C6-C10				1000				407	70 100	~	
Diesel Range Organics (Over C10-C28)	<49.8	U	996	1069		mg/Kg		107	70 - 130	8	20
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								

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

Job ID: 890-3523-1

Project/Site: PLU 13 DTD CTB

Client: Ensolum

## **QC Sample Results**

Job ID: 890-3523-1 SDG: 03E1558147

Method: 300.0 - Anions, Ion Chromatography

										(	Client S	ample ID:	Method	Blank
Matrix: Solid												Prep	Type: S	oluble
Analysis Batch: 40325														
		MB I	мв											
Analyte	R	esult (	Qualifier		RL		U	nit	<u>D</u>	Pre	epared	Analy	zed	Dil Fac
Chloride	<	<5.00 l	U		5.00		m	g/Kg				11/23/22	19:11	1
	<b>A</b>								Clie	ent	Sample	ID: Lab C	ontrol S	ample
Matrix: Solid												Prep	Type: S	oluble
Analysis Batch: 40325														
				Spike		LCS	LCS					%Rec		
Analyte				Added			Qualifie	r Unit		D	%Rec	Limits		
Chloride				250		243.9		mg/Kg			98	90 - 110		
_ Lab Sample ID: LCSD 880-40010/3	-A							CI	ient S	amj	ple ID: I	_ab Contr	ol Samp	le Dup
Matrix: Solid												Prep	Type: S	oluble
Analysis Batch: 40325														
				Spike		LCSD	LCSD					%Rec		RPD
Analyte				Added		Result	Qualifie	r Unit		D	%Rec	Limits	RPD	Limit
Chloride				250		246.3		mg/Kg			99	90 - 110	1	20
_ Lab Sample ID: 890-3519-A-1-B M	S										Client	Sample I	): Matrix	Spike
Matrix: Solid												Prep	Type: S	oluble
Analysis Batch: 40325														
	Sample	Samp	le	Spike		MS	MS					%Rec		
Analyte	Result	Qualif	fier	Added		Result	Qualifie	r Unit		D	%Rec	Limits		
Chloride	57.9			249		281.5		mg/Kg			90	90 - 110		
- Lab Sample ID: 890-3519-A-1-C M	SD								Client	Sa	mple ID	: Matrix S	pike Duj	plicate
Matrix: Solid													Type: S	-
Analysis Batch: 40325														
	Sample	Samp	le	Spike		MSD	MSD					%Rec		RPD
Analyte	Result	Qualif	fier	Added		Result	Qualifie	r Unit		D	%Rec	Limits	RPD	Limit
Chloride	57.9			249		287.5		mg/Kg			92	90 - 110	2	20

## **QC Association Summary**

Client: Ensolum Project/Site: PLU 13 DTD CTB

Job ID: 890-3523-1 SDG: 03E1558147

## **GC VOA**

### Prep Batch: 40588

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-3523-1	SS05	Total/NA	Solid	5035	
MB 880-40588/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-40588/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-40588/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-21976-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
880-21976-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
nalysis Batch: 40656					
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-3523-1	SS05	Total/NA	Solid	8021B	40588
MB 880-40588/5-A	Method Blank	Total/NA	Solid	8021B	40588
LCS 880-40588/1-A	Lab Control Sample	Total/NA	Solid	8021B	40588
LCSD 880-40588/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	40588
880-21976-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	40588
880-21976-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	40588
nalysis Batch: 40783					
	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
Lab Sample ID	- · · · · · · · · · · · · · · · · · · ·		Solid	Total BTEX	

#### Analysis Batch: 40260

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-3523-1	SS05	Total/NA	Solid	8015B NM	40341
MB 880-40341/1-A	Method Blank	Total/NA	Solid	8015B NM	40341
LCS 880-40341/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	40341
LCSD 880-40341/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	40341
890-3498-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	40341
890-3498-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	40341

#### Prep Batch: 40341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3523-1	SS05	Total/NA	Solid	8015NM Prep	
MB 880-40341/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-40341/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-40341/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3498-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3498-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	
Analysis Batch: 40462					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3523-1	SS05	Total/NA	Solid	8015 NM	

## 890-3523-1

## HPLC/IC

#### Leach Batch: 40010

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3523-1	SS05	Soluble	Solid	DI Leach	
MB 880-40010/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-40010/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-40010/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Job ID: 890-3523-1 SDG: 03E1558147

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5 6 7

## HPLC/IC (Continued)

## Leach Batch: 40010 (Continued)

Lab Sample ID 890-3519-A-1-B MS	Client Sample ID Matrix Spike	Prep Type Soluble	Matrix Solid	Method DI Leach	Prep Batch
890-3519-A-1-C MSD Analysis Batch: 40325	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch

890-3523-1         SS05         Soluble         Solid         300.0           MB 880-40010/1-A         Method Blank         Soluble         Solid         300.0	40010
MB 880-40010/1-A Method Blank Soluble Solid 300.0	
	40010
LCS 880-40010/2-A Lab Control Sample Soluble Solid 300.0	40010
LCSD 880-40010/3-A Lab Control Sample Dup Soluble Solid 300.0	40010
890-3519-A-1-B MS Matrix Spike Soluble Solid 300.0	40010
890-3519-A-1-C MSD Matrix Spike Duplicate Soluble Solid 300.0	40010

Job ID: 890-3523-1 SDG: 03E1558147

## Lab Sample ID: 890-3523-1 Matrix: Solid

Client Sample ID: SS05 Date Collected: 11/17/22 11:01 Date Received: 11/18/22 08:20

Project/Site: PLU 13 DTD CTB

Client: Ensolum

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	40588	11/29/22 10:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40656	11/30/22 18:18	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			40783	12/01/22 12:55	SM	EET MID
Total/NA	Analysis	8015 NM		1			40462	11/28/22 12:39	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	40341	11/23/22 14:58	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40260	11/24/22 03:57	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	40010	11/20/22 12:21	СН	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40325	11/23/22 20:24	СН	EET MID

#### Laboratory References:

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

Eurofins Carlsbad

Released to Imaging: 5/2/2023 2:29:51 PM

Accreditation/Certification Summary

Laboratory: Eurofins Midland

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

thority	P	rogram	Identification Number	Expiration Date
as	N	ELAP	T104704400-22-24	06-30-23
The following analytes	are included in this report b	ut the laboratory is not certif	ied by the governing authority. This list ma	av include analytes for w
the agency does not o	fer certification.	,	, , , , , ,	
the agency does not o Analysis Method	1 /	Matrix	Analyte	
the agency does not o	fer certification.	,	, , , , , ,	

Job ID: 890-3523-1 SDG: 03E1558147

10

Job ID: 890-3523-1 SDG: 03E1558147

Nethod	Method Description	Protocol	Laboratory	
3021B	Volatile Organic Compounds (GC)	SW846	EET MID	
lotal BTEX	Total BTEX Calculation	TAL SOP	EET MID	
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID	E
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	
3015NM Prep	Microextraction	SW846	EET MID	
OI Leach	Deionized Water Leaching Procedure	ASTM	EET MID	
Protocol Refe	rences:			8
ASTM = AS	STM International			
MCAWW =	"Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March	1983 And Subsequent Revisions.		9
SW846 = "	Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition	n, November 1986 And Its Updates.		
TAL SOP =	- TestAmerica Laboratories, Standard Operating Procedure			

#### Protocol References:

#### Laboratory References:

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

## **Sample Summary**

Client: Ensolum Project/Site: PLU 13 DTD CTB Job ID: 890-3523-1 SDG: 03E1558147

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth	
890-3523-1	SS05	Solid	11/17/22 11:01	11/18/22 08:20	0.5	4
						5
						8
						9
						12
						13

Project Manager: Ben Bel Company Name: Ensolur Address: 3122 Na City, State ZIP: Carlsba		Xenco M 88220	Environment Testing Xenco al Parks Hwy M 88220		Houst Midland, EL Pas Hobbs, Bill to: (if different) Company Name: Address: Address:	e nt) sto	nn, TX (43 5, TX (43 NM (5	Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300         Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334         EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296         Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199         different)       Garrett Green         V Name:       XTO Energy         3104 E. Green St.         Carlsbad, NM 88220
10 10	22 National arlsbad, NM	Parks Hw 88220			Address: City, State ZIP:		3104 E. Gr Carlsbad, I	
	303-887-2946			Emait:	Garrett.Green@ExxonMobil.com	ı@Еххо	nMobil	CO
	PLU 1	PLU 13 DTD CTB	B	Tum	Furn Around	Drea		
Project Location:	0.0	0001147	-	Due Date:		Code		
Sampler's Name:	Conn	Connor Whitman		TAT starts the	TAT starts the day received by			
PO #			y 	the lab, if rece	lived by 4:30pm	ers		
SAMPLE RECEIPT	PT Temp Blank:	Blank:	Yes No	Wet Ice:	(Yes No	nete	.0)	
Samples Received Intact				): t	DM.00	aran	300.	
Cooler Custody Seals:	s: Yes No	AN	Correction Factor:	or:	C. O.	Pa	PA: 3	
Sample Custody Seals	als: Yes No	MA	Temperature Reading:	eading:	4.4		S (El	
Fotal Containers:		0	Corrected Temperature	perature:	6.4	1,-	IDES	015)
Sample Identification	ntification	Matrix	Date Sampled	Time Sampled	Depth Comp	# of Cont	CHLOR	TPH (80
5055		S	$\sim 1$	211/17/22	s' a	-	-	
			1					
	/							
	/	/						
					Å			
							A	
Total 200.7 / 6010 Circle Method(s) and	010 200.8 / 6020:	020:	BRCRA	RA 13PPM	A Texas 11 AI Sb As	AI Sb	Sb As	Ba Be Is Ba B
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Min Mo Ni Se Ag Li U Fig. 1031 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	nd Metal(s) to b document and relingu	e analyzed uishment of si for the cost of	amples constitues and sh	TCLP / SP tes a valid purct all not assume	TCLP / SPLP 6010: BRCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag II U es a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terr all not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances	Ilent comp	sses	o Eurofi
Relinquished by: (Signature)	r: (Signature)		Received by:	by: (Signature)	ire)		Date/Time	ime
with		An	N AN	Pa &	that	1/11	Raa	2
								I

## Received by OCD: 1/25/2023 1:28:40 PM

11 12 13

Chain of Custody

14

Job Number: 890-3523-1 SDG Number: 03E1558147

List Source: Eurofins Carlsbad

## Login Sample Receipt Checklist

Client: Ensolum

Login Number: 3523 List Number: 1 Creator: Clifton, Cloe

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

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Job Number: 890-3523-1 SDG Number: 03E1558147

List Source: Eurofins Midland

List Creation: 11/21/22 08:46 AM

## Login Sample Receipt Checklist

Client: Ensolum

Login Number: 3523 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	

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

Received by OCD: 1/25/2023 1:28:40 PM



**Environment Testing** 

# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Ben Belill Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701 Generated 12/1/2022 12:59:44 PM

# JOB DESCRIPTION

PLU 13 DTD CTB SDG NUMBER 03E1558147

# **JOB NUMBER**

890-3524-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

See page two for job notes and contact information.



5 6 Received by OCD: 1/25/2023 1:28:40 PM

## **Eurofins Carlsbad**

Job Notes

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

## Authorization

RAMER

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

Laboratory Job ID: 890-3524-1 SDG: 03E1558147

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	Definitions/Glossary	
Client: Ensolum		Job ID: 890-3524-1
Project/Site: PL		SDG: 03E1558147
Qualifiers		
GC VOA Qualifier	Qualifier Description	
*_	Qualifier Description LCS and/or LCSD is outside acceptance limits, low biased.	
- *1	LCS/LCSD RPD exceeds control limits.	
F1	MS and/or MSD recovery exceeds control limits.	
S1-	Surrogate recovery exceeds control limits, low biased.	
U	Indicates the analyte was analyzed for but not detected.	
GC Semi VOA		
Qualifier	Qualifier Description	
S1+	Surrogate recovery exceeds control limits, high biased.	
U	Indicates the analyte was analyzed for but not detected.	
HPLC/IC		
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	
Glossary		
Abbreviation	These commonly used abbreviations may or may not be present in this report.	
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis	
%R	Percent Recovery	
CFL	Contains Free Liquid	
CFU	Colony Forming Unit	
CNF	Contains No Free Liquid	
DER	Duplicate Error Ratio (normalized absolute difference)	
Dil Fac	Dilution Factor	
DL	Detection Limit (DoD/DOE)	
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision Level Concentration (Radiochemistry)	
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	
LOQ	Limit of Quantitation (DoD/DOE)	
MCL	EPA recommended "Maximum Contaminant Level"	
MDA	Minimum Detectable Activity (Radiochemistry)	
MDC	Minimum Detectable Concentration (Radiochemistry)	
MDL	Method Detection Limit	
ML	Minimum Level (Dioxin)	
MPN	Most Probable Number	
MQL	Method Quantitation Limit	
NC	Not Calculated	
ND	Not Detected at the reporting limit (or MDL or EDL if shown)	
NEG	Negative / Absent	
POS	Positive / Present	
PQL	Practical Quantitation Limit	
PRES	Presumptive	
QC	Quality Control	
RER	Relative Error Ratio (Radiochemistry)	
RL	Reporting Limit or Requested Limit (Radiochemistry)	
חחם	Polotive Dereent Difference a measure of the relative difference between two naints	

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

TEF Toxicity Equivalent Factor (Dioxin)

TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

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Job ID: 890-3524-1 SDG: 03E1558147

#### Job ID: 890-3524-1

Client: Ensolum

#### Laboratory: Eurofins Carlsbad

Project/Site: PLU 13 DTD CTB

#### Narrative

Job Narrative 890-3524-1

#### Receipt

The samples were received on 11/18/2022 8:20 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.2°C

#### GC VOA

Method 8021B: The absolute response for Benzene, Toluene, Ethylbenzene, m-Xylene & p-Xylene and o-Xylene was greater than the method reporting limit (RL) in the following sample: (LCSD 880-40436/2-A). The instrument raw data has been manually reviewed and the result can be reported as ND.

Method 8021B: The matrix spike (MS) and/or matrix spike duplicate (MSD) recovery for preparation batch 880-40436 and analytical batch 880-40689 was outside control limits for the following analyte(s): Benzene and Toluene. Results may be biased high because this analyte is a common laboratory solvent and contaminant.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-40436 and analytical batch 880-40689 was outside the control limits.

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

#### GC Semi VOA

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-40210 and analytical batch 880-40168 was outside the upper control limits.

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

#### HPLC/IC

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

Released to Imaging: 5/2/2023 2:29:51 PM
Job ID: 890-3524-1 SDG: 03E1558147

## Client Sample ID: SS03

Project/Site: PLU 13 DTD CTB

Date Collected: 11/17/22 09:30 Date Received: 11/18/22 08:20

Sample Depth: 0.5

Client: Ensolum

SDG: 03E15

### Lab Sample ID: 890-3524-1 Matrix: Solid

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00199	U *- *1	0.00199	mg/Kg		11/28/22 11:21	12/01/22 01:58	
Toluene	<0.00199	U *- *1	0.00199	mg/Kg		11/28/22 11:21	12/01/22 01:58	
Ethylbenzene	<0.00199	U *- *1	0.00199	mg/Kg		11/28/22 11:21	12/01/22 01:58	
m-Xylene & p-Xylene	<0.00398	U *- *1	0.00398	mg/Kg		11/28/22 11:21	12/01/22 01:58	
o-Xylene	<0.00199	U *- *1	0.00199	mg/Kg		11/28/22 11:21	12/01/22 01:58	
Xylenes, Total	<0.00398	U *- *1	0.00398	mg/Kg		11/28/22 11:21	12/01/22 01:58	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	98		70 - 130			11/28/22 11:21	12/01/22 01:58	
1,4-Difluorobenzene (Surr)	103		70 - 130			11/28/22 11:21	12/01/22 01:58	
Method: TAL SOP Total BTEX - T	otal BTEX Cal	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00398	U	0.00398	mg/Kg			12/01/22 13:21	
Method: SW846 8015 NM - Diese	I Range Organ	ics (DRO) (	GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<49.9	U	49.9	mg/Kg			11/23/22 11:46	
Method: SW846 8015B NM - Dies	el Range Orga	nics (DRO)	(GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		11/22/22 11:24	11/23/22 02:47	
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		11/22/22 11:24	11/23/22 02:47	
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		11/22/22 11:24	11/23/22 02:47	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	115		70 - 130			11/22/22 11:24	11/23/22 02:47	
o-Terphenyl	111		70 - 130			11/22/22 11:24	11/23/22 02:47	
Method: MCAWW 300.0 - Anions	•	• • •						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	55.7		5.05	mg/Kg			11/23/22 20:48	
lient Sample ID: SS04						Lab Sar	nple ID: 890-	
ate Collected: 11/17/22 09:35							Matri	x: Soli
ate Received: 11/18/22 08:20								
ample Depth: 0.5								
Method: SW846 8021B - Volatile			)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *- *1	0.00200	mg/Kg		11/28/22 11:21	12/01/22 02:24	1
Toluene	<0.00200	U *- *1	0.00200	mg/Kg		11/28/22 11:21	12/01/22 02:24	1
Ethylbenzene	<0.00200	U *- *1	0.00200	mg/Kg		11/28/22 11:21	12/01/22 02:24	1
m-Xylene & p-Xylene	<0.00401	U *- *1	0.00401	mg/Kg		11/28/22 11:21	12/01/22 02:24	1
o-Xylene	<0.00200	U *- *1	0.00200	mg/Kg		11/28/22 11:21	12/01/22 02:24	1
Xylenes, Total	<0.00401	U *- *1	0.00401	mg/Kg		11/28/22 11:21	12/01/22 02:24	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		70 - 130			11/28/22 11:21	12/01/22 02:24	1

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### **Client Sample Results**

Job ID: 890-3524-1 SDG: 03E1558147

Lab Sample ID: 890-3524-2

Lab Sample ID: 890-3524-3

## **Client Sample ID: SS04**

Project/Site: PLU 13 DTD CTB

Date Collected: 11/17/22 09:35 Date Received: 11/18/22 08:20

### Sample Depth: 0.5

Client: Ensolum

Method: SW846 8021B - \	/olatile Organic Compounds	(GC) (Continued)
MC(1100. 011040 0021D - 1	volutile organic oompounds	(00) (00) (11111111111111111111111111111

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1,4-Difluorobenzene (Surr)	92		70 - 130			11/28/22 11:21	12/01/22 02:24	
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00401	U	0.00401	mg/Kg			12/01/22 13:21	
Method: SW846 8015 NM - Diese	el Range Organ	ics (DRO) (	GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
	<49.8		49.8	mg/Kg			11/23/22 11:46	
Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)		D	Prepared		Dil Fa
Method: SW846 8015B NM - Dies Analyte	sel Range Orga Result	nics (DRO) Qualifier	(GC)	Unit	<u>D</u>	Prepared	Analyzed	Dil Fa
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics	sel Range Orga	nics (DRO) Qualifier	(GC)		<u>D</u>	Prepared 11/22/22 11:24		Dil Fa
Analyte Gasoline Range Organics (GRO)-C6-C10	sel Range Orga Result	<b>Qualifier</b>	(GC)	Unit	<u>D</u>		Analyzed	Dil Fa
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	sel Range Orga Result <49.8	<b>Qualifier</b>	(GC) <u>RL</u> 49.8	Unit mg/Kg	<u>D</u>	11/22/22 11:24	Analyzed 11/23/22 03:09	Dil Fa
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	sel Range Orga Result <49.8	nics (DRO) Qualifier U	(GC) <u>RL</u> 49.8	Unit mg/Kg	<u>D</u>	11/22/22 11:24	Analyzed 11/23/22 03:09	Dil Fa
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	sel Range Orga Result <49.8 <49.8	<b>nics (DRO)</b> Qualifier U U U	(GC) <u>RL</u> 49.8 49.8	Unit mg/Kg mg/Kg	<u>D</u>	11/22/22 11:24 11/22/22 11:24	Analyzed 11/23/22 03:09 11/23/22 03:09	
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics	sel Range Orga 	<b>nics (DRO)</b> Qualifier U U U	(GC) <u>RL</u> 49.8 49.8 49.8	Unit mg/Kg mg/Kg	<u> </u>	11/22/22       11:24         11/22/22       11:24         11/22/22       11:24	Analyzed 11/23/22 03:09 11/23/22 03:09 11/23/22 03:09	Dil Fa

#### Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble .. ..

Analyte	Result	Qualifier	RL	Unit	U	Prepared	Analyzed	DIIFac
Chloride	25.4		5.04	mg/Kg			11/23/22 20:57	1

### **Client Sample ID: SS06**

Date Collected: 11/17/22 10:15 Date Received: 11/18/22 08:20 Sample Depth: 0.5

#### Method: SW846 8021B - Volatile Organic Compounds (GC) Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fac Benzene <0.00201 U *- *1 0.00201 mg/Kg 11/28/22 11:21 12/01/22 02:50 Toluene <0.00201 U*-*1 0.00201 11/28/22 11:21 12/01/22 02:50 mg/Kg 1 Ethylbenzene <0.00201 U*-*1 0.00201 mg/Kg 11/28/22 11:21 12/01/22 02:50 12/01/22 02:50 0.00402 m-Xylene & p-Xylene <0.00402 U*-*1 mg/Kg 11/28/22 11:21 1 o-Xylene <0.00201 U*-*1 0.00201 mg/Kg 11/28/22 11:21 12/01/22 02:50 1 Xylenes, Total <0.00402 U*-*1 0.00402 mg/Kg 11/28/22 11:21 12/01/22 02:50 1 %Recovery Qualifier Limits Dil Fac Surrogate Prepared Analvzed 11/28/22 11:21 93 70 - 130 12/01/22 02:50 4-Bromofluorobenzene (Surr) 1 1,4-Difluorobenzene (Surr) 97 70 - 130 11/28/22 11:21 12/01/22 02:50 1 Method: TAL SOP Total BTEX - Total BTEX Calculation Analyte **Result Qualifier** RL Unit D Dil Fac Prepared Analyzed Total BTEX <0.00402 Ū 0.00402 12/01/22 13:21 mg/Kg 1 Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC) Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fac Total TPH <49.8 U 49.8 mg/Kg 11/23/22 11:46 1

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Matrix: Solid

5

Matrix: Solid

## **Client Sample Results**

Job ID: 890-3524-1 SDG: 03E1558147

Matrix: Solid

5

Lab Sample ID: 890-3524-3

# Project/Site: PLU 13 DTD CTB Client Sample ID: SS06

Date Collected: 11/17/22 10:15 Date Received: 11/18/22 08:20

## Sample Depth: 0.5

Client: Ensolum

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.8	U	49.8	mg/Kg		11/22/22 11:24	11/23/22 03:30	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<49.8	U	49.8	mg/Kg		11/22/22 11:24	11/23/22 03:30	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		11/22/22 11:24	11/23/22 03:30	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	113		70 - 130			11/22/22 11:24	11/23/22 03:30	1
o-Terphenyl	108		70 - 130			11/22/22 11:24	11/23/22 03:30	1
	. Ion Chromato	graphy - So	oluble					
Method: MCAWW 300.0 - Anions	.,							
Method: MCAWW 300.0 - Anions Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Eurofins Carlsbad

Job ID: 890-3524-1 SDG: 03E1558147

Prep Type: Total/NA

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

Matrix: Solid

-				Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		
890-3511-A-10-D MS	Matrix Spike	92	104		
890-3511-A-10-E MSD	Matrix Spike Duplicate	101	95		
890-3524-1	SS03	98	103		
890-3524-2	SS04	91	92		
890-3524-3	SS06	93	97		
LCS 880-40436/1-A	Lab Control Sample	99	89		
LCSD 880-40436/2-A	Lab Control Sample Dup	0 S1-	0 S1-		
MB 880-40436/5-A	Method Blank	66 S1-	95		
<b>.</b>					
Surrogate Legend					

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

### Matrix: Solid

		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
820-6564-A-1-E MS	Matrix Spike	99	95
820-6564-A-1-F MSD	Matrix Spike Duplicate	117	97
890-3524-1	SS03	115	111
890-3524-2	SS04	99	98
890-3524-3	SS06	113	108
LCS 880-40210/2-A	Lab Control Sample	104	103
LCSD 880-40210/3-A	Lab Control Sample Dup	115	102
MB 880-40210/1-A	Method Blank	135 S1+	135 S1+

### Surrogate Legend

1CO = 1-Chlorooctane OTPH = o-Terphenyl

## Prep Type: Total/NA

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

lifier	Unit	D	Prepared	Analyzed	Dil Fac
		<u>D</u>	Prepared	Analyzed	Dil Fac
0.00200					
0.00200	mg/Kg		11/28/22 11:21	11/30/22 17:06	1
0.00200	mg/Kg		11/28/22 11:21	11/30/22 17:06	1
0.00200	mg/Kg		11/28/22 11:21	11/30/22 17:06	1
0.00400	mg/Kg		11/28/22 11:21	11/30/22 17:06	1
0.00200	mg/Kg		11/28/22 11:21	11/30/22 17:06	1
0.00400	mg/Kg		11/28/22 11:21	11/30/22 17:06	1
	0.00400 0.00200	0.00400 mg/Kg 0.00200 mg/Kg	0.00400 mg/Kg 0.00200 mg/Kg	0.00400mg/Kg11/28/22 11:210.00200mg/Kg11/28/22 11:21	0.00400mg/Kg11/28/2211:2111/30/2217:060.00200mg/Kg11/28/2211:2111/30/2217:06

	MB	MB	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	66	S1-	70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

### Lab Sample ID: LCS 880-40436/1-A Matrix: Solid

### Analysis Batch: 40689

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1127		mg/Kg		113	70 - 130	
Toluene	0.100	0.1182		mg/Kg		118	70 - 130	
Ethylbenzene	0.100	0.1070		mg/Kg		107	70 - 130	
m-Xylene & p-Xylene	0.200	0.2149		mg/Kg		107	70 - 130	
o-Xylene	0.100	0.1084		mg/Kg		108	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	89		70 - 130

### Lab Sample ID: LCSD 880-40436/2-A

### Matrix: Solid

Analysis Batch: 40689							Prep	Batch:	40436
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	<0.00200	U *- *1	mg/Kg		0	70 - 130	200	35
Toluene	0.100	<0.00200	U *- *1	mg/Kg		0	70 - 130	200	35
Ethylbenzene	0.100	<0.00200	U *- *1	mg/Kg		0	70 - 130	200	35
m-Xylene & p-Xylene	0.200	<0.00400	U *- *1	mg/Kg		0	70 - 130	200	35
o-Xylene	0.100	<0.00200	U *- *1	mg/Kg		0	70 - 130	200	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	0	S1-	70 - 130
1,4-Difluorobenzene (Surr)	0	S1-	70 - 130

## Lab Sample ID: 890-3511-A-10-D MS

## Matrix: Solid

Analysis Batch: 40689									Prep	Batch: 40436
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	< 0.00201	U F1 *- *1	0.0996	0.1174		mg/Kg		118	70 - 130	
Toluene	<0.00201	U F1 *- *1	0.0996	0.1158		mg/Kg		116	70 - 130	

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Prep Type: Total/NA

**Client Sample ID: Matrix Spike** 

7

Dil Fac

1

1

Analyzed

11/30/22 17:06

11/30/22 17:06

Prep Type: Total/NA

Prep Type: Total/NA

Prep Batch: 40436

**Client Sample ID: Lab Control Sample** 

Client Sample ID: Lab Control Sample Dup

Prepared

11/28/22 11:21

11/28/22 11:21

Client: Ensolum Project/Site: PLU 13 DTD CTB

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

Lab Sample ID: 890-3511-A- Matrix: Solid	-10-D MS							Client	Sample ID Prep 1	: Matrix Type: To	
Analysis Batch: 40689	Sample	Sample	Spike	MS	MS				Prep %Rec	Batch:	40436
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Ethylbenzene	< 0.00201	U *- *1	0.0996	0.09952		mg/Kg		100	70 - 130		
m-Xylene & p-Xylene	<0.00402	U *- *1	0.199	0.2008		mg/Kg		101	70 - 130		
o-Xylene	<0.00201	U *- *1	0.0996	0.1059		mg/Kg		106	70 - 130		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	92		70 - 130								
1,4-Difluorobenzene (Surr)	104		70 - 130								
Lab Sample ID: 890-3511-A-											
	-10-E MSD					Cl	ient Sa	ample IC	): Matrix Sp		
Matrix: Solid	-10-E MSD					Cli	ient Sa	ample IC	Prep 1	Type: To	tal/NA
						Cli	ient Sa	ample IC	Prep 1 Prep		tal/NA 40436
Matrix: Solid Analysis Batch: 40689	Sample	Sample	Spike	MSD	MSD			-	Prep 1 Prep %Rec	Type: To Batch:	tal/NA 40436 RPD
Matrix: Solid Analysis Batch: 40689 Analyte	Sample Result	Qualifier	Added	Result	Qualifier	Unit	ient Sa	%Rec	Prep 1 Prep %Rec Limits	Batch:	tal/NA 40436 RPD Limit
Matrix: Solid Analysis Batch: 40689 Analyte Benzene	Sample 	Qualifier U F1 *- *1	Added	<b>Result</b> 0.1370	Qualifier F1	- <mark>Unit</mark> mg/Kg		<b>%Rec</b> 136	Prep 7 Prep %Rec Limits 70 - 130	Type: To Batch: RPD 15	tal/NA 40436 RPD Limit 35
Matrix: Solid Analysis Batch: 40689 Analyte Benzene Toluene	Sample Result <0.00201 <0.00201	<b>Qualifier</b> U F1 *- *1 U F1 *- *1	Added           0.100           0.100	<b>Result</b> 0.1370 0.1331	Qualifier F1	– <mark>Unit</mark> mg/Kg mg/Kg		%Rec 136 133	Prep 7 Prep 7 %Rec Limits 70 - 130 70 - 130	RPD           15           14	tal/NA 40436 RPD Limit 35 35
Matrix: Solid Analysis Batch: 40689 Analyte Benzene Toluene Ethylbenzene	Sample Result <0.00201 <0.00201 <0.00201	Qualifier U F1 *- *1 U F1 *- *1 U *- *1	Added 0.100 0.100 0.100	Result           0.1370           0.1331           0.1144	Qualifier F1	- Unit mg/Kg mg/Kg mg/Kg		%Rec 136 133 114	Prep 7 Prep %Rec Limits 70 - 130 70 - 130 70 - 130	RPD           15           14	tal/NA 40436 RPD Limit 35 35 35
Matrix: Solid Analysis Batch: 40689 Analyte Benzene Toluene Ethylbenzene	Sample Result <0.00201 <0.00201	Qualifier U F1 *- *1 U F1 *- *1 U *- *1	Added           0.100           0.100	<b>Result</b> 0.1370 0.1331	Qualifier F1	– <mark>Unit</mark> mg/Kg mg/Kg		%Rec 136 133	Prep 7 Prep 7 %Rec Limits 70 - 130 70 - 130	RPD           15           14	tal/NA 40436 RPD Limit 35 35
Matrix: Solid Analysis Batch: 40689 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	Sample Result <0.00201 <0.00201 <0.00201	Qualifier U F1 *- *1 U F1 *- *1 U *- *1 U *- *1	Added 0.100 0.100 0.100	Result           0.1370           0.1331           0.1144	Qualifier F1	- Unit mg/Kg mg/Kg mg/Kg		%Rec 136 133 114	Prep 7 Prep %Rec Limits 70 - 130 70 - 130 70 - 130	RPD           15           14	tal/NA 40436 RPD Limit 35 35 35
Matrix: Solid Analysis Batch: 40689 Analyte Benzene Toluene	Sample Result <0.00201 <0.00201 <0.00201 <0.00402 <0.00201	Qualifier U F1 *- *1 U F1 *- *1 U *- *1 U *- *1	Added 0.100 0.100 0.100 0.201	Result           0.1370           0.1331           0.1144           0.2338	Qualifier F1	Unit mg/Kg mg/Kg mg/Kg mg/Kg		%Rec 136 133 114 116	Prep 7 Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130	RPD           15           14           15	tal/NA 40436 RPD Limit 35 35 35 35 35
Matrix: Solid Analysis Batch: 40689 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	Sample Result <0.00201 <0.00201 <0.00201 <0.00402 <0.00201	Qualifier U F1 *- *1 U F1 *- *1 U *- *1 U *- *1 U *- *1 MSD	Added 0.100 0.100 0.100 0.201	Result           0.1370           0.1331           0.1144           0.2338	Qualifier F1	Unit mg/Kg mg/Kg mg/Kg mg/Kg		%Rec 136 133 114 116	Prep 7 Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130	RPD           15           14           15	tal/NA 40436 RPD Limit 35 35 35 35 35

Method: 8015B NM - Diese	Range Organics	(GC)
Method. 0015D MM - Diese	I hange organics	

95

Lab Sample ID: MB 880-40210/1-A		
Matrix: Solid		
Analysis Batch: 40168		
	MB	MR

1,4-Difluorobenzene (Surr)

	NID .						
Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<50.0	U	50.0	mg/Kg		11/22/22 11:24	11/22/22 19:48	1
<50.0	U	50.0	mg/Kg		11/22/22 11:24	11/22/22 19:48	1
<50.0	U	50.0	mg/Kg		11/22/22 11:24	11/22/22 19:48	1
МВ	МВ						
%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
	Result <50.0 <50.0 <50.0 <i>xB</i>	Result     Qualifier       <50.0     U       <50.0     U       <50.0     U       <50.0     U       <50.0     U       <80.0     U	Result         Qualifier         RL           <50.0         U         50.0           <50.0         W         50.0           MB         MB         MB	Result         Qualifier         RL         Unit           <50.0         U         50.0         mg/Kg           MB         MB         MB         MB         MB	Result         Qualifier         RL         Unit         D           <50.0         U         50.0         mg/Kg ¹ 50.0         mg/Kg ¹	Result         Qualifier         RL         Unit         D         Prepared           <50.0         U         50.0         mg/Kg         11/22/22 11:24           MB         MB         KB         KB         KB	Result         Qualifier         RL         Unit         D         Prepared         Analyzed           <50.0         U         50.0         mg/Kg         11/22/22 11:24         11/22/22 19:48           MB         MB         KB         KB

70 - 130

1-Chlorooctane	135	S1+	70 - 130
o-Terphenyl	135	S1+	70 - 130
_			

#### Lab Sample ID: LCS 880-40210/2-A Matrix: Solid Analysis Ratch: 40169

Analysis Batch: 40168							Prep	5 Batch: 40210
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	 1000	994.7		mg/Kg		99	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	955.7		mg/Kg		96	70 - 130	
C10-C28)								

1

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

11/22/22 19:48

11/22/22 19:48

11/22/22 11:24

11/22/22 11:24

**Client Sample ID: Method Blank** 

Prep Type: Total/NA Prep Batch: 40210

Prop Batch: 40210

Page 78 of 127

Job ID: 890-3524-1 SDG: 03E1558147

Eurofins Carlsbad

12/1/2022

Client: Ensolum Project/Site: PLU 13 DTD CTB

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

	ser Range Of	games (L		Jonanac								
Lab Sample ID: LCS 880-40	210/2-A						Client	t Sample	ID: Lab C	ontrol Sa	ample	
Matrix: Solid										Type: Tot		
Analysis Batch: 40168									Prep	Batch:	40210	
	LCS	LCS										5
Surrogate	%Recovery	Qualifier	Limits									
1-Chlorooctane			70 - 130									
o-Terphenyl	103		70 - 130									
											_	7
Lab Sample ID: LCSD 880-4	0210/3-A					Clier	nt Sam	iple ID: I	Lab Contro			
Matrix: Solid										Type: Tot		۶ ا
Analysis Batch: 40168			Crike		LCSD				Prep %Rec	Batch:		
Analyte			Spike Added		Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit	
Gasoline Range Organics				869.2	Quaimer	mg/Kg	— <b>–</b>	87	70 - 130	13	20	
(GRO)-C6-C10			1000	009.2				07	70 - 100	10	20	
Diesel Range Organics (Over			1000	926.3		mg/Kg		93	70 - 130	3	20	
C10-C28)												
	LCSD	LCSD										
Surrogate	%Recovery		Limits									
1-Chlorooctane			70 - 130									
o-Terphenyl	102		70 - 130									
Lab Sample ID: 820-6564-A-	1-E MS							Client	Sample ID			
Matrix: Solid										Type: Tot		
Analysis Batch: 40168	0	0	0							Batch:	40210	
Analyte		Sample Qualifier	Spike Added		MS Qualifier	Unit	D	%Rec	%Rec Limits			
Gasoline Range Organics			999	822.5	Quaimer	mg/Kg		80	70 - 130			
(GRO)-C6-C10	10.0	0	000	022.0		ing/itg		00	10-100			
Diesel Range Organics (Over	<49.9	U	999	906.5		mg/Kg		88	70 - 130			
C10-C28)												
	MS	MS										
Surrogate	%Recovery	Qualifier	Limits									
1-Chlorooctane	99		70 - 130									
o-Terphenyl	95		70 - 130									
-												
Lab Sample ID: 820-6564-A-	1-F MSD					Cli	ient Sa	ample ID	): Matrix S			
Matrix: Solid										Type: Tot		
Analysis Batch: 40168	0	Comm!-	0		MOD					Batch:		
Analyto		Sample Qualifier	Spike Addod		MSD Qualifier	Unit		% Baa	%Rec Limits	RPD	RPD Limit	
Analyte Gasoline Range Organics	<b>Result</b> <49.9		Added	818.0	Quaimer	- Unit mg/Kg	D	%Rec 80	70 - 130	·	Limit 20	
(GRO)-C6-C10	~49.9	5	330	010.0		mg/iXg		00	10 - 130	I	20	
Diesel Range Organics (Over	<49.9	U	998	934.6		mg/Kg		91	70 - 130	3	20	
										•		
C10-C28)										Ū		

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

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Job ID: 890-3524-1 SDG: 03E1558147

## 12/1/2022

Project/Site: PLU 13 DTD CTB

Client: Ensolum

## **QC Sample Results**

Job ID: 890-3524-1 SDG: 03E1558147

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-40010/1-A Matrix: Solid											cheft c	ample ID: Pren	Type: S	
Analysis Batch: 40325													.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
· · · · · · · · · · · · · · · · · · ·		MB N	ИВ											
Analyte	R	esult C	Qualifier		RL		U	nit	D	P	repared	Analy	zed	Dil Fac
Chloride	<	<5.00 L	J		5.00		m	g/Kg				11/23/22	19:11	1
Lab Sample ID: LCS 880-40010/2-/	4								Cli	ient	Sample	ID: Lab C	ontrol S	ample
Matrix: Solid												Prep	Type: S	oluble
Analysis Batch: 40325														
				Spike		LCS	LCS					%Rec		
Analyte				Added			Qualifie			D	%Rec	Limits		
Chloride				250		243.9		mg/Kg			98	90 _ 110		
Lab Sample ID: LCSD 880-40010/3	<b>-A</b>							C	lient S	Sam	ple ID:	Lab Contro	ol Samp	le Dup
Matrix: Solid												Prep	Type: S	oluble
Analysis Batch: 40325														
				Spike		LCSD	LCSD					%Rec		RPD
Analyte				Added			Qualifie	er Unit		D	%Rec	Limits	RPD	Limi
Chloride				250		246.3		mg/Kg			99	90 _ 110	1	20
Lab Sample ID: 890-3519-A-1-B M	S										Client	Sample IE	D: Matrix	Spike
Matrix: Solid												Prep	Type: S	oluble
Analysis Batch: 40325														
	Sample	Sample	е	Spike		MS	MS					%Rec		
Analyte	Result	Qualifi	ier	Added		Result	Qualifie	er Unit		D	%Rec	Limits		
Chloride	57.9			249		281.5		mg/Kg			90	90 - 110		
Lab Sample ID: 890-3519-A-1-C M	SD								Clien	it Sa	ample IC	): Matrix S	pike Du	plicate
Matrix: Solid													Type: S	
Analysis Batch: 40325														
	Sample	Sampl	е	Spike		MSD	MSD					%Rec		RPD
Analyte	Result	Qualifi	ier	Added		Result	Qualifie	er Unit		D	%Rec	Limits	RPD	Limit

## **QC Association Summary**

Client: Ensolum Project/Site: PLU 13 DTD CTB

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Job ID: 890-3524-1 SDG: 03E1558147

## **GC VOA**

### Prep Batch: 40436

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-3524-1	SS03	Total/NA	Solid	5035	
890-3524-2	SS04	Total/NA	Solid	5035	
890-3524-3	SS06	Total/NA	Solid	5035	
MB 880-40436/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-40436/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-40436/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3511-A-10-D MS	Matrix Spike	Total/NA	Solid	5035	
890-3511-A-10-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

### Analysis Batch: 40689

I ab Sample ID	Client Sample ID	Pren Type	Matrix	Method	Pren Batch	
Analysis Batch: 40797						
890-3511-A-10-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	40436	13
890-3511-A-10-D MS	Matrix Spike	Total/NA	Solid	8021B	40436	12
LCSD 880-40436/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	40436	
LCS 880-40436/1-A	Lab Control Sample	Total/NA	Solid	8021B	40436	
MB 880-40436/5-A	Method Blank	Total/NA	Solid	8021B	40436	
890-3524-3	SS06	Total/NA	Solid	8021B	40436	
890-3524-2	SS04	Total/NA	Solid	8021B	40436	
890-3524-1	SS03	Total/NA	Solid	8021B	40436	
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
Analysis Batch: 40689						9
890-3511-A-10-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035		8
890-3511-A-10-D MS	Matrix Spike	Total/NA	Solid	5035		

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3524-1	SS03	Total/NA	Solid	Total BTEX	
890-3524-2	SS04	Total/NA	Solid	Total BTEX	
890-3524-3	SS06	Total/NA	Solid	Total BTEX	

### GC Semi VOA

### Analysis Batch: 40168

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3524-1	SS03	Total/NA	Solid	8015B NM	40210
890-3524-2	SS04	Total/NA	Solid	8015B NM	40210
890-3524-3	SS06	Total/NA	Solid	8015B NM	40210
MB 880-40210/1-A	Method Blank	Total/NA	Solid	8015B NM	40210
LCS 880-40210/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	40210
LCSD 880-40210/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	40210
820-6564-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	40210
820-6564-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	40210

### Prep Batch: 40210

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3524-1	SS03	Total/NA	Solid	8015NM Prep	
890-3524-2	SS04	Total/NA	Solid	8015NM Prep	
890-3524-3	SS06	Total/NA	Solid	8015NM Prep	
MB 880-40210/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-40210/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-40210/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
820-6564-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
820-6564-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

## **QC Association Summary**

Client: Ensolum Project/Site: PLU 13 DTD CTB

### Analysis Batch: 40301

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3524-1	SS03	Total/NA	Solid	8015 NM	
890-3524-2	SS04	Total/NA	Solid	8015 NM	
890-3524-3	SS06	Total/NA	Solid	8015 NM	
000-002+-0		1010/14/1	Colla	0010 NW	

## HPLC/IC

### Leach Batch: 40010

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3524-1	SS03	Soluble	Solid	DI Leach	
890-3524-2	SS04	Soluble	Solid	DI Leach	
890-3524-3	SS06	Soluble	Solid	DI Leach	
MB 880-40010/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-40010/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-40010/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3519-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3519-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

### Analysis Batch: 40325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3524-1	SS03	Soluble	Solid	300.0	40010
890-3524-2	SS04	Soluble	Solid	300.0	40010
890-3524-3	SS06	Soluble	Solid	300.0	40010
MB 880-40010/1-A	Method Blank	Soluble	Solid	300.0	40010
LCS 880-40010/2-A	Lab Control Sample	Soluble	Solid	300.0	40010
LCSD 880-40010/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	40010
890-3519-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	40010
890-3519-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	40010

Job ID: 890-3524-1 SDG: 03E1558147

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Job ID: 890-3524-1 SDG: 03E1558147

## Lab Sample ID: 890-3524-1 Matrix: Solid

Lab Sample ID: 890-3524-2

Lab Sample ID: 890-3524-3

Matrix: Solid

Matrix: Solid

Date Collected: 11/17/22 09:30 Date Received: 11/18/22 08:20

**Client Sample ID: SS03** 

Project/Site: PLU 13 DTD CTB

Client: Ensolum

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	40436	11/28/22 11:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40689	12/01/22 01:58	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			40797	12/01/22 13:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			40301	11/23/22 11:46	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	40210	11/22/22 11:24	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40168	11/23/22 02:47	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	40010	11/20/22 12:21	СН	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40325	11/23/22 20:48	СН	EET MID

## Client Sample ID: SS04

## Date Collected: 11/17/22 09:35

Date Received: 11/18/22 08:20

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	40436	11/28/22 11:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40689	12/01/22 02:24	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			40797	12/01/22 13:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			40301	11/23/22 11:46	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	40210	11/22/22 11:24	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40168	11/23/22 03:09	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	40010	11/20/22 12:21	СН	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40325	11/23/22 20:57	СН	EET MID

## Client Sample ID: SS06

### Date Collected: 11/17/22 10:15 Date Received: 11/18/22 08:20

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	40436	11/28/22 11:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40689	12/01/22 02:50	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			40797	12/01/22 13:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			40301	11/23/22 11:46	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	40210	11/22/22 11:24	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40168	11/23/22 03:30	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	40010	11/20/22 12:21	СН	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40325	11/23/22 21:05	СН	EET MID

### Laboratory References:

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

Laboratory: Eurofins Midland

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

hority	P	rogram	Identification Number	Expiration Date
as	N	ELAP	T104704400-22-24	06-30-23
• •	• •	ut the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes for wh
the agency does not of	fer certification.			
the agency does not of Analysis Method	fer certification . Prep Method	Matrix	Analyte	
6 ,		Matrix Solid	Analyte Total TPH	

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Job ID: 890-3524-1

SDG: 03E1558147

Eurofins Carlsbad

Client: Ensolum Project/Site: PLU 13 DTD CTB Job ID: 890-3524-1 SDG: 03E1558147

Method	Method Description	Protocol	Laboratory	
8021B	Volatile Organic Compounds (GC)	SW846	EET MID	- 4
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID	
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID	E
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 Refe	rences:			8
ASTM = A	STM International			
MCAWW :	= "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March	1983 And Subsequent Revisions.		9
SW846 = '	"Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Editio	n, November 1986 And Its Updates.		
TAL SOP :	= TestAmerica Laboratories, Standard Operating Procedure			

### Protocol References:

### Laboratory References:

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

Client: Ensolum Project/Site: PLU 13 DTD CTB Job ID: 890-3524-1 SDG: 03E1558147

Matrix Collected	Received Depth
Solid 11/17/22 09:30	30 11/18/22 08:20 0.5
Solid 11/17/22 09:35	35 11/18/22 08:20 0.5
Solid 11/17/22 10:15	15 11/18/22 08:20 0.5

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eurotins 💞		Environment Testing	nt Testing		Hous	ston, TX (28	, TX (281) 240-4200, Dallas, TX (214) 90	Dallas, TX	Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300		Work Order No:	Mar No.	
	Xe	Xenco			EL Pa	aso, TX (91	5) 585-3443. L	ubbock, TX	EL Paso, TX (915) 585-3443. Lubbock, TX (806) 794-1296				
					Hobb	s, NM (575	) 392-7550, Ca	rtsbad, NM	Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199		www.xe	www.xenco.com Pa	Page of
Project Manager:	Ben Belill			B	Bill to: (if different)		Garrett Green				Work	ŏ	ents
Company Name:	Ensolum			0	Company Name		XTO Energy			Program: U	IST/PST   PRF	Program: UST/PST 🗌 PRP 🗍 Brownfields 🗌 RRC 🗌	RRC Superfund
Address:	3122 National Parks Hwy	arks Hwy		A	Address:		3	St		State of Project:	oject:		
City, State ZIP:	Carlsbad, NM 88220	8220		Q	City, State ZIP:	Ca	Carlsbad, NM 88220	18220		Reporting: L	.evel II 🗌 Level	Reporting: Level II Clevel III PST/UST TRRP	
	303-887-2946			Email: G	Email: Garrett.Green@ExxonMobil.com	@Exxon	Mobil.com			Deliverables: EDD		ADaPT	Other:
Project Name:	PLU 13	PLU 13 DTD CTB		Furn Around	round				ANALYSIS R	REQUEST			Preservative Codes
Project Number:	03E	03E1558147	4	Routine	Rush	Pres. Code						None: NO	NO DI Water: H ₂ O
Project Location:			Due	Due Date:								Cool: Cool	Cool MeOH: Me
Sampler's Name:	Conno	Connor Whitman	TAT	r starts the d	TAT starts the day received by				_	-	_	HCL: HC	
PO#			the	lab, if receiv	the lab, if received by 4:30pm	ers		-				H ₂ S04 H ₂	H ₂ NaCH Na
SAMPLE RECEIPT	PT Temp Blank:	-	ATEN NO W	Wet Ice: 0	KAS NO	nete	U)					H ₃ PO ₄ : HP	HP
Samples Received Intact	fee	No Therr	Thermometer ID:		OM .00		300.					NaHS	NaHSO4: NABIS
Cooler Custody Seals:	Yes	MIA	Correction Factor:		-0.2		=PA:		890-3524 Chain	hain of Custody		Nd202	Na20203. Nao03
Total Containers		Curry Curry	Corrected Temperature	ature:	t t		5)	21)	-	-	_	NaOH	NaOH+Ascorbic Acid: SAPC
Sample Identification	tification	Matrix Sal	Date Sampled Sa	•	Depth Grab/	# of Cont	PH (80	BTEX (8				(0)	Sample Comments
2025		S II	2	9:30	es's	-	1	1				Incide	Incident ID:
5 0 1 S		5	-	56.6	5	-	///	1				nAPP223	nAPP2231551182
305		5	01	10:15	2	-	111					Cost	Cost Center:
^													2191711001
												AFE:	
		/	1										
		_				1	20						
							H						
Circle Method(s) and Metal(s) to be analyzed	010 200.8 / 6020:	)20:	8RCRA	13PPM	RA 13PPM Texas 11 AI S		b As Ba Be B Cd Ca Cr Sb As Ba Be Cd Cr Co	B Cd Ca	Co Cu Fe Cu Pb Mn	Mg Mn Ma Ni Se Ag	NiK Se /	SiO ₂ Na Sr j: 1631 / 245.1	TI Sn U V Zn 1/7470 /7471
Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of service. Eurofins Xenco, A minimum charge of \$560 mill be applied to each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated to each sample submitted to Eurofins Xenco, but not analyzed.	document and relinquise of the second s	ishment of samp or the cost of sam	nples constitutes a nples and shall r	a valid purcha not assume av	ise order from cl ny responsibility of \$5 for each s	for any loss	ny to Eurofins X ses or expenses litted to Eurofin	incurred by S Xenco, bu	filiates and subcontractor: y the client if such losses . t not analyzed. These tern	tors. It assigns standard terms and conditions sease the due to circumstances beyond the control terms will be enforced unless previously negotiated.	rd terms and cond ances beyond the c unless previously n	litions sontrol regotiated.	
Relinquished by: (Signature)	r: (Signature)	T	Received by:	(Signature)	e)	D	Date/Time	Re	Relinquished by: (Signature)	nature)	Received by: (Signature)	(Signature)	Date/Time
1 Carthold		AND	par 6	e C	tat	11/16	1 celar	CORD					
ω			1	1	0			4					
σ								6					Revised Date: 08/25/2020 Rev. 2020.2

## Received by OCD: 1/25/2023 1:28:40 PM

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12/1/2022

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12 13

## Login Sample Receipt Checklist

Client: Ensolum

Login Number: 3524 List Number: 1 Creator: Clifton, Cloe

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

### Job Number: 890-3524-1 SDG Number: 03E1558147

SDG Number: 03E1558147
List Source: Eurofins Carlsbad

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Job Number: 890-3524-1 SDG Number: 03E1558147

List Source: Eurofins Midland

List Creation: 11/21/22 08:46 AM

## Login Sample Receipt Checklist

Client: Ensolum

Login Number: 3524 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	

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

Received by OCD: 1/25/2023 1:28:40 PM



**Environment Testing** 

# **ANALYTICAL REPORT**

## PREPARED FOR

Attn: Ben Belill Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701 Generated 12/13/2022 1:32:49 PM

## JOB DESCRIPTION

PLU 13 DTD CTB SDG NUMBER 03E1558147

## **JOB NUMBER**

880-22195-1

EOL

Eurofins Midland 1211 W. Florida Ave Midland TX 79701





Received by OCD: 1/25/2023 1:28:40 PM

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## **Eurofins Midland**

Job Notes

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

## Authorization

RAMER

Generated 12/13/2022 1:32:49 PM

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

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

Laboratory Job ID: 880-22195-1 SDG: 03E1558147

## **Table of Contents**

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	Definitions/Glossary		
Client: Ensolum Project/Site: PL		Job ID: 880-22195-1 SDG: 03E1558147	2
Qualifiers			3
GC VOA			
Qualifier	Qualifier Description		
S1+	Surrogate recovery exceeds control limits, high biased.		
U	Indicates the analyte was analyzed for but not detected.		5
GC Semi VOA			
Qualifier	Qualifier Description		
S1+	Surrogate recovery exceeds control limits, high biased.		
U	Indicates the analyte was analyzed for but not detected.		
HPLC/IC			
Qualifier	Qualifier Description		8
U	Indicates the analyte was analyzed for but not detected.		
Glossary			9
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)		10
Dil Fac	Dilution Factor		13
DL	Detection Limit (DoD/DOE)		
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample		
DLC	Decision Level Concentration (Radiochemistry)		
EDL	Estimated Detection Limit (Dioxin)		
LOD	Limit of Detection (DoD/DOE)		
LOQ	Limit of Quantitation (DoD/DOE)		
MCL	EPA recommended "Maximum Contaminant Level"		
MDA	Minimum Detectable Activity (Radiochemistry)		
MDC	Minimum Detectable Concentration (Radiochemistry)		
MDL	Method Detection Limit		
ML	Minimum Level (Dioxin)		
MPN	Most Probable Number		
MQL	Method Quantitation Limit		
NC	Not Calculated		
ND	Not Detected at the reporting limit (or MDL or EDL if shown)		
NEG	Negative / Absent		
POS	Positive / Present		
PQL	Practical Quantitation Limit		
PRES	Presumptive		
QC	Quality Control		
RER	Relative Error Ratio (Radiochemistry)		
RL	Reporting Limit or Requested Limit (Radiochemistry)		
RPD	Relative Percent Difference, a measure of the relative difference between two points		

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

- TEFToxicity Equivalent Factor (Dioxin)TEQToxicity Equivalent Quotient (Dioxin)
- TEQ Toxicity Equivalent Quote TNTC Too Numerous To Count

Eurofins Midland

Job ID: 880-22195-1 SDG: 03E1558147

### Job ID: 880-22195-1

Client: Ensolum

### Laboratory: Eurofins Midland

Project/Site: PLU 13 DTD CTB

### Narrative

Job Narrative 880-22195-1

### Receipt

The samples were received on 12/1/2022 1:44 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice.

### GC VOA

Method 8021B: Surrogate recovery for the following samples were outside control limits: (LCS 880-40910/1-A) and (LCSD 880-40910/2-A). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following sample was outside control limits: BH02 (880-22195-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-40910 and analytical batch 880-41566 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.

### GC Semi VOA

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-41187 and analytical batch 880-41218 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-41187/2-A) and (LCSD 880-41187/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (880-22119-A-1-F). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: BH02 (880-22195-1) and BH02A (880-22195-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 880-41187 and analytical batch 880-41218 was outside control limits. Sample non-homogeneity is suspected.

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 880-40959 and analytical batch 880-41085 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.

12/13/2022

## **Client Sample Results**

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Job ID: 880-22195-1 SDG: 03E1558147

## Client Sample ID: BH02

Project/Site: PLU 13 DTD CTB

Client: Ensolum

Date Collected: 12/01/22 10:45 Date Received: 12/01/22 13:44

			SD	G:	03	E1	5	5
-	-	-				-	-	

## Lab Sample ID: 880-22195-1

Matrix: Solid

5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		12/08/22 15:45	12/13/22 08:15	1
Toluene	<0.00201	U	0.00201	mg/Kg		12/08/22 15:45	12/13/22 08:15	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		12/08/22 15:45	12/13/22 08:15	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		12/08/22 15:45	12/13/22 08:15	1
p-Xylene	<0.00201	U	0.00201	mg/Kg		12/08/22 15:45	12/13/22 08:15	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		12/08/22 15:45	12/13/22 08:15	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	155	S1+	70 - 130			12/08/22 15:45	12/13/22 08:15	1
1,4-Difluorobenzene (Surr)	102		70 - 130			12/08/22 15:45	12/13/22 08:15	1
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			12/13/22 11:04	1
Method: SW846 8015 NM - Diese	el Range Organ	ics (DRO) (	GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			12/08/22 12:15	1
Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics 'GRO)-C6-C10	<50.0	U	50.0	mg/Kg		12/06/22 15:06	12/07/22 18:47	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		12/06/22 15:06	12/07/22 18:47	
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/06/22 15:06	12/07/22 18:47	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	123		70 - 130			12/06/22 15:06	12/07/22 18:47	1
o-Terphenyl	145	S1+	70 - 130			12/06/22 15:06	12/07/22 18:47	1
Method: MCAWW 300.0 - Anions	, Ion Chromato	ography - So	oluble					
Analyte	Result	Qualifier	RL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Chloride	8360		50.0	mg/Kg			12/08/22 09:06	10
lient Sample ID: BH02A						Lab Sam	ple ID: 880-2	2195-2
ate Collected: 12/01/22 11:15 ate Received: 12/01/22 13:44							Matri	x: Solid
Method: SW846 8021B - Volatile	Organic Comp	ounds (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		12/08/22 15:45	12/13/22 08:36	1
Toluene	<0.00202	U	0.00202	mg/Kg		12/08/22 15:45	12/13/22 08:36	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		12/08/22 15:45	12/13/22 08:36	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		12/08/22 15:45	12/13/22 08:36	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		12/08/22 15:45	12/13/22 08:36	
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		12/08/22 15:45	12/13/22 08:36	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	101		70 - 130			12/08/22 15:45	12/13/22 08:36	1

Eurofins Midland

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## **Client Sample Results**

Job ID: 880-22195-1 SDG: 03E1558147

Matrix: Solid

Lab Sample ID: 880-22195-2

## Client Sample ID: BH02A

Project/Site: PLU 13 DTD CTB

Client: Ensolum

Date Collected: 12/01/22 11:15 Date Received: 12/01/22 13:44

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total BTEX	<0.00403	U	0.00403	mg/Kg			12/13/22 11:04	1	ī
Method: SW846 8015 NM - Diese	I Range Organ	ics (DRO) (	GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total TPH	<49.9	U	49.9	mg/Kg			12/08/22 12:15	1	
Method: SW846 8015B NM - Dies	el Range Orga	nics (DRO)	(GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics	<49.9	U	49.9	mg/Kg		12/06/22 15:06	12/07/22 19:09	1	
GRO)-C6-C10									1
Diesel Range Organics (Over	<49.9	U	49.9	mg/Kg		12/06/22 15:06	12/07/22 19:09	1	
C10-C28)									
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		12/06/22 15:06	12/07/22 19:09	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
I-Chlorooctane	130		70 - 130			12/06/22 15:06	12/07/22 19:09	1	
p-Terphenyl	151	S1+	70 - 130			12/06/22 15:06	12/07/22 19:09	1	
/lethod: MCAWW 300.0 - Anions	Ion Chromato	oraphy - Se	oluble						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride			4.97	mg/Kg			12/08/22 09:13	1	

### Job ID: 880-22195-1 SDG: 03E1558147

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

Matrix: Solid

		BFB1	DFBZ1	Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		Ę
880-22195-1	BH02	155 S1+	102	·	
880-22195-2	BH02A	101	99		6
LCS 880-40910/1-A	Lab Control Sample	147 S1+	96		
LCSD 880-40910/2-A	Lab Control Sample Dup	137 S1+	97		
MB 880-40910/5-A	Method Blank	74	98		
MB 880-41490/5-A	Method Blank	74	99		8
Surrogate Legend					
BFB = 4-Bromofluorobe	nzene (Surr)				

DFBZ = 1,4-Difluorobenzene (Surr)

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

### Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		
880-22195-1	BH02	123	145 S1+		13
880-22195-2	BH02A	130	151 S1+		
LCS 880-41187/2-A	Lab Control Sample	157 S1+	182 S1+		
LCSD 880-41187/3-A	Lab Control Sample Dup	153 S1+	181 S1+		
MB 880-41187/1-A	Method Blank	119	145 S1+		

### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Prep Type: Total/NA

Lab Sample ID: MB 880-40910/5-A

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

Matrix: Solid						onent oa	Prep Type: 1	
Analysis Batch: 41566							Prep Batch	n: <b>40910</b>
	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		12/02/22 16:18	12/13/22 00:29	1
Toluene	<0.00200	U	0.00200	mg/Kg		12/02/22 16:18	12/13/22 00:29	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		12/02/22 16:18	12/13/22 00:29	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		12/02/22 16:18	12/13/22 00:29	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		12/02/22 16:18	12/13/22 00:29	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		12/02/22 16:18	12/13/22 00:29	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	74		70 - 130			12/02/22 16:18	12/13/22 00:29	1
1,4-Difluorobenzene (Surr)	98		70 - 130			12/02/22 16:18	12/13/22 00:29	1

### Lab Sample ID: LCS 880-40910/1-A Matrix: Solid

### Analysis Batch: 41566

	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzene	0.100	0.09037		mg/Kg		90	70 - 130
Toluene	0.100	0.09680		mg/Kg		97	70 - 130
Ethylbenzene	0.100	0.1042		mg/Kg		104	70 - 130
m-Xylene & p-Xylene	0.200	0.2347		mg/Kg		117	70 - 130
o-Xylene	0.100	0.1151		mg/Kg		115	70 - 130

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	147	S1+	70 - 130
1,4-Difluorobenzene (Surr)	96		70 - 130

### Lab Sample ID: LCSD 880-40910/2-A

## Matrix: Solid

Analysis Batch: 41566							Prep	Batch:	40910
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.1092		mg/Kg		109	70 - 130	19	35
Toluene	0.100	0.1036		mg/Kg		104	70 - 130	7	35
Ethylbenzene	0.100	0.1081		mg/Kg		108	70 - 130	4	35
m-Xylene & p-Xylene	0.200	0.2415		mg/Kg		121	70 - 130	3	35
o-Xylene	0.100	0.1212		mg/Kg		121	70 - 130	5	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	137	S1+	70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

### Lab Sample ID: MB 880-41490/5-A Matrix: Solid

### Analysis Batch: 41566

	МВ	МВ						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		12/09/22 14:34	12/12/22 12:54	1
Toluene	<0.00200	U	0.00200	mg/Kg		12/09/22 14:34	12/12/22 12:54	1

**Eurofins Midland** 

Prep Type: Total/NA

Prep Batch: 41490

**Client Sample ID: Method Blank** 

5 6

7

Client Sample ID: Method Blank

**Client Sample ID: Lab Control Sample** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Type: Total/NA

Prep Batch: 40910

Client: Ensolum Project/Site: PLU 13 DTD CTB Page 99 of 127

Job ID: 880-22195-1 SDG: 03E1558147

#### Mothod: 8021B Volatile O C . 41 **4**/

Lab Sample ID: MB 880-41490/5-	A							Client S	ample ID: Metho	d Blank
Matrix: Solid									Prep Type:	
Analysis Batch: 41566									Prep Batc	
-	M	B MB								
Analyte	Resu	ılt Qualifier	RL		Unit		D	Prepared	Analyzed	Dil Fa
Ethylbenzene	<0.0020	00 U	0.00200		mg/K	g	_	12/09/22 14:34	12/12/22 12:54	
m-Xylene & p-Xylene	<0.0040	0 U	0.00400		mg/K	g		12/09/22 14:34	12/12/22 12:54	
o-Xylene	<0.0020	0 U	0.00200		mg/K	g		12/09/22 14:34	12/12/22 12:54	
Kylenes, Total	<0.0040	0 U	0.00400		mg/K	g		12/09/22 14:34	12/12/22 12:54	
	N	B MB								
Surrogate	%Recove	ry Qualifier	Limits					Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)		74	70 - 130					12/09/22 14:34	12/12/22 12:54	
1,4-Difluorobenzene (Surr)	9	99	70 - 130					12/09/22 14:34	12/12/22 12:54	
lethod: 8015B NM - Diesel F	Range Org	anics (DF	RO) (GC)							
Lab Sample ID: MB 880-41187/1-	Α							Client S	ample ID: Metho	od Blan
Matrix: Solid									Prep Type:	Total/N/
Analysis Batch: 41218									Prep Batc	h: 4118
-	M	в мв								
Analyte	Resu	It Qualifier	RL		Unit		D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics GRO)-C6-C10	<50	.0 U	50.0		mg/K	g	_	12/06/22 15:06	12/07/22 08:21	
Diesel Range Organics (Over	<50	.0 U	50.0		mg/K	g		12/06/22 15:06	12/07/22 08:21	
C10-C28) Oll Range Organics (Over C28-C36)	<50	.0 U	50.0		mg/K	g		12/06/22 15:06	12/07/22 08:21	
	N	B MB								
Surrogate	%Recove	ry Qualifier	Limits					Prepared	Analyzed	Dil Fa
1-Chlorooctane	1:	19	70 - 130					12/06/22 15:06	12/07/22 08:21	
p-Terphenyl	14	15 S1+	70 - 130					12/06/22 15:06	12/07/22 08:21	
Lab Sample ID: LCS 880-41187/2	- <b>A</b>						С	lient Sample	ID: Lab Control	Sample
Matrix: Solid									Prep Type:	Total/N
Analysis Batch: 41218									Prep Batc	h: 4118 ⁻
-			Spike	LCS	LCS				%Rec	
Analyte			Added	Result	Qualifier	Unit		D %Rec	Limits	
Gasoline Range Organics			1000	883.0		mg/Kg		88	70 - 130	
(GRO)-C6-C10										
Diesel Range Organics (Over C10-C28)			1000	948.5		mg/Kg		95	70 - 130	
	LCS L	cs								
Surrogate	%Recovery Q	ualifier	Limits							
1-Chlorooctane	157 S	1+	70 - 130							
o-Terphenyl	182 S	1+	70 - 130							
Lab Sample ID: LCSD 880-41187	/ <b>3-A</b>					Cli	ent	Sample ID: L	ab Control Sam	nple Du
Matrix: Solid									Prep Type:	
Analysis Batch: 41218									Prep Batc	
			Spike	LCSD	LCSD				%Rec	RP
Δnalvto			bebba		Qualifier	Unit		D %Rec		D Lim

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	913.7		mg/Kg		91	70 - 130	3	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	923.1		mg/Kg		92	70 - 130	3	20
C10-C28)									

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### Job ID: 880-22195-1 SDG: 03E1558147

Client: Ensolum Project/Site: PLU 13 DTD CTB

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

Lab Sample ID: LCSD 880-41187/3 Matrix: Solid	8- <b>A</b>								CI	ient Sa	amp	ole ID:	Lab Contro Prep	ol Samp Type: To		
Analysis Batch: 41218														Batch:		ŝ
	LCSD	LCS	D													
Surrogate	&Recovery	Qua	lifier	Limits												ï
1-Chlorooctane	153	S1+		70 - 130	-											
o-Terphenyl	181	S1+		70 - 130												Ē
Method: 300.0 - Anions, Ion C	hromat	ogr	aphy													ļ
_ Lab Sample ID: MB 880-40959/1-A											С	Client S	ample ID:	Method	Blank	
Matrix: Solid	-													Type: S		
Analysis Batch: 41085														.,,		
		мв	МВ													ī
Analyte	R	esult	Qualifier		RL		ı	Unit		D	Pre	pared	Analy	zed	Dil Fac	
Chloride	<	<5.00	U		5.00		r	mg/Kg					12/07/22	22:10	1	
- Lab Sample ID: LCS 880-40959/2-	A									Clie	nt S	Sample	ID: Lab C	ontrol S	ample	
Matrix: Solid														Type: S		
Analysis Batch: 41085																ł
				Spike		LCS	LCS						%Rec			
Analyte				Added		Result	Qualif	ier	Unit		<u> </u>	%Rec	Limits			
_Chloride				250		267.0			mg/Kg			107	90 - 110			
Lab Sample ID: LCSD 880-40959/3	3-A								CI	ient Sa	amp	ole ID:	Lab Contro	ol Samp	le Dup	
Matrix: Solid													Prep	Type: S	oluble	
Analysis Batch: 41085																
				Spike		LCSD	LCSD						%Rec		RPD	
Analyte				Added		Result	Qualif	ier	Unit		<u> </u>	%Rec	Limits	RPD	Limit	
Chloride				250		267.4			mg/Kg			107	90 - 110	0	20	

**QC** Association Summary

Client: Ensolum Project/Site: PLU 13 DTD CTB

### Job ID: 880-22195-1 SDG: 03E1558147

**GC VOA** 

### Prep Batch: 40910

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22195-1	BH02	Total/NA	Solid	5035	
880-22195-2	BH02A	Total/NA	Solid	5035	
MB 880-40910/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-40910/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-40910/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
Prep Batch: 41490					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-41490/5-A	Method Blank	Total/NA	Solid	5035	
Analysis Batch: 41566					
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
880-22195-1	BH02	Total/NA	Solid	8021B	40910
880-22195-2	BH02A	Total/NA	Solid	8021B	40910
MB 880-40910/5-A	Method Blank	Total/NA	Solid	8021B	40910
MB 880-41490/5-A	Method Blank	Total/NA	Solid	8021B	41490
LCS 880-40910/1-A	Lab Control Sample	Total/NA	Solid	8021B	40910
LCSD 880-40910/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	40910
Analysis Batch: 41734	(				
-	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
Lab Sample ID			0	Total BTEX	
Lab Sample ID 880-22195-1	BH02	Total/NA	Solid	IOIAI DI EX	

### GC Semi VOA

### Prep Batch: 41187

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22195-1	BH02	Total/NA	Solid	8015NM Prep	
880-22195-2	BH02A	Total/NA	Solid	8015NM Prep	
MB 880-41187/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-41187/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-41187/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

### Analysis Batch: 41218

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22195-1	BH02	Total/NA	Solid	8015B NM	41187
880-22195-2	BH02A	Total/NA	Solid	8015B NM	41187
MB 880-41187/1-A	Method Blank	Total/NA	Solid	8015B NM	41187
LCS 880-41187/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	41187
LCSD 880-41187/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	41187

### Analysis Batch: 41365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22195-1	BH02	Total/NA	Solid	8015 NM	
880-22195-2	BH02A	Total/NA	Solid	8015 NM	

HPLC/IC

### Leach Batch: 40959

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
880-22195-1	BH02	Soluble	Solid	DI Leach	

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Client: Ensolum Project/Site: PLU 13 DTD CTB

## HPLC/IC (Continued)

### Leach Batch: 40959 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
80-22195-2	BH02A	Soluble	Solid	DI Leach	
IB 880-40959/1-A	Method Blank	Soluble	Solid	DI Leach	
CS 880-40959/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
CSD 880-40959/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
nalysis Batch: 41085					
· ·					
ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
ab Sample ID 80-22195-1	Client Sample ID BH02	Soluble	Solid	300.0	40959
ab Sample ID 880-22195-1	Client Sample ID				
ab Sample ID 880-22195-1 880-22195-2	Client Sample ID BH02	Soluble	Solid	300.0	40959
nalysis Batch: 41085 Lab Sample ID 880-22195-1 880-22195-2 MB 880-40959/1-A LCS 880-40959/2-A	Client Sample ID BH02 BH02A	Soluble	Solid Solid	300.0 300.0	40959

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Job ID: 880-22195-1 SDG: 03E1558147

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Job ID: 880-22195-1 SDG: 03E1558147

Lab Sample ID: 880-22195-1

## Client Sample ID: BH02 Date Collected: 12/01/22 10:45

Project/Site: PLU 13 DTD CTB

Client: Ensolum

Date Received: 12/01/22 13:44

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			40910	MNR	EET MID	12/08/22 15:45
Total/NA	Analysis	8021B		1	41566	MNR	EET MID	12/13/22 08:15
Total/NA	Analysis	Total BTEX		1	41734	SM	EET MID	12/13/22 11:04
Total/NA	Analysis	8015 NM		1	41365	SM	EET MID	12/08/22 12:15
Total/NA	Prep	8015NM Prep			41187	DM	EET MID	12/06/22 15:06
Total/NA	Analysis	8015B NM		1	41218	SM	EET MID	12/07/22 18:47
Soluble	Leach	DI Leach			40959	SMC	EET MID	12/03/22 13:50
Soluble	Analysis	300.0		10	41085	СН	EET MID	12/08/22 09:06

### Client Sample ID: BH02A Date Collected: 12/01/22 11:15

Date Received: 12/01/22 13:44

Lab Sample	ID: 880-22195-2	
	Motrix: Solid	

Matrix: Solid

	Batch	Batch		Dilution	Batch			Prepared
Ргер Туре	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			40910	MNR	EET MID	12/08/22 15:45
Total/NA	Analysis	8021B		1	41566	MNR	EET MID	12/13/22 08:36
Total/NA	Analysis	Total BTEX		1	41734	SM	EET MID	12/13/22 11:04
Total/NA	Analysis	8015 NM		1	41365	SM	EET MID	12/08/22 12:15
Total/NA	Prep	8015NM Prep			41187	DM	EET MID	12/06/22 15:06
Total/NA	Analysis	8015B NM		1	41218	SM	EET MID	12/07/22 19:09
Soluble	Leach	DI Leach			40959	SMC	EET MID	12/03/22 13:50
Soluble	Analysis	300.0		1	41085	СН	EET MID	12/08/22 09:13

### Laboratory References:

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

80-22195-1 Matrix: Solid 4 5 6 7

9

	A	Accreditation/C	ertification Summary		
Client: Ensolum Project/Site: PLU 13 DT	TD CTB			Job ID: 880-22195-1 SDG: 03E1558147	2
Laboratory: Eurofi	ns Midland				
Unless otherwise noted, all a	nalytes for this laboratory we	ere covered under each acc	reditation/certification below.		
Authority	P	rogram	Identification Number	Expiration Date	
Texas	N	ELAP	T104704400-22-24	06-30-23	E
The following analytes a	are included in this report, b	ut the laboratory is not certif	ied by the governing authority. This list ma	y include analytes for which	5
the agency does not off					
Analysis Method	Prep Method	Matrix	Analyte		
8015 NM		Solid	Total TPH		
Total BTEX		Solid	Total BTEX		
					8
					9
					10
					13
					14

Eurofins Midland

.

## **Method Summary**

Client: Ensolum Project/Site: PLU 13 DTD CTB Job ID: 880-22195-1

lethod	Method Description	Protocol	Laboratory
021B	Volatile Organic Compounds (GC)	SW846	EET MID
otal BTEX	Total BTEX Calculation	TAL SOP	EET MID
015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
00.0	Anions, Ion Chromatography	MCAWW	EET MID
035	Closed System Purge and Trap	SW846	EET MID
015NM Prep	Microextraction	SW846	EET MID
l 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

Client: Ensolum Project/Site: PLU 13 DTD CTB Job ID: 880-22195-1 SDG: 03E1558147

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-22195-1	BH02	Solid	12/01/22 10:45	12/01/22 13:44
880-22195-2	BH02A	Solid	12/01/22 11:15	12/01/22 13:44

D. risked Draw and Designation	6				
	4	0			n w
	12/1/22 13:442		1000	128-14	THUR
) Received by (Signature) Date/Time	Date/Time Relinquished by (Signature)	re)	Received by: (Signature)	Signature)	Reunquished by (Signature)
nd conditions 4 the control eviously negotiated.	of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated	som chemic company to somsibility for any losses or e 5 for each sample submitted	ples and shall not assume any response of states of the second shall not assume any response of states of states of the second s	be liable only for the cost of sam a charge of \$85.00 will be applied	of service. Eurofins Xenco will of Eurofins Xenco. A minimun
Hg 1631/2451/7470/747	8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se	TCLP / SPLP 6010 8RCR/	alyzed TCLP /	Circle Method(s) and Metal(s) to be analyzed	Circle Method(s) a
/n Mo Ni K Se Ag SiO ₂ Na Sr TI Sn U V Zn	Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni	13PPM Texas 11 Al	8RCRA	200.8 / 6020:	Total 200.7 / 6010
					1
hain of Custody	880-22195 Chair				
971.11001					
	1 Xe				
APP2231551182		2.516	12/01/22 1115	D V	3102
10Cadent#		1, 6	12/01/22 1045	S	BH02
Sample Comments	cont CV B TI	Depth Grab/ # Comp C	Date Time Sampled Sampled	cation	Sample Identification
NaOH+Ascorbic Acid SAPC			Corrected Temperature		Total Containers.
Zn Acetate+NaOH Zn	×	2.8	Temperature Reading	Yes No N/A	Sample Custody Seals.
Na ₂ S ₂ O ₃ NaSO ₃			Correction Factor	Yes No N/A	Cooler Custody Seals
NaHSO & NABIS		Ľ	Thermometer ID-	t: Yes No	Samples Received Intact:
-		Kes No	Yes No Wet Ice	Temp Blank.	SAMPLE RECEIPT
μ μ	;			1	PO #
HCL HC HNO, HN		TAT starts the day received by		Meredith Ps	
			38300	32.20597-1038300	Project Location
	Pres.	sh	Rout	03E1558147	Project Number
T Precentative Codes	1	Turn Around	CTB	PLU 13 DTD	Project Name
DaPT 🔲 Other			0852 Email	469 854.0852	Phone
Reporting Level II C Level III PST/UST TRRP Level IV	88220	City State ZIP-	-100	Carisbad, r	City State ZIP-
roject:	Greenest	Address.	Parks Hury	3122 Nat'l	Address
Program. UST/PST PRP Brownfields RRC Superfund		Company Name		Ensolumitte	Company Name
Work Order Comments	Sarrett Green	Bill to. (if different)	1	I'm Benni	Project Manager
www.xenco.com Page of					
	EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550 Carlsbad NM (575) 988-3199	EL Paso, T Hobbs, N			
Work Order No: 22795	Houston, TX (281) 240-4200, Dallas TX (214) 902-0300 Midland, TX (432) 704-5440 San Antonio, TX (210) 509-3334	Houston Midland, T)	Environment Testing		
	Chain of Custody	:			eurofins.

Revised Date: 08/25/2020 Rev 2020.2

### 12/13/2022

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Chain of Custody

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Job Number: 880-22195-1 SDG Number: 03E1558147

List Source: Eurofins Midland

## Login Sample Receipt Checklist

Client: Ensolum

Login Number: 22195 List Number: 1 Creator: Kramer, Jessica

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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is	N/A	

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

14
**5** 6

Received by OCD: 1/25/2023 1:28:40 PM



**Environment Testing** 

### **ANALYTICAL REPORT**

#### PREPARED FOR

Attn: Ben Belill Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701 Generated 12/22/2022 8:59:40 AM Revision 1

#### JOB DESCRIPTION

PLU 13 DTD CTB SDG NUMBER 03E1558147

#### **JOB NUMBER**

880-22196-1

Eurofins Midland 1211 W. Florida Ave Midland TX 79701

See page two for job notes and contact information.

Received by OCD: 1/25/2023 1:28:40 PM

1

5

#### **Eurofins Midland**

**Job Notes** 

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

# Authorization Generated 2/22/2022 8:59:40 AM Revision 1 Authorized for release by Brianna Teel, Project Manager Brianna Teel@et.eurofinsus.com Designee for Jessica Kramer, Project Manager Jessica Kramer@et.eurofinsus.com (432)704-5440

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

Laboratory Job ID: 880-22196-1 SDG: 03E1558147

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Sample Summary	16
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Client: Ensolum
Project/Site: PLU 13 DTD CTB

cerrea by 0 eD	0: 1/25/2023 1:28:40 PM	Page 112 of	
	Definitions/Glossary		
Client: Ensolu		Job ID: 880-22196-1	
Project/Site: F	PLU 13 DTD CTB	SDG: 03E1558147	
Qualifiers			3
GC VOA			
Qualifier	Qualifier Description		
S1+	Surrogate recovery exceeds control limits, high biased.		
U	Indicates the analyte was analyzed for but not detected.		5
GC Semi VO	Α		
Qualifier	Qualifier Description		
S1+	Surrogate recovery exceeds control limits, high biased.		
U	Indicates the analyte was analyzed for but not detected.		
HPLC/IC			
Qualifier	Qualifier Description		8
U	Indicates the analyte was analyzed for but not detected.		
Glossary			9
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)		1 2
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) Most Probable Number MPN MQL Method Quantitation Limit

Mide -	mounou quantitation
NC	Not Calculated
ND	Not Detected at the

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

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)

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

#### Job ID: 880-22196-1

#### Laboratory: Eurofins Midland

Narrative

Job Narrative 880-22196-1

#### REVISION

The report being provided is a revision of the original report sent on 12/14/2022. The report (revision 1) is being revised due to Per client email requesting chloride re run.

Report revision history

#### Receipt

The sample was received on 12/1/2022 1:44 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.8°C

#### GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: (LCS 880-41400/1-A). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following samples were outside control limits: (880-22122-A-50-C MS) and (880-22122-A-50-D MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (880-22122-A-50-E). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

#### GC Semi VOA

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

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

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: BH01 (880-22196-1), (880-22272-A-21-G), (880-22272-A-21-H MS) and (880-22272-A-21-I MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

#### HPLC/IC

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

Job ID: 880-22196-1 SDG: 03E1558147

#### **Client Sample Results**

Client: Ensolum Project/Site: PLU 13 DTD CTB

#### Client Sample ID: BH01 Date Collected: 12/01/22 11:55

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

#### Lab Sample ID: 880-22196-1

Matrix: Solid

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Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		12/08/22 16:23	12/14/22 08:24	1
Toluene	<0.00199	U	0.00199	mg/Kg		12/08/22 16:23	12/14/22 08:24	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		12/08/22 16:23	12/14/22 08:24	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		12/08/22 16:23	12/14/22 08:24	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		12/08/22 16:23	12/14/22 08:24	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		12/08/22 16:23	12/14/22 08:24	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130			12/08/22 16:23	12/14/22 08:24	1
1,4-Difluorobenzene (Surr)	103		70 - 130			12/08/22 16:23	12/14/22 08:24	1
Method: TAL SOP Total BTEX	- Total BTE	X Calculat	ion					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			12/14/22 10:47	1
Method: SW846 8015 NM - Die Analyte		Organics ( Qualifier	DRO) (GC) _{RL}	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	95.2		49.9	mg/Kg			12/06/22 10:09	1
 Method: SW846 8015B NM - D	iosol Rango	Organics						
Analyte	•	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	-	49.9	mg/Kg		12/05/22 15:06	12/06/22 04:45	1
Diesel Range Organics (Over C10-C28)	95.2		49.9	mg/Kg		12/05/22 15:06	12/06/22 04:45	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		12/05/22 15:06	12/06/22 04:45	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	167	S1+	70 - 130			12/05/22 15:06	12/06/22 04:45	1
o-Terphenyl	200	S1+	70 - 130			12/05/22 15:06	12/06/22 04:45	1
Method: MCAWW 300.0 - Anio	ns, Ion Chr	omatogram	ohy - Soluble					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	599		5.00	mg/Kg			12/21/22 18:01	1

#### **Surrogate Summary**

Client: Ensolum Project/Site: PLU 13 DTD CTB

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

			Perc	ent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-22196-1	BH01	98	103	
LCS 880-41400/1-A	Lab Control Sample	141 S1+	93	
LCSD 880-41400/2-A	Lab Control Sample Dup	127	91	
MB 880-41400/5-A	Method Blank	78	103	
MB 880-41401/5-A	Method Blank	78	103	
Surrogate Legend				

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

			Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	ОТРН1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-22196-1	BH01	167 S1+	200 S1+	
LCS 880-41084/2-A	Lab Control Sample	156 S1+	190 S1+	13
LCSD 880-41084/3-A	Lab Control Sample Dup	158 S1+	191 S1+	
MB 880-41084/1-A	Method Blank	113	142 S1+	

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Job ID: 880-22196-1 SDG: 03E1558147

Prep Type: Total/NA

Prep Type: Total/NA

#### **QC Sample Results**

Client: Ensolum Project/Site: PLU 13 DTD CTB

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

#### Lab Sample ID: MB 880-41400/5-A Matrix: Solid Analysis Batch: 41705

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		12/08/22 16:23	12/13/22 23:56	1
Toluene	<0.00200	U	0.00200	mg/Kg		12/08/22 16:23	12/13/22 23:56	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		12/08/22 16:23	12/13/22 23:56	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		12/08/22 16:23	12/13/22 23:56	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		12/08/22 16:23	12/13/22 23:56	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		12/08/22 16:23	12/13/22 23:56	1
	MB	MB						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	78		70 - 130			12/08/22 16:23	12/13/22 23:56	1
1,4-Difluorobenzene (Surr)	103		70 - 130			12/08/22 16:23	12/13/22 23:56	1

#### Lab Sample ID: LCS 880-41400/1-A Matrix: Solid Analysis Batch: 41705

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1049		mg/Kg		105	70 - 130	
Toluene	0.100	0.09994		mg/Kg		100	70 - 130	
Ethylbenzene	0.100	0.1102		mg/Kg		110	70 - 130	
m-Xylene & p-Xylene	0.200	0.2402		mg/Kg		120	70 - 130	
o-Xylene	0.100	0.1173		mg/Kg		117	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	141	S1+	70 - 130
1,4-Difluorobenzene (Surr)	93		70 - 130

#### Lab Sample ID: LCSD 880-41400/2-A Matrix: Solid

Analysis Batch: 41705							Prep E	Batch: 4	41400
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08250		mg/Kg		82	70 - 130	24	35
Toluene	0.100	0.08174		mg/Kg		82	70 - 130	20	35
Ethylbenzene	0.100	0.08948		mg/Kg		89	70 - 130	21	35
m-Xylene & p-Xylene	0.200	0.1962		mg/Kg		98	70 - 130	20	35
o-Xylene	0.100	0.09728		mg/Kg		97	70 - 130	19	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	127		70 - 130
1,4-Difluorobenzene (Surr)	91		70 - 130

#### Lab Sample ID: MB 880-41401/5-A Matrix: Solid

Analysis Batch: 41705							Prep Batch:	41401
	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg	_	12/08/22 16:47	12/13/22 12:20	1
Toluene	<0.00200	U	0.00200	mg/Kg		12/08/22 16:47	12/13/22 12:20	1

Eurofins Midland

Prep Type: Total/NA

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

Prep Type: Total/NA Prep Batch: 41400

Prep Type: Total/NA

Prep Batch: 41400

**Client Sample ID: Method Blank** 

**Client Sample ID: Lab Control Sample** 

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

#### Released to Imaging: 5/2/2023 2:29:51 PM

12/22/2022 (Rev. 1)

#### **QC Sample Results**

Client: Ensolum Project/Site: PLU 13 DTD CTB

Lab Sample ID: MB 880-41401/5-A

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

Matrix: Solid Analysis Batch: 41705							Prep Type: To Prep Batch:	
	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		12/08/22 16:47	12/13/22 12:20	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		12/08/22 16:47	12/13/22 12:20	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		12/08/22 16:47	12/13/22 12:20	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		12/08/22 16:47	12/13/22 12:20	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	78		70 - 130			12/08/22 16:47	12/13/22 12:20	1
1,4-Difluorobenzene (Surr)	103		70 - 130			12/08/22 16:47	12/13/22 12:20	1

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

#### Lab Sample ID: MB 880-41084/1-A **Client Sample ID: Method Blank Matrix: Solid** Prep Type: Total/NA Analysis Batch: 40987 Prep Batch: 41084 MB MB Unit Analyte Result Qualifier RL D Prepared Analyzed 12/05/22 15:06 12/05/22 20:25 Gasoline Range Organics <50.0 U 50.0 mg/Kg (GRO)-C6-C10 12/05/22 15:06 12/05/22 20:25 **Diesel Range Organics (Over** <50.0 U 50.0 mg/Kg C10-C28) Oll Range Organics (Over C28-C36) <50.0 U 50.0 12/05/22 15:06 12/05/22 20:25 mg/Kg MB MB Surrogate %Recovery Qualifier Limits 1-Chlorooctane 113 70 - 130

70 - 130

142 S1+

#### Lab Sample ID: LCS 880-41084/2-A Matrix: Solid Analysis Batch: 40987

o-Terphenyl

Analysis Batch: 40987							Prep E	Batch: 41084
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	880.3		mg/Kg		88	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	951.5		mg/Kg		95	70 - 130	
C10-C28)								

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

#### Lab Sample ID: LCSD 880-41084/3-A Matrix: Solid

Analysis Batch: 40987							Prep E	Batch: 4	1084
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	901.1		mg/Kg		90	70 - 130	2	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	955.6		mg/Kg		96	70 - 130	0	20
C10-C28)									

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7

# **Client Sample ID: Method Blank**

SDG: 03E1558147

1 1

Dil Fac

Prepared	Analyzed	Dil Fac
12/05/22 15:06	12/05/22 20:25	1
12/05/22 15:06	12/05/22 20:25	1

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

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

Prep Type: Total/NA

#### **QC Sample Results**

Job ID: 880-22196-1 SDG: 03E1558147

Client: Ensolum Project/Site: PLU 13 DTD CTB

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

Lab Sample ID: LCSD 880-4 Matrix: Solid	1084/3-A						(	Client S	Sam	ple	ID: Lab	Control Prep Ty			
Analysis Batch: 40987													Batch:		2
	LCSD	109	הי												
Surrogate	%Recovery			Limits											
1-Chlorooctane	158			70 - 130	-										
o-Terphenyl	191	S1+		70 - 130											÷
Mothed: 200.0 Aniona	lan Chra														
Method: 300.0 - Anions,	Ion Unro	oma	atograp	ony											Ē
Lab Sample ID: MB 880-423	69/1-A								(	Clie	nt Sam	ple ID: N	lethod	Blank	
Matrix: Solid												-	Type: So		
Analysis Batch: 42424															
		MB	MB												
Analyte			Qualifier		RL		Unit		D	P	repared	Analy		Dil Fac	
Chloride	</td <td>5.00</td> <td>U</td> <td></td> <td>5.00</td> <td></td> <td>mg/k</td> <td>ξg</td> <td></td> <td></td> <td></td> <td>12/21/22</td> <td>2 16:14</td> <td>1</td> <td></td>	5.00	U		5.00		mg/k	ξg				12/21/22	2 16:14	1	
Lab Sample ID: LCS 880-42	369/2-4							CI	ent	Sar	nnle ID	: Lab Co	ntrol Sa	amnle	
Matrix: Solid								0.		oui			Type: So		
Analysis Batch: 42424													,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
				Spike		LCS	LCS					%Rec			
Analyte				Added		Result	Qualifier	Unit		D	%Rec	Limits			
Chloride				250		248.2		mg/Kg		_	99	90 - 110			
Lab Sample ID: LCSD 880-4	2369/3-A							Client S	Sam	ple	ID: Lab	Control	Sampl	e Dup	
Matrix: Solid													Type: So		
Analysis Batch: 42424															
				Spike		LCSD	LCSD					%Rec		RPD	
Analyte				Added		Result	Qualifier	Unit		D	%Rec	Limits	RPD	Limit	
Chloride				250		248.3		mg/Kg		_	99	90 - 110	0	20	

Lab Control Sample Dup

#### **QC Association Summary**

Client: Ensolum Project/Site: PLU 13 DTD CTB

GC VOA

#### Prep Batch: 41400

Lab Sample ID

880-22196-1 MB 880-41400/5-A LCS 880-41400/1-A

Client Sample ID	Prep Type	Matrix	Method	Prep Batch
BH01	Total/NA	Solid	5035	
Method Blank	Total/NA	Solid	5035	
Lab Control Sample	Total/NA	Solid	5035	

Solid

Total/NA

#### LCSD 880-41400/2-A Prep Batch: 41401

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
MB 880-41401/5-A	Method Blank	Total/NA	Solid	5035	

#### Analysis Batch: 41705

Client Sample ID	Prep Type	Matrix	Method	Prep Batch
BH01	Total/NA	Solid	8021B	41400
Method Blank	Total/NA	Solid	8021B	41400
Method Blank	Total/NA	Solid	8021B	41401
Lab Control Sample	Total/NA	Solid	8021B	41400
Lab Control Sample Dup	Total/NA	Solid	8021B	41400
	BH01 Method Blank Method Blank Lab Control Sample	BH01     Total/NA       Method Blank     Total/NA       Method Blank     Total/NA       Lab Control Sample     Total/NA	BH01     Total/NA     Solid       Method Blank     Total/NA     Solid       Method Blank     Total/NA     Solid       Lab Control Sample     Total/NA     Solid	BH01Total/NASolid8021BMethod BlankTotal/NASolid8021BMethod BlankTotal/NASolid8021BLab Control SampleTotal/NASolid8021B

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22196-1	BH01	Total/NA	Solid	Total BTEX	

#### GC Semi VOA

#### Analysis Batch: 40987

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
880-22196-1	BH01	Total/NA	Solid	8015B NM	41084
MB 880-41084/1-A	Method Blank	Total/NA	Solid	8015B NM	41084
LCS 880-41084/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	41084
LCSD 880-41084/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	41084

#### Prep Batch: 41084

Lab Sample ID 880-22196-1	Client Sample ID BH01	Prep Type Total/NA	Matrix Solid	Method 8015NM Prep	Prep Batch
MB 880-41084/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-41084/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-41084/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 41139

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
880-22196-1	BH01	Total/NA	Solid	8015 NM	

#### HPLC/IC

#### Leach Batch: 42369

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22196-1	BH01	Soluble	Solid	DI Leach	
MB 880-42369/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-42369/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-42369/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

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Job ID: 880-22196-1

5035

SDG: 03E1558147

#### **QC Association Summary**

Client: Ensolum Project/Site: PLU 13 DTD CTB Job ID: 880-22196-1 SDG: 03E1558147

#### HPLC/IC

#### Analysis Batch: 42424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-22196-1	BH01	Soluble	Solid	300.0	42369
/IB 880-42369/1-A	Method Blank	Soluble	Solid	300.0	42369
CS 880-42369/2-A	Lab Control Sample	Soluble	Solid	300.0	42369
CSD 880-42369/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	42369

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Job ID: 880-22196-1 SDG: 03E1558147

#### Project/Site: PLU 13 DTD CTB **Client Sample ID: BH01**

Client: Ensolum

Date Collected: 12/01/22 11:55 Date Received: 12/01/22 13:44

Lab	Sample	ID:	880-22196-1
			Matrix: Solid

N	latr	'IX:	Sol	id

	Batch	Batch		Dilution	Batch			Prepared
Ргер Туре	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			41400	MNR	EET MID	12/08/22 16:23
Total/NA	Analysis	8021B		1	41705	MNR	EET MID	12/14/22 08:24
Total/NA	Analysis	Total BTEX		1	41800	SM	EET MID	12/14/22 10:47
Total/NA	Analysis	8015 NM		1	41139	SM	EET MID	12/06/22 10:09
Total/NA	Prep	8015NM Prep			41084	DM	EET MID	12/05/22 15:06
Total/NA	Analysis	8015B NM		1	40987	SM	EET MID	12/06/22 04:45
Soluble	Leach	DI Leach			42369	KS	EET MID	12/21/22 08:43
Soluble	Analysis	300.0		1	42424	СН	EET MID	12/21/22 18:01

#### Laboratory References:

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

**Eurofins Midland** 

4 5 6

7 8 9

Client: Ensolum Project/Site: PLU 13 DTD CTB

Laboratory: Eurofins Midland

thority	Program	Identification Number	Expiration Date	
xas	NELAP	T104704400-22-25	06-30-23	

Job ID: 880-22196-1 SDG: 03E1558147

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#### **Method Summary**

Client: Ensolum Project/Site: PLU 13 DTD CTB Job ID: 880-22196-1 SDG: 03E1558147

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

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Client: Ensolum Project/Site: PLU 13 DTD CTB Job ID: 880-22196-1 SDG: 03E1558147

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-22196-1	BH01	Solid	12/01/22 11:55	12/01/22 13:44	1'

5
8
9
13

# Chain of Custody

Houston, TX (281) 240-4200, Dallas TX (214) 902-0300 Midland, TX (432) 704-5440 San Antonio, TX (210) 509-3324

Work Order No:	
99196	

Circle Method(s) and Metal(s) to be analyzed       TCLP / SPLP 6010       8RCRA       Sb       As       Be       Cd       Cr       Curcle Mn       Mo       Ni       Se       Ag       TL       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 for each sector of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions for each sector any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. But not analyzed These terms will be enforced unless previously negotiated.         Volume       Received by: (Signature)       Date/Time       Relinquished by: (Signature)       Relinquished by: (Signature)	Total 200.7 / 6010 200.8 / 6020:		BHOI	Sample Custody Seals. Yes No N/A Total Containers. Sample Identification Mat	Project Location     Subscription       Sampler's Name:     Mcreck intro Roberts       PO #     Temp Blank     Yes No       SAMPLE RECEIPT     Temp Blank     Yes No       Samples Received Intact:     Yes No     Thermo       Cooler Custody Seals.     Yes No     N/A	Project Number PLU 13 DTD CI B	City, State ZIP: Carris bad, Phone 989,854	lanager y Name	1
a analyzed TCLP / SPLP 6010 of samples constitutes a valid purchase order from client of samples and shall not assume any responsibility for an applied to each project and a charge of \$5 for each samp Received by: (Signature) Received by: Signature)	8RCRA		S 1401/22 1155	ríx	TAT starts the TAT starts the the lab, if rece do Wet Ice imeter ID ion Factor	TD CIB Tum/	NM 88220 0852 Email	P	Environment Testing Xenco
PLP 6010     8RCRA     Sb     As     Ba     Be     CC       ar from client company to Eurofins Xenco, Its affiliates     staffiliates     inclusion     inclusion     inclusion       submitted to Eurofins Xenco, but not     inclusion     bit not       arch sample submitted to Eurofins Xenco, but not       b)     Date/Time       b)     Date/Time       b)     Italitat	13PPM Texas 11 AI Sb As E			2.8 Depth Grab/ #of Comp Cont	Due Date       TAT starts the day received by       TAT starts the day received by       the lab, if received by 4.30pm       Wet Ice     Yes       Wet Ice     Yes       Von     Parameters	Turn Around Pres.	City State ZIP.	f different) iy Name	Housion, 1 X (281). Midland, TX (432) 704-1 EL Paso TX (915) 585- Hobbs NM (575) 392
BRCRA     Sb     As     Ba     Be     Cd     Cr     Co     Cu     Pb     Mn     Mo     Ni     Se       Impany to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms an losses or expenses incurred by the client if such losses are due to circumstances beyond submitteed to Eurofins Xenco, but not analyzed     These terms will be enforced unless pre       Date/Time     Relinquished by: (Signature)       I2/I/2.2     I3: 44     2       6     6	As Ba Be B Cd Ca Cr Co Cu Fe Pb I		XXX	BTEX		ANALYSIS REQUEST	P Cartsbad, NM 88220	THB	nousiun, 1 x (261) 240-4200, Uailas 1 x (214) 902-0300 Midland, TX (432) 704-540 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
Hg 1631/2451/7470 aceived by (Signature)	Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO ₂ Na Sr TI Sn L			Zn Aceta NaOH+A Sat	Cool Cool HCL.HC H ₂ SO ₄ .H ₂ H ₃ PO ₄ HP NaHSO 4 NABIS	Non	State of Project:       Reporting Level II       Deliverables       EDD	Work Order Comi	Work Order No:
7471 Date/Time	UVZn	Center 1174001	1001dent #.	Zn Acetate+NaOH Zn NaOH+Ascorbic Acid SAPC Sample Comments	VABIS	e NO DI Water: H ₂ O	PST/UST TRRP Level IV	RRC Superfund	- 12 - 6

Revised Date: 08/25/2020 Rev 2020.2

eurofins .

Job Number: 880-22196-1 SDG Number: 03E1558147

List Source: Eurofins Midland

#### Login Sample Receipt Checklist

Client: Ensolum

#### Login Number: 22196 List Number: 1 Creator: Kramer, Jessica

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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is	N/A	

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

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

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

District III

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

District IV 1220 S. St Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3470 Fax: (505) 476-3462

#### **State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division** 1220 S. St Francis Dr. Santa Fe, NM 87505

CONDITIONS

Operator:	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road	Action Number:
Midland, TX 79707	179587
	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 #NAPP2231551182 PLU 13 DOG TOWN DRAW CTB, 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.	5/2/2023