District I 1625 N. French Dr., Hobbs, NM 88240 District III 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

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Revised August 24, 2018 Submit to appropriate OCD District office

)

Incident ID	NAPP2207746719
District RP	
Facility ID	
Application ID	

## **Release Notification**

### **Responsible Party**

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

### **Location of Release Source**

32.20815 Latitude

Longitude	7066
(NAD 83 in decimal degrees to 5 decimal places	)

Site Name Poker Lake Unit 15 Twin Wells Ranch CTB	Site Type Central Tank Battery
Date Release Discovered 03/04/2022	API# (if applicable)

Unit Letter	Section	Township	Range	County
D	22	24S	31E	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) 8.36	Volume Recovered (bbls) 8.00
Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	Yes No
Condensate	Volume Released (bbls)	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 The particular third-particular third-particular third-particular third-particular third-particular third-particular third-particular third-particular the particular the	cking on the circulation pump leaked fluids both into th arty contractor has been retained for remediation purpos	e pump containment and overflowed onto the ground. A ses.

Page	2
1 450	-

NA

### Oil Conservation Division

Incident ID	NAPP2207746719
District RP	
Facility ID	
Application ID	

Was this a major	If YES, for what reason(s) does the responsible party consider this a major release?		
release as defined by	N/A		
19.15.29.7(A) NMAC?			
🗌 Yes 🗶 No			
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?			
N/A			
1 1/ 2 1			

### **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 not 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.

Printed Name: Adrian Baker	Title: SSHE Coordinator
Signature:	Date: 3/18/22 Telephone: 432-236-3808
OCD Only	
Received by: Jocelyn Harimon	Date:03/18/2022

Location:	Poker Lake Unit 15 Twin Wells R	anch CTB	
Spill Date:	3/4/2022		
	Area 1		
Approximate Ar	ea =	44.92	cu.ft.
	VOLUME OF LEAK		
Total Crude Oil	=	8.00	bbls
Total Produced	Water =	0.00	bbls
	Area 2		
Approximate Ar	ea =	814.00	sq. ft.
Average Saturat	ion (or depth) of spill =	1.00	inches
Average Porosit	y Factor =	0.03	
	VOLUME OF LEAK		
Total Crude Oil	=	0.36	bbls
Total Produced	Water =	0.00	bbls
	TOTAL VOLUME OF LEAK	ζ	
Total Crude Oil	=	8.36	bbls
Total Produced	Water =	0.00	bbls
	TOTAL VOLUME RECOVER	ED	

Total Crude Oil =	8.00 bbls	
Total Produced Water =	0.00 bbls	

## Site Assessment/Characterization

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

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

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

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

- 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 <sup>1</sup>/<sub>2</sub>-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: 8/10/	2022 10:53:56 AM State of New N	Aovioo	Page 5 of 2:				
			Incident ID	NAPP2207746719			
Page 4	Oil Conservation	Division	District RP				
			Facility ID				
			Application ID				
regulations all operators public health or the envir failed to adequately inve- addition, OCD acceptance and/or regulations. Printed Name: _Garret Signature: email: _garrett.green@	nformation given above is true and co are required to report and/or file certa ronment. The acceptance of a C-141 n stigate and remediate contamination t are of a C-141 report does not relieve th tt Green	in release notifications and perform or report by the OCD does not relieve th hat pose a threat to groundwater, surf he operator of responsibility for comp	orrective actions for rele e operator of liability sh- ace water, human health bliance with any other fer inator	eases which may endanger ould their operations have or the environment. In deral, state, or local laws			
OCD Only Received by: Jocel	yn Harimon	Date:0	8/10/2022				

Received by OCD: 8/10/2022 10:53:56 AM Form C-141 State of New Mexico Page 5

Oil Conservation Division

**<u>Remediation Plan Checklist</u>**: Each of the following items must be included in the plan.

Incident ID	NAPP2207746719
District RP	
Facility ID	
Application ID	

## **Remediation Plan**

<ul> <li>Detailed description of proposed remediation technique</li> <li>Scaled sitemap with GPS coordinates showing delineation points</li> <li>Estimated volume of material to be remediated</li> <li>Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC</li> <li>Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)</li> </ul>									
<b>Deferral Requests Only:</b> Each of the following items must be confirmed as part of any request for deferral of remediation.									
$\overline{\mathbf{X}}$ Contamination must be in areas immediately under or around prodeconstruction.	oduction equipment where remediation could cause a major facility								
X Extents of contamination must be fully delineated.									
X Contamination does not cause an imminent risk to human health	, the environment, or groundwater.								
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OC rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for relewinch may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.         Printed Name:       Garrett Green       Title:       Environmental Coordinator         Signature:       Jate       08/10/2022       email:       garrett.green@exxonmobil.com         Telephone:       575-200-0729       Telephone:       575-200-0729									
OCD Only Received by: Jocelyn Harimon	Date: 08/10/2022								
Approved Approved with Attached Conditions of A	X								
Signature:	Date:								



August 10, 2022

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

#### Re: Deferral Request Poker Lake Unit 15 Twin Wells Ranch Incident Numbers NAPP2205638843 and NAPP2207746719 Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum) on behalf of XTO Energy, Inc. (XTO), has prepared this Deferral Request to document site assessment, delineation and soil sampling activities at the Poker Lake Unit 15 Twin Wells Ranch (Site). The purpose of the site assessment and soil sampling activities was to assess for the presence or absence of impacts to soil following two incidents of crude oil releasing into a lined containment and onto the wellpad. Based on field observations, field screening activities, and soil sample laboratory analytical results, XTO is submitting this Deferral Request, describing site assessment and delineation activities that have occurred and requesting deferral of final remediation for Incident Numbers NAPP2205638843 and NAPP2207746719 until the Site is reconstructed, and/or the well pad is abandoned.

#### SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in in Unit D, Section 22, Township 24 South, Range 31 East, in Eddy County, New Mexico (32.20815° N, 103.77066°W) and is associated with oil and gas exploration and production operations on Bureau of Land Management (BLM) Federal Land.

On February 20, 2022, oil was released from the air eliminator on the oil circulating pump, resulting in the release of approximately 21.39 barrels (bbls) of crude oil into the lined containment and onto the pad. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; 20.0 bbls of released crude oil were recovered. XTO submitted a Release Notification Form C-141 (Form C-141) on February 25, 2022. The release was assigned Incident Number NAPP2205638843.

On March 4, 2022, the packing on the circulation pump failed, resulting in the release of approximately 8.36 barrels (bbls) of crude oil into the lined containment and onto the pad. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; 8.0 bbls of released crude oil were recovered. XTO submitted a Release Notification Form C-141 (Form C-141) on March 18, 2022. The release was assigned Incident Number NAPP2207746719.

Ensolum, LLC | Environmental, Engineering & Hydrogeologic Consultants 601 North Marienfield , Suite 400 | Midland, TX 78209 | ensolum.com Texas PG Firm No. 50588 | Texas PE Firm No. F-21843

### SITE CHARACTERIZATION AND CLOSURE CRITERIA

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

Depth to groundwater at the Site is greater than 100 feet below ground surface (bgs) based on a recent soil boring drilled for determination of regional groundwater depth. On December 29, 2020, a soil boring (C-4508) was drilled 0.3 miles southeast of the Site utilizing a truck-mounted hollow-stem auger rig. Soil boring C-4508 was drilled to a depth of 111 feet bgs. A field geologist logged and described soils continuously. No moisture or groundwater was encountered during drilling activites. The borehole was left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period without observing groundwater, it was confirmed that groundwater beneath the Site is greater than 111 feet bgs. The borehole was properly abandoned with drill cuttings and hydrated bentonite chips. All wells used to determing depth to groundwater are depicted on Figure 1. The Well Record and Log is included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is a dry wash, located approximately 14,830 feet northwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

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

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

### SITE ASSESSMENT ACTIVITIES

On April 18, 2022, Ensolum personnel visited the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. Four preliminary soil samples (SS01 through SS04) were collected within and around the release extent from a depth of approximately 0.5 feet bgs to assess the lateral extent of the impacted soil. The preliminary soil samples were field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. The release extent and preliminary soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation is included in Appendix B.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Eurofins

Poker Lake Unit 15 Twin Wells Ranch

Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Laboratory analytical results for preliminary soil samples SS01 and SS02 indicated that TPH-GRO/TPH-DRO, and TPH concentrations exceeded the Closure Criteria. Based on visible staining in the release area, elevated field screening results, and laboratory analytical results for the preliminary soil samples, additional remediation activities were warranted.

A 48-hour advance notice of liner inspection was provided via email to the New Mexico Oil Conservation Division (NMOCD) District II office. A liner integrity inspection was conducted by Ensolum personnel on July 14, 2022 to assess containment of the fluids that collected in the liner. The liner was determined to be in good working condition. Photo documentation was conducted during the liner inspection and a photographic log is included in Appendix B.

#### **DELINEATION SOIL SAMPLING ACTIVITIES**

Between July 13, 2022 and July 18, 2022, Ensolum personnel were at the Site to oversee delineation activities. Borehole BH01 and potholes PH01 through PH07 were advanced via hand auger and backhoe, respectively, to a depth of 4 feet bgs within and around the release extent, to assess the lateral and vertical extent of the release. Delineation soil samples were collected from each pothole at depths ranging from 0.5 feet to 3 feet bgs. Soil from the delineation borehole and potholes were field screened for volatile aromatic hydrocarbons and chloride using a PID and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations for the borehole and potholes were logged on lithologic/soil sampling logs, which are included in Appendix C. The delineation soil sample locations are depicted on Figure 3.

Laboratory analytical results for delineation soil sample PH01 at 2 feet bgs and PH02 at 1 foot indicated that TPH-GRO/TPH-DRO and TPH concentrations exceeded the Closure Criteria. Laboratory analytical results for all other delineation soil samples indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations are compliant with the strictest Closure Criteria. Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included in Appendix D.

Surface scraping of impacted soil was conducted from the release area as indicated by visible staining and laboratory analytical results from the preliminary soil samples. Surface scraping activities were performed using a backhoe and hand tools. The release occurred on the well pad near production equipment and surface pipelines. XTO safety policy restricts soil disturbing activities to a 2-foot radius of any on-site production equipment. The estimated area of remaining impacted soil and delineation soil sample locations are presented on Figure 4. The estimated area of remaining impacted soil measures approximately 780 square feet and, assuming a 1 to 2 feet depth based on the delineation soil sample results listed above, a total of approximately 43 cubic yards of TPH impacted soil remains in place.

#### DEFFERAL REQUEST

XTO is requesting deferral of final remediation due to the presence of active production equipment and surface pipelines surrounding the lined containment preventing full excavation of impacted soil. The impacted soil is limited to the area between two lined containments and active production equipment, where remediation would require a major facility deconstruction. The impacted soil remaining in place is delineated vertically by delineation soil samples PH01A and PH02A, both collected at 3 feet bgs. The soil is laterally delineated by delineation soil samples from borehole BH01 and potholes PH03 through PH07.

E ENSOLUM

XTO does not believe deferment will result in imminent risk to human health, the environment, or groundwater. Depth to groundwater was determined to be greater than 100 feet bgs, the majority of the release was contained laterally by the lined containment, the liner was determined to be in good working condition, and the impacted soil remaining in place is limited in areal and vertical extent. Any gross impacts were removed via scraping of the surface soils.

Based on the presence of active production equipment within the release area and the complete lateral and vertical delineation of impacted soil remaining in place, XTO requests deferral of final remediation for Incident Numbers NAPP2205638843 and NAPP2207746719 until final reclamation of the well pad or major construction, whichever comes first.

If you have any questions or comments, please contact Ms. Ashley Ager at (970) 946-1093 or aager@ensolum.com.

Sincerely, Ensolum, LLC

J. Delill

Ben Belill Project Geologist

Ashley L. ager

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

cc: Garrett Green, XTO Shelby Pennington, XTO Bureau of Land Management

Appendices:

- Figure 1 Site Receptor Map
- Figure 2 Preliminary Soil Sample Locations
- Figure 3 Delineation Soil Sample Locations
- Figure 4 Deferral Area Map
- Table 1
   Soil Sample Analytical Results
- Appendix A Referenced Well Records
- Appendix B Lithologic / Soil Sampling Logs
- Appendix C Photographic Log
- Appendix D Laboratory Analytical Reports & Chain-of-Custody Documentation
- Appendix E NMOCD Sample Notification



FIGURES

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Received by OCD: 8/10/2022 10:53:56 AM











# TABLES

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Released to Imaging: 11/22/2022 11:30:50 AM

# **ENSOLUM**

	TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS XTO Energy, Inc. Poker Lake Unit 15 Twin Wells Ranch Eddy County, New Mexico										
Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)	
NMOCD Table 1	Closure Criteria	(NMAC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	20,000	
				Preliminary	Soil Sample Analy	tical Results					
SS01	04/18/2022	0.5	<0.101	37.4	1,200	7,380	<50.0	8,580	8,580	578	
SS02	04/18/2022	0.5	<0.0237	44.9	1,150	6,550	<49.9	7,700	7,700	56.4	
SS03	04/18/2022	0.5	<0.00200	0.105	<50.0	69.8	<50.0	69.8	69.8	183	
SS04	04/18/2022	0.5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	126	
	Delineation Soil Sample Analytical Results										
PH01	07/14/2022	2	<0.0106	20.3	1,770	3,850	721	5,520	6,340	101	
PH01A	07/14/2022	3	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.00	41.9	
PH02	07/15/2022	1	<0.00328	26.0	1,110	3,710	707	4,427	5,530	80.5	
PH02A	07/15/2022	3	<0.00200	<0.00399	<.50	<50.0	<50.0	<50.0	<50.0	22.8	
PH03	07/15/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	6.55	
PH03A	07/15/2022	1	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	32.0	
PH03B	07/15/2022	3	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	154	
PH04	07/15/2022	0.5	<0.00201	>0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	<4.99	
PH04A	07/15/2022	2	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	29.0	
PH04B	07/15/2022	3	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	26.9	
PH05	07/15/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	5.39	
PH05A	07/15/2022	2	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	123	
PH05B	07/15/2022	3	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	56.5	
PH06	07/15/2022	0.5	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	35.8	
PH06A	07/15/2022	1	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	24.9	
PH06B	07/15/2022	3	<0.000398	<0.000795	<49.9	<49.9	<49.9	<49.9	<49.9	34.8	

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## **ENSOLUM**

TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS XTO Energy, Inc. Poker Lake Unit 15 Twin Wells Ranch Eddy County, New Mexico

Sample I.D. Sample Sample I.D. Date		Sample Depth (feet bgs)	Benzene (mg/kg) 10	Total BTEX (mg/kg) 50	TPH GRO (mg/kg) NE	TPH DRO (mg/kg) NE	TPH ORO (mg/kg) NE	GRO+DRO (mg/kg)	Total TPH (mg/kg) 2,500	Chloride (mg/kg) 20,000
PH07	07/15/2022	0.5	<0.00202	<0.00404	<49.9	<49.9	<49.9	<49.9	<49.9	24.3
-		0.5	<0.00202	<0.00404	<49.9	<43.5	<49.9	<43.5	<43.5	24.3
PH07A	07/15/2022	1	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	131
PH07B	07/15/2022	3	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	112
BH01	07/18/2022	0.5	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	179
BH01A	07/18/2022	3	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	36.5

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

Concentrations in **bold** exceed the NMOCD Table 1 Closure Criteria for Soils Impacted by a Release

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# APPENDIX A

**Referenced Well Records** 



# WELL RECORD & LOG

## OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

NOI	OSE POD NO POD1 (B	H-01)				WELL TAG ID NO. n/a			OSE FILE NO(S C-4508	s).				
LOCAT	WELL OWN	gy (Ky	yle Li	-					PHONE (OPTIC	DNAL)				
MELL 1	well own 6401 Holic								CITY Midland		state TX	79707	ZIP	
GENERAL AND WELL LOCATION	WELL LOCATION L (FROM GPS)		LATI	TUDE	2GREES 32° -103°	32° 12' 46.69" <sub>N</sub> • ACCU				RACY REQUIRED: ONE TENTH OF A SECOND IM REQUIRED: WGS 84				
1. GENE		ON REL	ATING	GITODE G WELL LOCATION TO						WNSHJIP, RANGE) WHI	ERE AVA	ILABLE		
	LICENSE NO.         NAME OF LICENSED DRILLER         NAME OF WELL DRILLING COMPANY           1249         Jackie D. Atkins         Atkins Engineering Associates, Inc.													
	DRILLING STARTED         DRILLING ENDED         DEPTH OF COMPLETED WELL (FT)         BORE HOLE DEPTH (FT)         DEPTH WATER FIRST ENCOUNTERED (FT)           12/29/2020         12/29/2020         temporary well material         110         n/a													
N	COMPLETED WELL IS: ARTESIAN I DRY HOLE SHALLOW (UNCONFINED) STATIC WATER LEVEL IN COMPLETED WELL (FT) n/a													
DIT	O DRILLING FLUID: AIR MUD ADDITIVES - SPECIFY:													
RM	DRILLING METHOD: CABLE TOOL CABLE TOOL CABLE TOOL OTHER - SPECIFY: Hollow Stem Auger													
2. DRILLING & CASING INFORMATION	DEPTH (feet bgl) FROM TO		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)		and	CASING CONNECTION TYPE (add coupling diameter)		CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)		SLOT SIZE (inches)		
¢ CA	0	1	10	±8.5		Boring- HSA		iaa coup				-		
NG 4														
ווידו												· · = - = · · · · · · · · · · · · · · ·		
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T	DEPTH FROM		gl) O	BORE HOLE DIAM. (inches)		ST ANNULAR SE VEL PACK SIZE-				AMOUNT (cubic feet)		METHOI PLACEM		
ERL	FROM		0							(,				
ИАТ					†		·							
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NUL														
3. ANNULAR MATERIAL				<u>.</u>							-+			
£					<u> </u>	<u>.</u>						· · · - ·		
FOR	OSE INTER	NALU	JSE	<b>.</b>	1				WR-20	WELL RECORD 8	I	Version 06/30	)/17)	

			WR-20 WELL		
FILE NO. 1 - 4508	POD NO.	/	TRN NO.	1186651	
LOCATION Frel 245.3/ F. 15.3	344 '	WELL	L TAG ID NO.		PAGE 1 OF 2
	,				

	DEPTH (f	eet bel)							Т			ESTIMATED
	FROM	TO	THICKNESS (feet)	INCLUDE WATE	D TYPE OF MATERIA R-BEARING CAVITII plemental sheets to ful	ES OR	FRAC	TURE ZONES		WAT BEAR (YES	ING?	YIELD FOR WATER- BEARING ZONES (gpm)
	0	14	14	SAND, medium-fine	grain, poorly graded, so	mecla	iche, lig	ht-brown-tan,c	try	Y	√ N	
	14	15	1	SAND, fine grain	SAND, fine grain, poorly graded, someclaiche, light-brown-tan, dry						<b>√</b> N	
	15	25	5	CALICHE, moderat	ely consolidated, silty, s	some g	ravel, o	ff-white-tan, di	ry	Y	<b>√</b> N	
	25	46	21	SILTSTONE,	mod. consolidated, so	me san	d, red-b	orown, dry		Y	√ N	
	46	64	18	CLAYSTONE, mo	d. consolidated, cohesi	ive, fev	w sand, 1	red-brown, dry	,	Y	√ N	
ŗ	64	72	8	SANDSTONE, high co	nsolidated, medium-gra	ain, we	ell grade	d,white/lightbr	rown	Y	√ N	
4. HYDROGEOLOGIC LOG OF WELL	72	90	18	CLAYSTONE, high co	nsolidated, cohesive, m	nedium	plastici	ity, few sand, r	ed-br	Y	<b>√</b> N	
OF	90	101	11	SANDSTONE, hi	igh consolidated, fine g	rain, fe	ew silt,v	white/offwhite		Y	√N	
ő	101	108	7	CLAYSTONE, high co	nsolidated, cohesive, m	nedlo	w plasti	city, few sand,	red-b	Y	√N	
ICI	108	111	3	SANDSTONE, high	consolidated, fine grai	n, few	silt, wh	ite/offwhite, di	ry	Y	√ N	
LOG						•				Y	N	
EOI										Y	N	
ROC										Y	N	
QXE										Y	N	
4.1										Y	N	
										Y	N	
										Y	N	
										Y	N	
										Y	N	
										Y	N	
							··· · -			Y	N	
	METHOD U	SED TO ES	TIMATE YIELD	OF WATER-BEARING	3 STRATA:				ΤΟΤΑ	L ESTIN	IATED	
	<b>PUM</b>		IR LIFT	BAILER OT	HER – SPECIFY:				WELI	l yield	(gpm):	0.00
NO	WELL TES			ACH A COPY OF DAT ME, AND A TABLE SH								
VOISIV	MISCELLA	NEOUS INF	ORMATION: T	11	1			1.011.1			<b>C</b>	
TEST; RIG SUPERV			fe	emporary well materia et below ground surfa	ce, then hydrated ber							
US:			L	ogs adapted from WSI	on-site geologist.		_			-		
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s. T	Shane Eldrid							WELE CON	moe			AIT LICENDEL.
				FIES THAT, TO THE B								
6. SIGNATURE				DESCRIBED HOLE AN 30 DAYS AFTER COM				HIS WELL R	ECOR	D WITH	THE STA	ILE ENGINEEK
IAT	0	· .										
SIG	Jack Atk	ins		Jac	kie D. Atkins					02/1	/2021	
6.		SIGNAT	URE OF DRILLE	R / PRINT SIGNEE	NAME		-				DATE	
	FOR OSE INTERNAL USE WR-20 WELL RECORD & LOG (Version 06/30/2017)											
	E NO.	<u> </u>	504		POD NO.			TRN NO.	U	840	/ _/	PAGE 2 OF 2
1 100	CATION						WELL	TAG ID NO.		·	-	FAGE 2 UF 2

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USGS Home Contact USGS Search USGS

### **National Water Information System: Web Interface**

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

### Click to hideNews Bulletins

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

Groundwater levels for the Nation

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

## Search Results -- 1 sites found

site\_no list =

• 321310103482101

### Minimum number of levels = 1

Save file of selected sites to local disk for future upload

## USGS 321310103482101 24S.31E.17.13120

Available data for this site Groundwater: Field measurements V GO

Eddy County, New Mexico Hydrologic Unit Code 13060011 Latitude 32°13'14.1", Longitude 103°48'23.4" NAD83 Land-surface elevation 3,530.00 feet above NGVD29 This well is completed in the Other aquifers (N99990THER) national aquifer. This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

### **Output formats**

Table of data	
Tab-separated data	
Graph of data	
Reselect period	



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

Questions about sites/data? Feedback on this web site Automated retrievals Help Data Tips Explanation of terms Subscribe for system changes News

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U.S. Department of the Interior | U.S. Geological Survey Title: Groundwater for USA: Water Levels URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: USGS Water Data Support Team Page Last Modified: 2022-08-08 14:10:11 EDT 0.55 0.47 nadww01





# APPENDIX B

Photographic Log



Photograph 1 Date: April 18, 2022 Description: Site Assessment Activities



**Photographic Log** XTO Energy, Inc.

nAPP2207746719

Photograph 2 Date: April 18, 2022 Description: Site Assessment Activities



Photograph 3 Date: July 14, 2022 Description: Delineation Activities.



Photograph 4 Date: July 15, 2022 Description: Delineation Activities



Photographic Log XTO Energy, Inc. Poker Lake Unit 15 Twin Wells Ranch Incident Number nAPP2205638843 & nAPP2207746719



Photograph 5 Date: July 15, 2022 Description: Surface Scraping activities.



**Photograph 6** Date: July 15, 2022 Description: Surface Scraping activities.



**Photograph 7** Date: July 14, 2022 Description: Liner Inspection



Photograph 8 Date: July 14, 2022 Description: Liner Inspection



APPENDIX C

Lithologic Soil Sampling Logs

								Sample Name: PH01	Date: 07.14.22
		-			0			Site Name: PLU 15 TWR	54(0, 0) 11 1122
15		-	N	2	01	. U		Incident Number: NAPP220563	38843 and NAPP2207746719
Dame.	-							Job Number: 03E1558017	
		LITHOL	OGI		SAMPLING	i LOG		Logged By: Conner Shore	Method: Backhoe
Coord	inates: 32							Hole Diameter: N/A	Total Depth: 4'
					vith HACH Ch il to distilled		Strips and	PID for chloride and vapor, resp	pectively. Chloride test
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic I	Descriptions
N	ND	1500			1	L - 1	a a b a		
N		1508	Ν		_	1'		grey-brown caliche	
Ν	ND	1620	Ν	PH01	2'	2'	cche	grey-brown caliche	
Ν	ND	76.0	Ν	PH01A	3'	3'	sp-sm	Red-brown sandstone	
N	ND	30.0	Ν		- 1	4'	sp-sm	Red-brown sandstone	
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								Sample Name: PH02	Date: 07.15.22
		-		-	0			Site Name: PLU 15 TWR	Bute: 07.13.22
115			N	5	01	. U		Incident Number: NAPP220563	88843and NAPP2207746719
Chemistry of the International Content of the								Job Number: 03E1558017	
		LITHOI	OGI		SAMPLING	Logged By: Conner Shore	Method: Hand Auger		
Coord	inates:32			-		Hole Diameter: 3.5"	Total Depth: 4'		
					vith HACH Ch	loride Test	Strips and	PID for chloride and vapor, resp	pectively. Chloride test
perfor	med with	n 1:4 dilu	tion f	actor of so	il to distilled				
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic I	Descriptions
N	ND	903	N	PH02	1'	L 1'	cche	grey-brown caliche	
				FAUZ	± _				
Ν	ND	860	Ν		-	2'	cche	grey-brown caliche	
Ν	ND	73.0	Ν	PH02A	3' _	3'	sp-sm	Red-brown sandstone	
N	ND	44.0	Ν		-	4'	sp-sm	Red-brown sandstone	
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								Sample Name: PH03	Date: 07.15.22	
		-		-	01			Site Name: PLU 15 TWR	5440101120122	
15			N	2	01	. U		Incident Number: NAPP220563	8843and NAPP2207746719	
Sharen .								Job Number: 03E1558015		
		LITHOL	OGI		SAMPLING	Logged By: Conner Shore	Method: Hand Auger			
Coord	inates:32			-		Hole Diameter:3.5"	Total Depth: 4'			
							Strips and	PID for chloride and vapor, resp	ectively. Chloride test	
perfor	med with	h 1:4 dilu	tion f	actor of so	il to distilled					
Moisture Content	-	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic D	Descriptions	
Ν	ND	1.2	Ν	PH03	0.5'	0.5'	cche	grey-brown caliche		
Ν	ND	1.7	Ν	РНОЗА	1'	1'	cche	grey-brown caliche		
Ν	ND	1.6	Ν		-	2'	cche	grey-brown caliche		
Ν	ND	0.7	Ν	PH03B	3'	3'	sp-sm	Red-brown sandstone		
Ν	ND	1.1	Ν		-	4'	sp-sm	Red-brown sandstone		
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								Sample Name: PH04	Date: 07.15.22
		-			0			Site Name: PLU 15 TWR	54(6) 07115122
15		=	N	5	01			Incident Number: NAPP2205638	8843and NAPP2207746719
<b>D</b> anne								Job Number: 03E1558015	
1		LITHOL	OGI		SAMPLING	Logged By: Conner Shore	Method: Hand Auger		
Coord		.20816,-:		-		Hole Diameter:3.5"	Total Depth: 4'		
							Strips and	PID for chloride and vapor, resp	ectively. Chloride test
perfor	med with	h 1:4 dilu	tion f	actor of so	il to distilled				
Moisture Content		Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic D	escriptions
Ν	ND	0.6	Ν	PH04	0.5'	0.5'	cche	grey-brown caliche	
Ν	ND	0.9	Ν		-	1'	cche	grey-brown caliche	
Ν	ND	1.6	Ν	PH04A	2'	2'	cche	grey-brown caliche	
Ν	ND	1.0	Ν	PH04B	3'	3'	sp-sm	Red-brown sandstone	
Ν	ND	1.3	Ν		-	4'	sp-sm	Red-brown sandstone	
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								Sample Name: PH05	Date: 07.15.22
		-		-	01			Site Name: PLU 15 TWR	24401 07 120 122
15			N	2	01	. U		Incident Number: NAPP2205638	843 and NAPP2207746719
Sec.	-							Job Number: 03E1558015	
		LITHOL	OGI		SAMPLING	Logged By: Conner Shore	Method: Hand Auger		
Coord	inates:32			-		Hole Diameter:3.5"	Total Depth: 4'		
Comm	ents: Fie	ld screen	ing co	onducted w	ith HACH Ch	loride Test	Strips and	PID for chloride and vapor, respe	ectively. Chloride test
perfor	med with	n 1:4 dilu	tion f	actor of so	il to distilled	water.			
Moisture Content		Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic De	escriptions
Ν	ND	0.3	Ν	PH05	0.5'	0.5'	cche	grey-brown caliche	
Ν	ND	0.5	Ν		-	1'	cche	grey-brown caliche	
Ν	ND	0.7	Ν	PH05A	2'	2'		grey-brown caliche	
Ν	ND	0.6	Ν	PH05B	3'	3'	sp-sm	Red-brown sandstone	
N	ND	0.9	Ν		-	4'	sp-sm	Red-brown sandstone	
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								Sample Name: PH06	Date: 07.15.22
		-		-	0			Site Name: PLU 15 TWR	Dute: 07.13.22
		=	N	5	01	. U		Incident Number: NAPP2205638	3843 and NAPP2207746719
	-							Job Number: 03E1558015	
		LITHOL	OGI		SAMPLING	Logged By: Conner Shore	Method: Hand Auger		
Coord	inates:32			-		Hole Diameter:3.5"	Total Depth: 4'		
Comm	nents: Fie	ld screen	ing co	onducted w	ith HACH Ch	loride Test	Strips and	PID for chloride and vapor, resp	ectively. Chloride test
perfor	med with	h 1:4 dilu	tion f	actor of so	il to distilled				
Moisture Content	-	Vapor (ppm)	0,	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic D	escriptions
Ν	ND	1.3	Ν	PH06	0.5'	0.5'	cche	grey-brown caliche	
Ν	ND	1.2	Ν	PH06A	1' _	1'	cche	grey-brown caliche	
Ν	ND	0.2	Ν		-	2'	cche	grey-brown caliche	
Ν	ND	0.1	Ν	PH06B	3'	3'	sp-sm	Red-brown sandstone	
Ν	ND	0.7	Ν		-	4'	sp-sm	Red-brown sandstone	
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								Sample Name: PH07	Date: 07.15.22
		-		-	0			Site Name: PLU 15 TWR	
	-	-	N	5	01	. U		Incident Number: NAPP2205638	8843 and NAPP2207746719
<b>D</b> anne								Job Number: 03E1558015	
		LITHOL	OGI		SAMPLING	Logged By: Conner Shore	Method: Hand Auger		
Coord	inates:32			-		Hole Diameter:3.5"	Total Depth: 4'		
Comm	nents: Fie	ld screen	ing co	onducted w	ith HACH Ch	loride Test	Strips and	PID for chloride and vapor, resp	ectively. Chloride test
perfor	med with	n 1:4 dilu	tion f	actor of so	il to distilled				
Moisture Content	-	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic D	escriptions
Ν	ND	1.4	Ν	PH07	0.5'	0.5'	cche	grey-brown caliche	
Ν	ND	1.6	Ν	PH07A	1'	1'	cche	grey-brown caliche	
Ν	ND	0.6	Ν		-	2'		grey-brown caliche	
Ν	ND	0.4	Ν	PH07B	3'	3'	sp-sm	Red-brown sandstone	
Ν	ND	0.4	Ν		-	4'	sp-sm	Red-brown sandstone	
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								Sample Name: BH01	Date: 07.18.22
		-		C	01	11		Site Name: PLU 15 TWR	
115		-	R	5	01			Incident Number: NAPP220563	38843 and NAPP2207746719
								Job Number: 03E1558015	
		LITHOL	OGI	C / SOIL S	SAMPLING	Logged By: Conner Shore	Method: Hand Auger		
Coord	inates:32	.20816,-:	103.7	7067		Hole Diameter:3.5"	Total Depth: 4'		
					vith HACH Ch il to distilled	PID for chloride and vapor, resp	pectively. Chloride test		
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol		Descriptions
Ν	ND	1.1	Ν	BH01	0.5'	0.5'	cche	grey-brown caliche	
Ν	ND	1.0	Ν		-	1'	cche	grey-brown caliche	
Ν	ND	0.0	Ν		-	2'	cche	grey-brown caliche	
Ν	ND	0.0	Ν	BH01A	3'	3'	sp-sm	Red-brown sandstone	
Ν	ND	0.0	Ν		-	4'	sp-sm	Red-brown sandstone	
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# APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation
Received by OCD: 8/10/2022 10:53:56 AM

# 🔅 eurofins

# Environment Testing America

# **ANALYTICAL REPORT**

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

# Laboratory Job ID: 890-2199-1

Laboratory Sample Delivery Group: 03E1558017 Client Project/Site: PLU 15 TWR

# For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

RAMER

Authorized for release by: 4/25/2022 3:58:46 PM

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

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

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

LINKS

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results through

TOTOLACCESS

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The
Expert
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Released to Imaging: 11/22/2022 11:30:50 AM

SDG: 03E1558017

Laboratory Job ID: 890-2199-1

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Sample Summary	17
Chain of Custody	18
	20

# **Definitions/Glossary**

Client: Encolum

IOP 100 5100 1

Client: Ensolum Project/Site: PL		Job ID: 890-2199-1 SDG: 03E1558017	
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.		ļ
GC Semi VOA			
Qualifier	Qualifier Description		
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.		8
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		4
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
- TEF Toxicity Equivalent Factor (Dioxin)
- Toxicity Equivalent Quotient (Dioxin) TEQ
- TNTC Too Numerous To Count

5

### Job ID: 890-2199-1 SDG: 03E1558017

### Job ID: 890-2199-1

Project/Site: PLU 15 TWR

Client: Ensolum

### Laboratory: Eurofins Carlsbad

### Narrative

Job Narrative 890-2199-1

### Receipt

The samples were received on 4/19/2022 12:10 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was  $1.4^{\circ}$ C

### GC VOA

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

### GC Semi VOA

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

### HPLC/IC

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

Method: 8021B - Volatile Organic Compounds (GC)

Job ID: 890-2199-1 SDG: 03E1558017

# **Client Sample ID: SS03**

Date Collected: 04/18/22 12:20 Date Received: 04/19/22 12:10

Sample Depth: 0.5

Project/Site: PLU 15 TWR

Client: Ensolum

# Lab Sample ID: 890-2199-1

Matrix: Solid

Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/21/22 16:00	04/25/22 04:01	1
Toluene	0.00844		0.00200	mg/Kg		04/21/22 16:00	04/25/22 04:01	1
Ethylbenzene	0.00452		0.00200	mg/Kg		04/21/22 16:00	04/25/22 04:01	1
m-Xylene & p-Xylene	0.0747		0.00401	mg/Kg		04/21/22 16:00	04/25/22 04:01	1
o-Xylene	0.0178		0.00200	mg/Kg		04/21/22 16:00	04/25/22 04:01	1
Xylenes, Total	0.0925		0.00401	mg/Kg		04/21/22 16:00	04/25/22 04:01	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130			04/21/22 16:00	04/25/22 04:01	1
1,4-Difluorobenzene (Surr)	92		70 - 130			04/21/22 16:00	04/25/22 04:01	1
Method: Total BTEX - Total BTE	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.105		0.00401	mg/Kg			04/25/22 16:29	1
- Method: 8015 NM - Diesel Range	e Organics (DR	O) (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	69.8		50.0	mg/Kg			04/21/22 10:45	1
-								
Method: 8015B NM - Diesel Rang	• • ·				_			
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/20/22 09:58	04/20/22 15:17	1
Diesel Range Organics (Over C10-C28)	69.8		50.0	mg/Kg		04/20/22 09:58	04/20/22 15:17	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/20/22 09:58	04/20/22 15:17	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	87		70 - 130			04/20/22 09:58	04/20/22 15:17	1
o-Terphenyl	95		70 - 130			04/20/22 09:58	04/20/22 15:17	1
- Method: 300.0 - Anions, Ion Chr	omatography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	183		4.95	mg/Kg			04/21/22 21:35	1
Client Sample ID: SS04						Lab Sar	nple ID: 890-	2199-2
Date Collected: 04/18/22 12:30								x: Solid
Date Received: 04/19/22 12:10							maan	
Sample Depth: 0.5								
-								
Method: 8021B - Volatile Organi		( <mark>GC)</mark> Qualifier	Ы	Unit	~	Prepared	Analyzed	Dil Fac
Analyte Benzene	<b>Result</b> <0.00201				<u>D</u>			
			0.00201	mg/Kg		04/21/22 16:00	04/25/22 04:22	1
Toluene	< 0.00201		0.00201	mg/Kg		04/21/22 16:00	04/25/22 04:22	1
Ethylbenzene	< 0.00201		0.00201	mg/Kg		04/21/22 16:00	04/25/22 04:22	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		04/21/22 16:00	04/25/22 04:22	1

# Released to Imaging: 11/22/2022 11:30:50 AM

<0.00201 U

<0.00402 U

%Recovery Qualifier

109

o-Xylene

Surrogate

Xylenes, Total

4-Bromofluorobenzene (Surr)

0.00201

0.00402

Limits

70 - 130

mg/Kg

mg/Kg

4/25/2022

Eurofins Carlsbad

1

1

1

Dil Fac

04/25/22 04:22

04/25/22 04:22

Analyzed

04/25/22 04:22

04/21/22 16:00

04/21/22 16:00

Prepared

04/21/22 16:00

# **Client Sample Results**

Job ID: 890-2199-1 SDG: 03E1558017

# Lab Sample ID: 890-2199-2

Matrix: Solid

5

Date Collected: 04/18/22 12:30 Date Received: 04/19/22 12:10

Client Sample ID: SS04

Project/Site: PLU 15 TWR

Sample Depth: 0.5

Client: Ensolum

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1,4-Difluorobenzene (Surr)	94		70 - 130			04/21/22 16:00	04/25/22 04:22	
Method: Total BTEX - Total BTE>	<b>Calculation</b>							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00402	U	0.00402	mg/Kg			04/25/22 16:29	
Method: 8015 NM - Diesel Range	Organics (DR	0) (GC)						
Analyte	- · ·	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<50.0	U	50.0	mg/Kg			04/21/22 10:45	
Method: 8015B NM - Diesel Rang	ge Organics (Di	RO) (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		04/20/22 09:58	04/20/22 15:59	
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		04/20/22 09:58	04/20/22 15:59	
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/20/22 09:58	04/20/22 15:59	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane			70 - 130			04/20/22 09:58	04/20/22 15:59	
	88		70 - 130			04/20/22 09:58	04/20/22 15:59	
p-Terphenyl								
	omatography	Soluble						
o- <i>Terphenyl</i> Method: 300.0 - Anions, Ion Chro Analyte		Soluble Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa

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Job ID: 890-2199-1
SDG: 03E1558017

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

Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
_ab Sample ID	Client Sample ID	(70-130)	(70-130)	
380-13850-A-27-C MS	Matrix Spike	109	111	
880-13850-A-27-D MSD	Matrix Spike Duplicate	79	82	
890-2199-1	SS03	110	92	
890-2199-2	SS04	109	94	
_CS 880-23967/1-A	Lab Control Sample	101	93	
_CSD 880-23967/2-A	Lab Control Sample Dup	102	92	
MB 880-23967/5-A	Method Blank	105	88	

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 880-13895-A-1-B MS	Client Sample ID Matrix Spike	(70-130)  77	(70-130) 81		-
880-13895-A-1-C MSD	Matrix Spike Duplicate	78	81		
890-2199-1	SS03	87	95		
890-2199-2	SS04	80	88		

### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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

				Percent Surrogate Recovery (Acceptance Limits)
		1CO2	OTPH2	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
LCS 880-23823/2-A	Lab Control Sample	92	108	
LCSD 880-23823/3-A	Lab Control Sample Dup	104	125	
MB 880-23823/1-A	Method Blank	84	100	

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

Client: Ensolum Project/Site: PLU 15 TWR

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

Lab Sample ID: MB 880-23967/5-A Matrix: Solid Analysis Batch: 24109						Client Sa	mple ID: Metho Prep Type: 1 Prep Batch	otal/NA
	MB							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/21/22 16:00	04/25/22 01:58	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/21/22 16:00	04/25/22 01:58	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/21/22 16:00	04/25/22 01:58	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/21/22 16:00	04/25/22 01:58	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/21/22 16:00	04/25/22 01:58	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/21/22 16:00	04/25/22 01:58	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130			04/21/22 16:00	04/25/22 01:58	1
1,4-Difluorobenzene (Surr)	88		70 - 130			04/21/22 16:00	04/25/22 01:58	1

### Lab Sample ID: LCS 880-23967/1-A Matrix: Solid

### Analysis Batch: 24109

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.08769		mg/Kg		88	70 - 130	
Toluene	0.100	0.09042		mg/Kg		90	70 - 130	
Ethylbenzene	0.100	0.09356		mg/Kg		94	70 - 130	
m-Xylene & p-Xylene	0.200	0.1927		mg/Kg		96	70 - 130	
o-Xylene	0.100	0.09654		mg/Kg		97	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	93		70 - 130

### Lab Sample ID: LCSD 880-23967/2-A

#### Matrix: Solid Local Desta

Analysis Batch: 24109							Prep	Batch:	23967
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08077		mg/Kg		81	70 - 130	8	35
Toluene	0.100	0.08128		mg/Kg		81	70 - 130	11	35
Ethylbenzene	0.100	0.08200		mg/Kg		82	70 - 130	13	35
m-Xylene & p-Xylene	0.200	0.1675		mg/Kg		84	70 - 130	14	35
o-Xylene	0.100	0.08663		mg/Kg		87	70 - 130	11	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

# Lab Sample ID: 880-13850-A-27-C MS

#### Matrix: Solid Analysis Bataby 24400

Analysis Batch: 24109									Prep	Batch: 23967
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U	0.0998	0.1069		mg/Kg		107	70 - 130	
Toluene	<0.00200	U F1	0.0998	0.1327	F1	mg/Kg		133	70 - 130	

rlsbad

Prep Type: Total/NA

# Client Sample ID: Method Blank

Job ID: 890-2199-1 SDG: 03E1558017

**Client Sample ID: Lab Control Sample** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 23967

Prep Type: Total/NA

Eurofins	Car

**Client Sample ID: Matrix Spike** 

Client: Ensolum

Project/Site: PLU 15 TWR

# **QC Sample Results**

Job ID: 890-2199-1 SDG: 03E1558017

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

Lab Sample ID: 880-13850-A-2	7-C MS							Client S	Sample ID: Mat	
Matrix: Solid									Prep Type:	
Analysis Batch: 24109									Prep Bato	:h: 2396
	Sample San	nple	Spike	MS	MS				%Rec	
Analyte	Result Qua	lifier	Added	Result	Qualifier	Unit		D %Rec	Limits	
Ethylbenzene	<0.00200 U		0.0998	0.1129		mg/Kg		113	70 - 130	
m-Xylene & p-Xylene	<0.00401 U		0.200	0.2220		mg/Kg		111	70 - 130	
o-Xylene	<0.00200 U		0.0998	0.1165		mg/Kg		117	70 - 130	
	MS MS									
Surrogate	%Recovery Qua	lifier	Limits							
4-Bromofluorobenzene (Surr)	109		70 - 130							
1,4-Difluorobenzene (Surr)	111		70 - 130							
Lab Sample ID: 880-13850-A-2	7-D MSD					(	Client	Sample ID:	Matrix Spike	Duplicat
Matrix: Solid									Prep Type:	
Analysis Batch: 24109									Prep Bate	h: 2396
	Sample San	nple	Spike	MSD	MSD				%Rec	RP
Analyte	Result Qua	lifier	Added	Result	Qualifier	Unit		D %Rec	Limits RF	D Lim
Benzene	<0.00200 U		0.0996	0.08759		mg/Kg		88	70 - 130	20 3
Toluene	<0.00200 UF	1	0.0996	0.1108		mg/Kg		111	70 - 130	18 3
Ethylbenzene	<0.00200 U		0.0996	0.09973		mg/Kg		100	70 - 130	12 3
n-Xylene & p-Xylene	<0.00401 U		0.199	0.1967		mg/Kg		99	70 - 130	12 3
o-Xylene	<0.00200 U		0.0996	0.09755		mg/Kg		98	70 - 130	18 3
	MSD MSI	ס								
Surrogate	%Recovery Qua	lifier	Limits							
4-Bromofluorobenzene (Surr)	79		70 - 130							
1,4-Difluorobenzene (Surr)	82		70 - 130							
ethod: 8015B NM - Diese	I Range Orga	nics (DF	RO) (GC)							
Lab Sample ID: MB 880-23823	/1-A							Client Sa	mple ID: Meth	od Blan
Matrix: Solid									Prep Type:	
Analysis Batch: 23813									Prep Bato	
····· <b>,</b> ··· ·····	МВ	МВ								
Analyte	Result	Qualifier	RL	_	Unit		D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics GRO)-C6-C10	<50.0	U	50.0	)	mg/K	g	0	4/20/22 09:58	04/20/22 10:25	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	)	mg/K	g	0	4/20/22 09:58	04/20/22 10:25	
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	)	mg/K	g	0	4/20/22 09:58	04/20/22 10:25	
	MB	МВ								
Surrogate	%Recovery	Qualifier	Limits					Prepared	Analyzed	Dil Fa
I-Chlorooctane	84		70 - 130				0	4/20/22 09:58	04/20/22 10:25	
p-Terphenyl	100		70 - 130				0	4/20/22 09:58	04/20/22 10:25	
Lab Sample ID: LCS 880-2382	3/2-A						Clie	ent Sample	ID: Lab Contro	I Sampl
Matrix: Solid							5.10		Prep Type:	
Analysis Databy 22012										h. 0000

Analysis Batch: 23813

Analysis Batch: 23813							Prep	Batch: 23823
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	1021		mg/Kg		102	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	841.0		mg/Kg		84	70 - 130	
C10-C28)								

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Released to Imaging: 11/22/2022 11:30:50 AM

Client: Ensolum Project/Site: PLU 15 TWR

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

Lab Sample ID: LCS 880-2382	23/2 <b>-A</b>						Client	: Sample	ID: Lab Co		
Matrix: Solid									Prep 1	Type: To	tal/N/
Analysis Batch: 23813									Prep	Batch:	2382:
	LCS	LCS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	92		70 - 130								
o-Terphenyl	108		70 - 130								
Lab Sample ID: LCSD 880-23	823/3-A					Clier	nt Sam	nple ID: I	Lab Contro	ol Sampl	e Dup
Matrix: Solid										Type: To	
Analysis Batch: 23813										Batch:	
-			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1035		mg/Kg		104	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	904.3		mg/Kg		90	70 - 130	7	20
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	104		70 - 130								
o-Terphenyl	125		70 - 130								
Matrix: Solid	1-B MS							Client		: Matrix Type: To Batch:	tal/N/
Matrix: Solid Analysis Batch: 23813	Sample	-	Spike Added		MS Qualifier	Unit	D		Prep 1 Prep %Rec	Type: To	tal/NA
Analysis Batch: 23813 Analyte	Sample Result	Qualifier	Added	Result	MS Qualifier	- Unit ma/Ka	<u>D</u>	%Rec	Prep 1 Prep %Rec Limits	Type: To	tal/NA
Matrix: Solid Analysis Batch: 23813 Analyte Gasoline Range Organics	Sample	Qualifier	-			- <mark>Unit</mark> mg/Kg	<u>D</u>		Prep 1 Prep %Rec	Type: To	tal/NA
Matrix: Solid Analysis Batch: 23813 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Sample Result	Qualifier	Added	Result			D	%Rec	Prep 1 Prep %Rec Limits	Type: To	tal/NA
Matrix: Solid Analysis Batch: 23813 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Sample Result <49.9 <49.9	Qualifier U	Added	<b>Result</b> 844.7		mg/Kg	<u> </u>	<b>%Rec</b> 83	Prep 1 Prep %Rec Limits 70 - 130	Type: To	tal/NA
Matrix: Solid Analysis Batch: 23813 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Sample Result <49.9 <49.9 MS	Qualifier U U MS	Added	<b>Result</b> 844.7		mg/Kg	<u>D</u>	<b>%Rec</b> 83	Prep 1 Prep %Rec Limits 70 - 130	Type: To	tal/NA
Matrix: Solid Analysis Batch: 23813 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	Sample Result <49.9 <49.9 MS %Recovery	Qualifier U U MS	Added 1000 1000 <i>Limits</i>	<b>Result</b> 844.7		mg/Kg	D	<b>%Rec</b> 83	Prep 1 Prep %Rec Limits 70 - 130	Type: To	tal/NA
Matrix: Solid Analysis Batch: 23813 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane	Sample Result <49.9 <49.9 MS	Qualifier U U MS	Added	<b>Result</b> 844.7		mg/Kg	<u> </u>	<b>%Rec</b> 83	Prep 1 Prep %Rec Limits 70 - 130	Type: To	tal/NA
Matrix: Solid Analysis Batch: 23813 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Sample Result <49.9 <49.9 MS %Recovery 77	Qualifier U U MS	Added 1000 1000 <u>Limits</u> 70 - 130	<b>Result</b> 844.7		mg/Kg	<u>D</u>	<b>%Rec</b> 83	Prep 1 Prep %Rec Limits 70 - 130	Type: To	tal/NA
Matrix: Solid Analysis Batch: 23813 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane	Sample Result <49.9 <49.9 MS %Recovery 77 81	Qualifier U U MS	Added 1000 1000 <u>Limits</u> 70 - 130	<b>Result</b> 844.7		mg/Kg		<b>%Rec</b> 83 75	Prep 1 Prep %Rec Limits 70 - 130	Type: To Batch:	tal/NA 23823
Matrix: Solid Analysis Batch: 23813 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl	Sample Result <49.9 <49.9 MS %Recovery 77 81	Qualifier U U MS	Added 1000 1000 <u>Limits</u> 70 - 130	<b>Result</b> 844.7		mg/Kg		<b>%Rec</b> 83 75	Prep 1 Prep %Rec Limits 70 - 130 70 - 130 70 - 130	Type: To Batch:	licate
Matrix: Solid Analysis Batch: 23813 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-13895-A-	Sample Result <49.9 <49.9 MS %Recovery 77 81	Qualifier U U MS	Added 1000 1000 <u>Limits</u> 70 - 130	<b>Result</b> 844.7		mg/Kg		<b>%Rec</b> 83 75	Prep 1 Prep %Rec Limits 70 - 130 70 - 130 70 - 130	Type: To Batch:	licate
Matrix: Solid Analysis Batch: 23813 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-13895-A- Matrix: Solid Analysis Batch: 23813	Sample Result <49.9 <49.9 MS %Recovery 77 81 1-C MSD Sample	Qualifier U MS Qualifier Sample	Added 1000 1000 <u>Limits</u> 70 - 130 70 - 130 Spike	Result 844.7 779.8 MSD	Qualifier	mg/Kg mg/Kg CI	ient Sa	%Rec 83 75	Prep 1 Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 9: Matrix Sp Prep 1 Prep 1 Prep 2 %Rec	Dike Dup Batch:	licate tal/NA 23823 23823 23823 RPD
Matrix: Solid Analysis Batch: 23813 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-13895-A- Matrix: Solid Analysis Batch: 23813 Analyte	Sample Result <49.9 <49.9 MS %Recovery 77 81 1-C MSD Sample Result	Qualifier U MS Qualifier Sample Qualifier	Added 1000 1000 <u>Limits</u> 70 - 130 70 - 130 70 - 130	Result 844.7 779.8 MSD Result	Qualifier	mg/Kg mg/Kg Cl		%Rec 83 75 ample ID	Prep 1 Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 9: Matrix Sp Prep 1 Prep %Rec Limits	Dike Dup Batch: Dike Dup Type: To Batch: 	licate tal/NA 23823 23823 23823 RPD Limit
Matrix: Solid Analysis Batch: 23813 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-13895-A- Matrix: Solid Analysis Batch: 23813 Analyte Gasoline Range Organics (GRO)-C6-C10	Sample Result <49.9 <49.9 MS %Recovery 77 81 1-C MSD Sample Result <49.9	Qualifier U MS Qualifier Qualifier U	Added 1000 1000 <i>Limits</i> 70 - 130 70 - 130 70 - 130 998	Result           844.7           779.8           MSD           Result           818.6	Qualifier	mg/Kg mg/Kg Cl Mg/Kg	ient Sa	%Rec           83           75           ample ID           %Rec           80	Prep 1 Prep %Rec Limits 70 - 130 70 - 130 70 - 130 9: Matrix Sp Prep 1 Prep %Rec Limits 70 - 130	Dike Dup Dike Dup Type: Tor Batch: RPD 3	elicate tal/NA 23823 23823 23823 RPD Limit 20
Matrix: Solid Analysis Batch: 23813 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-13895-A- Matrix: Solid Analysis Batch: 23813 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Sample Result <49.9 <49.9 MS %Recovery 77 81 1-C MSD Sample Result	Qualifier U MS Qualifier Qualifier U	Added 1000 1000 <u>Limits</u> 70 - 130 70 - 130 70 - 130	Result 844.7 779.8 MSD Result	Qualifier	mg/Kg mg/Kg Cl	ient Sa	%Rec 83 75 ample ID	Prep 1 Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 9: Matrix Sp Prep 1 Prep %Rec Limits	Dike Dup Batch: Dike Dup Type: To Batch: 	elicate tal/NA 23823 23823 RPD Limit 20
Matrix: Solid Analysis Batch: 23813 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-13895-A- Matrix: Solid Analysis Batch: 23813 Analyte Gasoline Range Organics	Sample Result <49.9 <49.9 MS %Recovery 77 81 1-C MSD Sample Result <49.9	Qualifier U MS Qualifier Qualifier U U	Added 1000 1000 <i>Limits</i> 70 - 130 70 - 130 70 - 130 998	Result           844.7           779.8           MSD           Result           818.6	Qualifier	mg/Kg mg/Kg Cl Mg/Kg	ient Sa	%Rec           83           75           ample ID           %Rec           80	Prep 1 Prep %Rec Limits 70 - 130 70 - 130 70 - 130 9: Matrix Sp Prep 1 Prep %Rec Limits 70 - 130	Dike Dup Dike Dup Type: Tor Batch: RPD 3	licate
Matrix: Solid Analysis Batch: 23813 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-13895-A- Matrix: Solid Analysis Batch: 23813 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Sample           Result           <49.9	Qualifier U MS Qualifier Qualifier U U MSD	Added 1000 1000 <i>Limits</i> 70 - 130 70 - 130 70 - 130 998	Result           844.7           779.8           MSD           Result           818.6	Qualifier	mg/Kg mg/Kg Cl Mg/Kg	ient Sa	%Rec           83           75           ample ID           %Rec           80	Prep 1 Prep %Rec Limits 70 - 130 70 - 130 70 - 130 9: Matrix Sp Prep 1 Prep %Rec Limits 70 - 130	Dike Dup Dike Dup Type: Tor Batch: RPD 3	elicate tal/NA 23823 23823 23823 RPD Limit 20

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81

o-Terphenyl

70 - 130

Client: Ensolum

Project/Site: PLU 15 TWR

# **QC Sample Results**

Job ID: 890-2199-1 SDG: 03E1558017

# Method: 300.0 - Anions, Ion Chromatography

-											
Lab Sample ID: MB 880-23840	)/1-A							Client S	Sample ID:		
Matrix: Solid									Prep	Type: S	oluble
Analysis Batch: 23965		ND ND									
Analyte	B	MB MB sult Qualifier		RL	Unit		D	Bronorod	Analy		Dil Fac
Chloride				5.00	0mit mg/K		<u> </u>	Prepared	Analyz		
-		5.00 0		5.00	iiig/ix	9			04/21/22	10.23	i
Lab Sample ID: LCS 880-2384	0/2-A						Clie	ent Sample	e ID: Lab C	ontrol S	ample
Matrix: Solid									Prep	Type: S	oluble
Analysis Batch: 23965											
			Spike	LCS	LCS				%Rec		
Analyte			Added	Result	Qualifier	Unit		D %Rec	Limits		
Chloride			250	255.9		mg/Kg		102	90 - 110		
Lab Sample ID: LCSD 880-238	840/3-4					CI	iont S	amnle ID:	Lab Contro	ol Samol	
Matrix: Solid						0.		umpic ib.		Type: S	
Analysis Batch: 23965									1100	1990.0	
· · · · · · · · · · · · · · · · · · ·			Spike	LCSD	LCSD				%Rec		RPD
Analyta			Added	Result	Qualifier	Unit		D %Rec	Limits	RPD	Limit
Analyte											
Chloride			250	256.1		mg/Kg		102	90 - 110	0	20
Chloride	21-B MS		250	256.1		mg/Kg		102		-	
Lab Sample ID: 880-13905-A-2	21-B MS		250	256.1		mg/Kg		102	Sample ID	): Matrix	Spike
Chloride Lab Sample ID: 880-13905-A-2 Matrix: Solid	21-B MS		250	256.1		mg/Kg		102	Sample ID	-	Spike
Chloride Lab Sample ID: 880-13905-A-2	21-B MS Sample	Sample	250 Spike		MS	mg/Kg		102	Sample ID	): Matrix	Spike
Chloride Lab Sample ID: 880-13905-A-2 Matrix: Solid	Sample	Sample Qualifier		MS	MS Qualifier	mg/Kg		102	Sample ID Prep	): Matrix	Spike
Chloride Lab Sample ID: 880-13905-A-2 Matrix: Solid Analysis Batch: 23965	Sample	•	Spike	MS				Client	Sample ID Prep %Rec	): Matrix	Spike
Chloride Lab Sample ID: 880-13905-A-2 Matrix: Solid Analysis Batch: 23965 Analyte Chloride	Sample Result 7.76	•	Spike Added	MS Result		Unit mg/Kg		102 Client D%Rec102	Sample ID Prep %Rec Limits 90 - 110	): Matrix Type: S	Spike oluble
Chloride Lab Sample ID: 880-13905-A-2 Matrix: Solid Analysis Batch: 23965 Analyte Chloride Lab Sample ID: 880-13905-A-2	Sample Result 7.76	•	Spike Added	MS Result		Unit mg/Kg		102 Client D%Rec102	Sample ID Prep %Rec Limits 90 - 110 D: Matrix Sp	9: Matrix Type: S	Spike oluble
Chloride Lab Sample ID: 880-13905-A-2 Matrix: Solid Analysis Batch: 23965 Analyte Chloride Lab Sample ID: 880-13905-A-2 Matrix: Solid	Sample Result 7.76	•	Spike Added	MS Result		Unit mg/Kg		102 Client D%Rec102	Sample ID Prep %Rec Limits 90 - 110 D: Matrix Sp	): Matrix Type: S	Spike oluble
Chloride Lab Sample ID: 880-13905-A-2 Matrix: Solid Analysis Batch: 23965 Analyte Chloride Lab Sample ID: 880-13905-A-2	Sample Result 7.76	Qualifier	Spike Added	MS Result 259.5		Unit mg/Kg		102 Client D%Rec102	Sample ID Prep %Rec Limits 90 - 110 D: Matrix Sp	9: Matrix Type: S	Spike oluble
Chloride Lab Sample ID: 880-13905-A-2 Matrix: Solid Analysis Batch: 23965 Analyte Chloride Lab Sample ID: 880-13905-A-2 Matrix: Solid	Sample <u>Result</u> 7.76 21-C MSD Sample	Qualifier	Spike Added 248	MS Result 259.5 MSD	Qualifier	Unit mg/Kg	Client	102 Client D%Rec102	Sample ID Prep %Rec Limits 90 - 110 D: Matrix Sp Prep	9: Matrix Type: S	Spike oluble blicate

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# **QC Association Summary**

Client: Ensolum Project/Site: PLU 15 TWR

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Job ID: 890-2199-1 SDG: 03E1558017

# **GC VOA**

### Prep Batch: 23967

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2199-1	SS03	Total/NA	Solid	5035	
890-2199-2	SS04	Total/NA	Solid	5035	
MB 880-23967/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-23967/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-23967/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-13850-A-27-C MS	Matrix Spike	Total/NA	Solid	5035	
880-13850-A-27-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

### Analysis Batch: 24109

000-13030-A-27-D M3D	Matin Spike Dupilcate	Total/NA	Solid	5055		0
Analysis Batch: 24109						Ō
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	9
890-2199-1	SS03	Total/NA	Solid	8021B	23967	
890-2199-2	SS04	Total/NA	Solid	8021B	23967	
MB 880-23967/5-A	Method Blank	Total/NA	Solid	8021B	23967	
LCS 880-23967/1-A	Lab Control Sample	Total/NA	Solid	8021B	23967	
LCSD 880-23967/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	23967	
880-13850-A-27-C MS	Matrix Spike	Total/NA	Solid	8021B	23967	
880-13850-A-27-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	23967	
Analysis Batch: 24209						13

### Analysis Batch: 24209

Lab Sample ID	Client Sample ID	Prep Туре	Matrix	Method	Prep Batch
890-2199-1	SS03	Total/NA	Solid	Total BTEX	
890-2199-2	SS04	Total/NA	Solid	Total BTEX	

### GC Semi VOA

### Analysis Batch: 23813

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2199-1	SS03	Total/NA	Solid	8015B NM	23823
890-2199-2	SS04	Total/NA	Solid	8015B NM	23823
MB 880-23823/1-A	Method Blank	Total/NA	Solid	8015B NM	23823
LCS 880-23823/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	23823
LCSD 880-23823/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	23823
880-13895-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	23823
880-13895-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	23823

### Prep Batch: 23823

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2199-1	SS03	Total/NA	Solid	8015NM Prep	
890-2199-2	SS04	Total/NA	Solid	8015NM Prep	
MB 880-23823/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-23823/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-23823/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-13895-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-13895-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

### Analysis Batch: 23926

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2199-1	SS03	Total/NA	Solid	8015 NM	
890-2199-2	SS04	Total/NA	Solid	8015 NM	

# **QC** Association Summary

Client: Ensolum Project/Site: PLU 15 TWR

### Job ID: 890-2199-1 SDG: 03E1558017

HPLC/IC

### Leach Batch: 23840

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2199-1	SS03	Soluble	Solid	DI Leach	
890-2199-2	SS04	Soluble	Solid	DI Leach	
MB 880-23840/1-A	Method Blank	Soluble	Solid	DI Leach	
_CS 880-23840/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-23840/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-13905-A-21-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-13905-A-21-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

### Analysis Batch: 23965

ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
390-2199-1	SS03	Soluble	Solid	DI Leach	
390-2199-2	SS04	Soluble	Solid	DI Leach	
MB 880-23840/1-A	Method Blank	Soluble	Solid	DI Leach	
_CS 880-23840/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
_CSD 880-23840/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
380-13905-A-21-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-13905-A-21-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
nalysis Batch: 23965					
	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
Lab Sample ID 390-2199-1	SS03	Soluble	Solid	300.0	23840
Lab Sample ID 390-2199-1 390-2199-2	SS03 SS04	Soluble	Solid Solid	300.0 300.0	23840 23840
Lab Sample ID 390-2199-1 390-2199-2 MB 880-23840/1-A	SS03 SS04 Method Blank	Soluble Soluble Soluble	Solid Solid Solid	300.0 300.0 300.0	23840 23840 23840 23840
Lab Sample ID 390-2199-1 390-2199-2 MB 880-23840/1-A _CS 880-23840/2-A	SS03 SS04 Method Blank Lab Control Sample	Soluble Soluble Soluble Soluble	Solid Solid Solid Solid	300.0 300.0 300.0 300.0	23840 23840 23840 23840 23840
Lab Sample ID 390-2199-1 390-2199-2 MB 880-23840/1-A _CS 880-23840/2-A _CSD 880-23840/3-A	SS03 SS04 Method Blank Lab Control Sample Lab Control Sample Dup	Soluble Soluble Soluble Soluble Soluble	Solid Solid Solid Solid Solid Solid	300.0 300.0 300.0 300.0 300.0 300.0	23840 23840 23840 23840 23840 23840
Lab Sample ID 390-2199-1 390-2199-2 MB 880-23840/1-A _CS 880-23840/2-A	SS03 SS04 Method Blank Lab Control Sample	Soluble Soluble Soluble Soluble	Solid Solid Solid Solid	300.0 300.0 300.0 300.0	23840 23840 23840 23840 23840

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## Lab Chronicle

Client: Ensolum Project/Site: PLU 15 TWR

### **Client Sample ID: SS03** Date Collected: 04/18/22 12:20

Date Received: 04/19/22 12:10

	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	23967	04/21/22 16:00	MR	XEN MID
Total/NA	Analysis	8021B		1			24109	04/25/22 04:01	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			24209	04/25/22 16:29	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23926	04/21/22 10:45	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	23823	04/20/22 09:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			23813	04/20/22 15:17	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	23840	04/20/22 12:38	SC	XEN MID
Soluble	Analysis	300.0		1			23965	04/21/22 21:35	СН	XEN MID

# **Client Sample ID: SS04**

# Date Collected: 04/18/22 12:30

Date Received: 04/19/22 12:10

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	23967	04/21/22 16:00	MR	XEN MID
Total/NA	Analysis	8021B		1			24109	04/25/22 04:22	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			24209	04/25/22 16:29	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23926	04/21/22 10:45	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	23823	04/20/22 09:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			23813	04/20/22 15:59	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	23840	04/20/22 12:38	SC	XEN MID
Soluble	Analysis	300.0		1			23965	04/21/22 22:01	СН	XEN MID

### Laboratory References:

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

Job ID: 890-2199-1 SDG: 03E1558017

# Lab Sample ID: 890-2199-1

Matrix: Solid

### Lab Sample ID: 890-2199-2 Matrix: Solid

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Eurofins Carlsbad

Accreditation/Certification Summary

Client: Ensolum Project/Site: PLU 15 TWR

Laboratory: Eurofins Midland

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

uthority	Pi	rogram	Identification Number	Expiration Date
exas	N	ELAP	T104704400-21-22	06-30-22
The following analytes	are included in this report, but	ut the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes for v
• ,	ffor cortification		, , , ,	
the agency does not o				
• ,	ffer certification. Prep Method	Matrix	Analyte	
the agency does not o		Matrix Solid	Analyte Total TPH	

Job ID: 890-2199-1 SDG: 03E1558017

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Client: Ensolum Project/Site: PLU 15 TWR Job ID: 890-2199-1 SDG: 03E1558017

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

### Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions. SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

### Laboratory References:

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

Client: Ensolum Project/Site: PLU 15 TWR Job ID: 890-2199-1 SDG: 03E1558017

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2199-1	SS03	Solid	04/18/22 12:20	04/19/22 12:10	0.5
890-2199-2	SS04	Solid	04/18/22 12:30	04/19/22 12:10	0.5

Released to Imaging: 11/22/2022 11:30:50 AM

🗧 eurofins	fins				Ho Midla	and, TX (	hair X (281) 2 432) 704	Chain of Custody Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334	Cus Dallas,	<b>tody</b> 1X (214) 9 ), TX (210	02-0300 ) 509-333	4			Wor	Work Order No:	er No				
					EL	Paso, T) bbs, NM	< (915) 51 (575) 393	EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	_ubbock, arlsbad,	TX (806) VM (575)	794-1296 988-3199										)
Project Manager:	Ben Belill			B	Bill to: (if different)	ent)	Adrian	Adrian Baker							8	Work Order (	Order (	Work Order Comments	its	9	
	Ensolum, LLC			0	Company Name:	ne:	XTOE	XTO Energy, Inc.	ō				Prog	ram: US	T/PST	PRP	Brow	Program: UST/PST 🗌 PRP 🔤 Brownfields 🗌 RRC	RRC	Superfund	und
	2351 W Northwest Hwy Suite 1203A	vest Hwy Su	lite 1203A	A	Address:		3104 E	3104 E. Green Street	Street				State	State of Project:	ect:						
City, State ZIP:	Dallas, TX 75220	20		Ω	City, State ZIP:		Carlsb	Carisbad, NM 88220	38220				Repo	rting: Le		Level II	D PS		] TRRP	Reporting: Level II CLevel III PST/UST CTRRP Level IV	
	9898540852			Email:									Delive	Deliverables: EDD	EDD		ADaPT		Other		
Project Name:	PLU	PLU 15 TWR	_	Turn Around	round						ANALY	SIS REQUEST	QUEST					Pr	eserva	Preservative Codes	Š
Project Number:	L108551350	L108		Routine [	Rush	Pres. Code												None: NO	ō	DI Water: H <sub>2</sub> O	T H <sub>2</sub> O
Project Location:	EDDY CO	EDDY COUNTY, NM		Due Date:														Cool: Cool	0	MeOH: Me	Me
Sampler's Name:	Ber	Ben Belill		starts the d	TAT starts the day received by	Ÿ			+			+			+	+		HCL: HC	0	HNO3: HN	Ż
PO#	NAPP2:	NAPP2207746719	the	lab, if receiv	the lab, if received by 4:30pm							-	-					H2S04: H2	2	NaOH: Na	Za
SAMPLE RECEIPT	$\vdash$		Yes No W	Wet ice: (	Yes No	nete	.0)		+								-	H <sub>3</sub> PO <sub>4</sub> : HP	툭		
Samples Received Intact:	act:	No	Thermometer ID:	Ц	MM OD		300											NaHSO	NaHSO4: NABIS	J	
Cooler Custody Seals:	Yes	NA NA	Correction Factor:	- -	1.00	P	EPA	+							H			14a2020	7a AcotataNiaOH: 7a		
Total Containers:	1.02 1.02	3	Corrected Temperature:	erature:		_1	DES	_			890-2199	) Chain (	Chain of Custody	LQ				NaOH+,	Ascorbic	NaOH+Ascorbic Acid: SAPC	PC
Sample Identification	tification	Matrix Sar	Date 1 Sampled Sa		Depth Grab/ Comp	p/ # of Cont	CHLOR	TPH (80	BTEX (8									S	Imple (	Sample Comments	S
5503	1655	11, S		$ \rightarrow $	0.51 6	-	R					$\left  - \right $				$\left  - \right $		Cc:	1202	100111202.50	
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Total 200.7 / 6010	10 200.8 / 6020:	020:	<b>BRCRA</b>	RA 13PPM	M Texas 11 Al	11 2	Sb As	As Ba Be	B Cd	Ca Cr	8	Cu Fe Pt	Pb Mg Mn Mo		N. K	Se Ag	SiO <sub>2</sub> Na	la Sr Tl		V Zn	
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U Hg: 163' Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofine Xenco. Its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofine 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 be locument and relingu o will be liable only to	analyzed	T( amples constitute amples and sha	CLP / SPL as a valid pur all not assum	TCLP / SPLP 6010: 8RCRA iutes a valid purchase order from client shall not assume any responsibility for	om client	Sb As company	Sb As Ba Be Cd Cr Co Cu Pb company to Eurofina Xenco, its affiliates and su my losses or expenses incurred by the client if	e Cd ( ses incur	or Co C Its affiliate red by the	s and subc	Mn Mo Ni Se Ag Ti U contractors. It assigns standard uch losses are due to circumstan	8. It assig	Ag TI	rd terms	and conc yond the	: 1631 Ittions control	Hg: 1631 / 245.1 / 7470 conditions the control	1111~	17471	
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# Received by OCD: 8/10/2022 10:53:56 AM



Page 54 of 255

	Custody Seals Intact: ∆ Yes ∆ No	Relinquished by	Relinquished by	Keinguusped by	Empty Kit Relinquished by	Deliverable Requested 1 II III IV Other (specify)	Possible Hazard Identification Unconfirmed	Note: Since laboratory accreditations are subject to change Eurofins Environment Testing South Central, LLC places the ownership of method analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tesis/matrix being analyzed the samples must be shipped back to the Eurofins Environment Testing South Central LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Central LLC attention immediately. If all requested accreditations are current to date return the signed Chain of Custody attesting to said complicance to Eurofins Environment Testing South Central LLC attention immediately. If all requested accreditations are current to date return the signed Chain of Custody attesting to said complicance to Eurofins Environment Testing South Central LLC.					SS04 (890-2199-2)	SS03 (890-2199-1)		Sample Identification - Chent in (Fab in)	Sample Identification - Client ID (1 ab ID)	Site	Project Name PLU 15 TWR	Email	Phone: 432-704-5440(Tel)	State Zip TX 79701	City Midland	1211 W Florida Ave	Eurofins Environment Testing South Centr	Shipping/Receiving Company	Client Information (Sub Contract Lab)	Phone: 575-988-3199 Fax: 575-988-3199	1089 N Canal St	Eurofins Carlsbad	2 3 4 5 7 8 9
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14

Job Number: 890-2199-1 SDG Number: 03E1558017

List Source: Eurofins Carlsbad

### Login Sample Receipt Checklist

Client: Ensolum

<6mm (1/4").

Login Number: 2199 List Number: 1 Creator: Clifton, Cloe

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

N/A

Containers requiring zero headspace have no headspace or bubble is

14

Job Number: 890-2199-1 SDG Number: 03E1558017

List Source: Eurofins Midland

List Creation: 04/20/22 10:37 AM

## Login Sample Receipt Checklist

Client: Ensolum

Login Number: 2199 List Number: 2 Creator: Teel, Brianna

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

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

Received by OCD: 8/10/2022 10:53:56 AM

# 🛟 eurofins

# Environment Testing America

# **ANALYTICAL REPORT**

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

# Laboratory Job ID: 890-2200-1

Laboratory Sample Delivery Group: 03E1558017 Client Project/Site: PLU 15 TWR

# For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

RAMER

Authorized for release by: 4/25/2022 4:03:49 PM

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

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

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

LINKS Review your project results through TOTOLACCESS Have a Question? Ask The Expert Visit us at: vww.eurofinsus.com/Env Released to Imaging: 11/22/2022 11:30:50 AM

SDG: 03E1558017

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	Definitions/Glossary		
Client: Ensolum			
Project/Site: PL	U 15 TWR SDG: 03E155	8017	
Qualifiers			
GC VOA			
Qualifier	Qualifier Description		
F1	MS and/or MSD recovery exceeds control limits.		
S1+	Surrogate recovery exceeds control limits, high biased.		
U	Indicates the analyte was analyzed for but not detected.		
	······································		
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		
F1	MS and/or MSD recovery exceeds control limits.		
U	Indicates the analyte was analyzed for but not detected.		
Glossary			
Abbreviation	These commonly used abbreviations may or may not be present in this report.		
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis		
%R	Percent Recovery		
CFL	Contains Free Liquid		
CFU	Colony Forming Unit		
CNF	Contains No Free Liquid		
DER	Duplicate Error Ratio (normalized absolute difference)		
Dil Fac	Dilution Factor		
DL	Detection Limit (DoD/DOE)		
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample		
DLC	Decision Level Concentration (Radiochemistry)		
EDL	Estimated Detection Limit (Dioxin)		
LOD	Limit of Detection (DoD/DOE)		
LOQ	Limit of Quantitation (DoD/DOE)		
MCL	EPA recommended "Maximum Contaminant Level"		
MDA	Minimum Detectable Activity (Radiochemistry)		
MDC	Minimum Detectable Concentration (Radiochemistry)		
MDL	Method Detection Limit		
ML	Minimum Level (Dioxin)		
MPN	Most Probable Number		
MQL	Method Quantitation Limit		
NC	Not Calculated		
ND	Not Detected at the reporting limit (or MDL or EDL if shown)		
NEG	Negative / Absent		
POS	Positive / Present		
PQL	Practical Quantitation Limit		
PRES	Presumptive		
QC	Quality Control		
RER	Relative Error Ratio (Radiochemistry)		
RL	Reporting Limit or Requested Limit (Radiochemistry)		
RPD	Relative Percent Difference, a measure of the relative difference between two points		
TEF	Toxicity Equivalent Factor (Dioxin)		
TEQ	Toxicity Equivalent Quotient (Dioxin)		

TNTC Too Numerous To Count

5

### Job ID: 890-2200-1 SDG: 03E1558017

### Job ID: 890-2200-1

Project/Site: PLU 15 TWR

Client: Ensolum

### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-2200-1

#### Receipt

The samples were received on 4/19/2022 12:10 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was  $1.4^{\circ}$ C

### GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-24111 and analytical batch 880-24110 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

### GC Semi VOA

Method 8015MOD\_NM: Surrogate recovery for the following samples were outside control limits: SS01 (890-2200-1) and SS02 (890-2200-2). Evidence of matrix interferences is not obvious.

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

#### HPLC/IC

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

Job ID: 890-2200-1 SDG: 03E1558017

### **Client Sample ID: SS01**

Project/Site: PLU 15 TWR

Date Collected: 04/18/22 12:00 Date Received: 04/19/22 12:10

Client: Ensolum

### Lab Sample ID: 890-2200-1 Matrix: Solid

5

Method: 8021B - Volatile Organic	Compounds (	(GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.101	U	0.101	mg/Kg		04/21/22 16:00	04/25/22 05:03	5
Toluene	3.92		0.101	mg/Kg		04/21/22 16:00	04/25/22 05:03	50
Ethylbenzene	3.89		0.101	mg/Kg		04/21/22 16:00	04/25/22 05:03	50
m-Xylene & p-Xylene	23.5		0.202	mg/Kg		04/21/22 16:00	04/25/22 05:03	50
o-Xylene	6.12		0.101	mg/Kg		04/21/22 16:00	04/25/22 05:03	50
Xylenes, Total	29.6		0.202	mg/Kg		04/21/22 16:00	04/25/22 05:03	50
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	126		70 - 130			04/21/22 16:00	04/25/22 05:03	50
1,4-Difluorobenzene (Surr)	94		70 - 130			04/21/22 16:00	04/25/22 05:03	50
Method: Total BTEX - Total BTEX	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	37.4		0.202	mg/Kg			04/25/22 12:21	
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	8580		50.0	mg/Kg			04/21/22 10:45	
Method: 8015B NM - Diesel Rang								
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	1200		50.0	mg/Kg		04/20/22 09:58	04/20/22 17:23	
Diesel Range Organics (Over C10-C28)	7380		50.0	mg/Kg		04/20/22 09:58	04/20/22 17:23	
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/20/22 09:58	04/20/22 17:23	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	116		70 - 130			04/20/22 09:58	04/20/22 17:23	
o-Terphenyl	147	S1+	70 - 130			04/20/22 09:58	04/20/22 17:23	
Method: 300.0 - Anions, Ion Chro								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	578		25.3	mg/Kg			04/21/22 22:10	ł
Client Sample ID: SS02						Lab San	nple ID: 890-	
Date Collected: 04/18/22 12:10							Matri	x: Solic
Date Received: 04/19/22 12:10 Sample Depth: 0.5								
_								
Method: 8021B - Volatile Organic Analyte		(GC) Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	0.0237		0.00200	mg/Kg		04/21/22 16:00	04/25/22 04:42	
Toluene	4.06		0.201	mg/Kg		04/24/22 22:21	04/25/22 10:59	10
Ethylbenzene	3.68		0.201	mg/Kg		04/24/22 22:21	04/25/22 10:59	10
m-Xylene & p-Xylene	29.4		0.402	mg/Kg		04/24/22 22:21	04/25/22 10:59	10
o-Xylene	7.78		0.201	mg/Kg		04/24/22 22:21	04/25/22 10:59	10
Xylenes, Total	37.2		0.402	mg/Kg		04/24/22 22:21	04/25/22 10:59	10
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
A Bromofluorobenzene (Surr)			70 120			04/21/22 16:00	04/25/22 04:42	Birra

4-Bromofluorobenzene (Surr)

Eurofins Carlsbad

04/21/22 16:00 04/25/22 04:42

Released to Imaging: 11/22/2022 11:30:50 AM

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4/25/2022

1

# **Client Sample Results**

Job ID: 890-2200-1 SDG: 03E1558017

# Lab Sample ID: 890-2200-2

Matrix: Solid

5

Date Collected: 04/18/22 12:10 Date Received: 04/19/22 12:10

Client Sample ID: SS02

Project/Site: PLU 15 TWR

Sample Depth: 0.5

Client: Ensolum

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1,4-Difluorobenzene (Surr)	99		70 - 130			04/21/22 16:00	04/25/22 04:42	
Method: Total BTEX - Total BTE	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	44.9		0.402	mg/Kg			04/25/22 12:21	
Method: 8015 NM - Diesel Range	e Organics (DR	O) (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	7700		49.9	mg/Kg			04/21/22 10:45	
Gasoline Range Organics	1150		49.9	mg/Kg		04/20/22 09:58	04/20/22 17:45	
(GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	<b>6550</b> <49.9	U	49.9 49.9	mg/Kg mg/Kg		04/20/22 09:58 04/20/22 09:58	04/20/22 17:45 04/20/22 17:45 04/20/22 17:45	
Diesel Range Organics (Over C10-C28)				0.0		04/20/22 09:58	04/20/22 17:45	Dil Fa
Diesel Range Organics (Over C10-C28) DII Range Organics (Over C28-C36) Surrogate	<49.9		49.9	0.0		04/20/22 09:58 04/20/22 09:58	04/20/22 17:45 04/20/22 17:45	
Diesel Range Organics (Over C10-C28) DII Range Organics (Over C28-C36) Surrogate I-Chlorooctane	<49.9 <u>%Recovery</u> 115		49.9 Limits	0.0		04/20/22 09:58 04/20/22 09:58 <b>Prepared</b>	04/20/22 17:45 04/20/22 17:45 <b>Analyzed</b>	
Diesel Range Organics (Over C10-C28) DII Range Organics (Over C28-C36) Surrogate I-Chlorooctane D-Terphenyl	<49.9 <u>%Recovery</u> 115 134	Qualifier S1+	49.9 	0.0		04/20/22 09:58 04/20/22 09:58 <b>Prepared</b> 04/20/22 09:58	04/20/22 17:45 04/20/22 17:45 <u>Analyzed</u> 04/20/22 17:45	
Diesel Range Organics (Over C10-C28) DII Range Organics (Over C28-C36)	<49.9 %Recovery 115 134 romatography -	Qualifier S1+	49.9 	0.0	D	04/20/22 09:58 04/20/22 09:58 <b>Prepared</b> 04/20/22 09:58	04/20/22 17:45 04/20/22 17:45 <u>Analyzed</u> 04/20/22 17:45	

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

Percent Surrogate Recovery (Acceptance Limits) BFB1 DFBZ1 Client Sample ID (70-130) (70-130) Lab Sample ID 880-13850-A-1-H MS Matrix Spike 95 102 880-13850-A-1-I MSD Matrix Spike Duplicate 97 99 880-13850-A-27-C MS Matrix Spike 109 111 880-13850-A-27-D MSD Matrix Spike Duplicate 79 82 890-2200-1 SS01 126 94 SS02 890-2200-2 403 S1+ 99 LCS 880-23967/1-A Lab Control Sample 101 93 LCS 880-24111/1-A 97 95 Lab Control Sample LCSD 880-23967/2-A Lab Control Sample Dup 102 92 LCSD 880-24111/2-A Lab Control Sample Dup 99 99 MB 880-23967/5-A Method Blank 105 88 MB 880-24111/5-A Method Blank 99 96 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)
880-13895-A-1-B MS	Matrix Spike	77	81
880-13895-A-1-C MSD	Matrix Spike Duplicate	78	81
890-2200-1	SS01	116	147 S1+
890-2200-2	SS02	115	134 S1+

Surrogate	Legend

- 1CO = 1-Chlorooctane
- OTPH = o-Terphenyl

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

1CO2	OTPH2
(70-130)	(70-130)
92	108
104	125
84	100
_	(70-130) 92 104

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

6

Prep Type: Total/NA

Prep Type: Total/NA

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

Lab Sample ID: MB 880-23967/5 Matrix: Solid Analysis Batch: 24109	A					Client Sa	mple ID: Metho Prep Type: 1 Prep Batch	Total/NA
		MB			_			
Analyte	Result	Qualifier	RL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/21/22 16:00	04/25/22 01:58	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/21/22 16:00	04/25/22 01:58	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/21/22 16:00	04/25/22 01:58	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/21/22 16:00	04/25/22 01:58	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/21/22 16:00	04/25/22 01:58	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/21/22 16:00	04/25/22 01:58	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130			04/21/22 16:00	04/25/22 01:58	1
1,4-Difluorobenzene (Surr)	88		70 - 130			04/21/22 16:00	04/25/22 01:58	1

### Lab Sample ID: LCS 880-23967/1-A Matrix: Solid

### Analysis Batch: 24109

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.08769		mg/Kg		88	70 - 130	
Toluene	0.100	0.09042		mg/Kg		90	70 - 130	
Ethylbenzene	0.100	0.09356		mg/Kg		94	70 - 130	
m-Xylene & p-Xylene	0.200	0.1927		mg/Kg		96	70 - 130	
o-Xylene	0.100	0.09654		mg/Kg		97	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	93		70 - 130

### Lab Sample ID: LCSD 880-23967/2-A

#### Matrix: Solid

Analysis Batch: 24109							Prep	Batch:	23967
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08077		mg/Kg		81	70 - 130	8	35
Toluene	0.100	0.08128		mg/Kg		81	70 - 130	11	35
Ethylbenzene	0.100	0.08200		mg/Kg		82	70 - 130	13	35
m-Xylene & p-Xylene	0.200	0.1675		mg/Kg		84	70 - 130	14	35
o-Xylene	0.100	0.08663		mg/Kg		87	70 - 130	11	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

# Lab Sample ID: 880-13850-A-27-C MS

#### Matrix: Solid aluaia Ratahi 24400

Analysis Batch: 24109									Prep	Batch: 23967
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U	0.0998	0.1069		mg/Kg		107	70 - 130	
Toluene	<0.00200	U F1	0.0998	0.1327	F1	mg/Kg		133	70 - 130	

**Eurofins Carlsbad** 

Prep Type: Total/NA

**Client Sample ID: Matrix Spike** 

# **Client Sample ID: Method Blank**

Job ID: 890-2200-1 SDG: 03E1558017

Prep Batch: 23967

Prep Type: Total/NA

Client Sample ID: Lab Control Sample Dup

MS MS

0.1129

0.2220

0.1165

**Result Qualifier** 

Unit

mg/Kg

mg/Kg

mg/Kg

D

111

117

Spike

Added

0.0998

0.200

0.0998

Limits

70 - 130

70 - 130

Lab Sample ID: 880-13850-A-27-C MS

Lab Sample ID: 880-13850-A-27-D MSD

Project/Site: PLU 15 TWR

Analysis Batch: 24109

Matrix: Solid

Analyte

o-Xylene

Surrogate

Ethylbenzene

m-Xylene & p-Xylene

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

Sample Sample

<0.00200

%Recovery

<0.00401 U

<0.00200 U

109

111

Result Qualifier

U

MS MS

Qualifier

Prep Type: Total/NA

Prep Batch: 23967

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

**Client Sample ID: Method Blank** 

04/25/22 01:09

04/25/22 01:09

**Client Sample ID: Lab Control Sample** 

04/24/22 22:21

04/24/22 22:21

Prep Type: Total/NA

Prep Batch: 24111

### Matrix: Solid Analysis Batch: 24109

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

Analysis Batch: 24109									Prep	Batch:	23967	
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	<0.00200	U	0.0996	0.08759		mg/Kg		88	70 - 130	20	35	
Toluene	<0.00200	U F1	0.0996	0.1108		mg/Kg		111	70 - 130	18	35	ī
Ethylbenzene	<0.00200	U	0.0996	0.09973		mg/Kg		100	70 - 130	12	35	
m-Xylene & p-Xylene	<0.00401	U	0.199	0.1967		mg/Kg		99	70 - 130	12	35	ī
o-Xylene	<0.00200	U	0.0996	0.09755		mg/Kg		98	70 - 130	18	35	

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	79		70 - 130
1,4-Difluorobenzene (Surr)	82		70 - 130

### Lab Sample ID: MB 880-24111/5-A Matrix: Solid Analysis Batch: 24110

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/24/22 22:21	04/25/22 01:09	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/24/22 22:21	04/25/22 01:09	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/24/22 22:21	04/25/22 01:09	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/24/22 22:21	04/25/22 01:09	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/24/22 22:21	04/25/22 01:09	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/24/22 22:21	04/25/22 01:09	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

4-Bromofluorobenzene (Surr)	99	70 - 130
1,4-Difluorobenzene (Surr)	96	70 - 130

### Lab Sample ID: LCS 880-24111/1-A Matrix: Solid Analysis Batch: 24110

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.07124		mg/Kg		71	70 - 130	
Toluene	0.100	0.09089		mg/Kg		91	70 - 130	
Ethylbenzene	0.100	0.09549		mg/Kg		95	70 - 130	
m-Xylene & p-Xylene	0.200	0.1938		mg/Kg		97	70 - 130	

Eurofins Carlsbad

Prep Type: Total/NA

Prep Batch: 24111

%Rec %Rec 113 70 - 130

70 - 130

70 - 130

**Client Sample ID: Matrix Spike** 

Released to Imaging: 11/22/2022 11:30:50 AM

1

1

Client: Ensolum Project/Site: PLU 15 TWR

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

	111/1 <b>-A</b>						Client	Sample	D: Lab C		
Matrix: Solid										Гуре: То	
Analysis Batch: 24110										Batch:	24111
			Spike	LCS					%Rec		
Analyte			Added		Qualifier	Unit	D	%Rec	Limits		
o-Xylene			0.100	0.09767		mg/Kg		98	70 - 130		
	LCS	LCS									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	97		70 - 130								
1,4-Difluorobenzene (Surr)	95		70 - 130								
Lab Sample ID: LCSD 880-2	24111/2-A					Clie	nt Sam	ple ID:	Lab Contro	ol Sampl	e Dup
Matrix: Solid									Prep 1	Type: Tot	tal/N/
Analysis Batch: 24110									Prep	Batch:	2411 <sup>.</sup>
			Spike	LCSD	LCSD				%Rec		RP
Analyte			Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Benzene			0.100	0.07926		mg/Kg	_	79	70 - 130	11	3
Toluene			0.100	0.09758		mg/Kg		98	70 - 130	7	3
Ethylbenzene			0.100	0.1017		mg/Kg		102	70 - 130	6	3
m-Xylene & p-Xylene			0.200	0.2056		mg/Kg		103	70 - 130	6	3
o-Xylene			0.100	0.1035		mg/Kg		104	70 - 130	6	3
	1.050	LCSD									
		Qualifiar	Limite								
-	%Recovery	Qualifier									
4-Bromofluorobenzene (Surr)	99	Qualifier	70 - 130								
4-Bromofluorobenzene (Surr)		Qualifier									
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr)	99 99	Qualifier	70 - 130					Client	Sample ID	: Matrix	Spik
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-13850-A	99 99	Qualifier	70 - 130					Client	Sample ID Prep 1		
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-13850-4 Matrix: Solid	99 99	Qualifier	70 - 130					Client	Prep	Type: To	tal/N/
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-13850-4 Matrix: Solid	99 99 <b>A-1-H MS</b>	<u>Qualifier</u> Sample	70 - 130	MS	MS			Client	Prep		tal/N/
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-13850-4 Matrix: Solid Analysis Batch: 24110	99 99 A-1-H MS Sample		70 - 130 70 - 130		MS Qualifier	Unit	D	Client %Rec	Prep Prep	Type: To	tal/N/
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-13850-4 Matrix: Solid Analysis Batch: 24110 Analyte	99 99 A-1-H MS Sample	Sample	70 - 130 70 - 130 Spike			- <mark>Unit</mark> mg/Kg	D		Prep Prep %Rec	Type: To	tal/N/
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-13850-A Matrix: Solid Analysis Batch: 24110 Analyte Benzene	A-1-H MS Sample Result	Sample Qualifier U	70 - 130 70 - 130 Spike Added	Result	Qualifier		D	%Rec	Prep Prep %Rec Limits	Type: To	tal/N/
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-13850-4 Matrix: Solid Analysis Batch: 24110 Analyte Benzene Toluene	99 99 A-1-H MS Sample <u>Result</u> <0.00200	Sample Qualifier U U F1	70 - 130 70 - 130 <b>Spike</b> Added 0.100	<b>Result</b> 0.09875	Qualifier	mg/Kg	D	%Rec 99	Prep Prep %Rec Limits 70 - 130	Type: To	tal/N/
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-13850-4 Matrix: Solid Analysis Batch: 24110 Analyte Benzene Toluene Ethylbenzene	99 99 <b>A-1-H MS</b> <b>Sample</b> <u>Result</u> <0.00200 <0.00200	Sample Qualifier U U F1 U	70 - 130 70 - 130 <b>Spike</b> Added 0.100 0.100	<b>Result</b> 0.09875 0.1308	<b>Qualifier</b> F1	mg/Kg mg/Kg	<u>D</u>	%Rec 99	Prep Prep %Rec Limits 70 - 130 70 - 130	Type: To	tal/N/
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-13850-4 Matrix: Solid Analysis Batch: 24110 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	99 99 A-1-H MS Sample Result <0.00200 <0.00200 <0.00200	Sample Qualifier U U F1 U U F1	70 - 130 70 - 130 Spike Added 0.100 0.100 0.100	Result 0.09875 0.1308 0.1271	<b>Qualifier</b> F1	mg/Kg mg/Kg mg/Kg	<u> </u>	%Rec 99 131 127	Prep 7 Prep 7 %Rec Limits 70 - 130 70 - 130 70 - 130	Type: To	tal/N/
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-13850-4 Matrix: Solid Analysis Batch: 24110 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	99 99 A-1-H MS Sample Result <0.00200 <0.00200 <0.00200 <0.00200	Sample Qualifier U U F1 U F1 U U	70 - 130 70 - 130 <b>Spike</b> Added 0.100 0.100 0.100 0.200	Result           0.09875           0.1308           0.1271           0.2702	<b>Qualifier</b> F1	mg/Kg mg/Kg mg/Kg mg/Kg	<u> </u>	%Rec 99 131 127 135	Prep 7 Prep 7 %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130	Type: To	tal/N/
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-13850-4 Matrix: Solid Analysis Batch: 24110 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene p-Xylene	99 99 A-1-H MS Sample Result <0.00200 <0.00200 <0.00200 <0.00401 <0.00200 MS	Sample Qualifier U U F1 U F1 U U S	70 - 130 70 - 130 <b>Spike</b> Added 0.100 0.100 0.100 0.200 0.100	Result           0.09875           0.1308           0.1271           0.2702	<b>Qualifier</b> F1	mg/Kg mg/Kg mg/Kg mg/Kg	<u>D</u>	%Rec 99 131 127 135	Prep 7 Prep 7 %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130	Type: To	tal/N/
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-13850-4 Matrix: Solid Analysis Batch: 24110 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate	99 99 A-1-H MS Sample Result <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 MS %Recovery	Sample Qualifier U U F1 U F1 U U S	70 - 130 70 - 130 <b>Spike</b> Added 0.100 0.100 0.100 0.200 0.100 U.100	Result           0.09875           0.1308           0.1271           0.2702	<b>Qualifier</b> F1	mg/Kg mg/Kg mg/Kg mg/Kg	<u>D</u>	%Rec 99 131 127 135	Prep 7 Prep 7 %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130	Type: To	tal/NA
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-13850-4 Matrix: Solid Analysis Batch: 24110 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr)	99 99 A-1-H MS Co.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 MS %Recovery 102	Sample Qualifier U U F1 U F1 U U S	70 - 130         70 - 130         70 - 130         Spike         Added         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100	Result           0.09875           0.1308           0.1271           0.2702	<b>Qualifier</b> F1	mg/Kg mg/Kg mg/Kg mg/Kg	<u> </u>	%Rec 99 131 127 135	Prep 7 Prep 7 %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130	Type: To	tal/NA
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-13850-4 Matrix: Solid Analysis Batch: 24110 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene p-Xylene Surrogate 4-Bromofluorobenzene (Surr)	99 99 A-1-H MS Sample Result <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 MS %Recovery	Sample Qualifier U U F1 U F1 U U S	70 - 130 70 - 130 <b>Spike</b> Added 0.100 0.100 0.200 0.100 0.200 0.100	Result           0.09875           0.1308           0.1271           0.2702	<b>Qualifier</b> F1	mg/Kg mg/Kg mg/Kg mg/Kg	<u> </u>	%Rec 99 131 127 135	Prep 7 Prep 7 %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130	Type: To	tal/N/
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-13850-4 Matrix: Solid Analysis Batch: 24110 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr)	99 99 99 A-1-H MS Co.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 MS %Recovery 102 95	Sample Qualifier U U F1 U F1 U U S	70 - 130         70 - 130         70 - 130         Spike         Added         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100	Result           0.09875           0.1308           0.1271           0.2702	<b>Qualifier</b> F1	mg/Kg mg/Kg mg/Kg mg/Kg		%Rec 99 131 127 135 125	Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	Type: To Batch:	tal/N/ 2411
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-13850-4 Matrix: Solid Analysis Batch: 24110 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-13850-4	99 99 99 A-1-H MS Co.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 MS %Recovery 102 95	Sample Qualifier U U F1 U F1 U U S	70 - 130         70 - 130         70 - 130         Spike         Added         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100	Result           0.09875           0.1308           0.1271           0.2702	<b>Qualifier</b> F1	mg/Kg mg/Kg mg/Kg mg/Kg		%Rec 99 131 127 135 125	Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	Type: To b Batch: 	tal/N/ 2411
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-13850-4 Matrix: Solid Analysis Batch: 24110 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-13850-4 Matrix: Solid	99 99 99 A-1-H MS Co.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 MS %Recovery 102 95	Sample Qualifier U U F1 U F1 U U S	70 - 130         70 - 130         70 - 130         Spike         Added         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100	Result           0.09875           0.1308           0.1271           0.2702	<b>Qualifier</b> F1	mg/Kg mg/Kg mg/Kg mg/Kg		%Rec 99 131 127 135 125	Prep 7 Prep 7 %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	Type: To b Batch:  pike Dup Type: To	licate
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-13850-4 Matrix: Solid Analysis Batch: 24110 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-13850-4 Matrix: Solid	99 99 99 A-1-H MS <u>Result</u> <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <i>(0.00401)</i> <0.00200 <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.00200)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i> <i>(0.0020)</i>	Sample Qualifier U U F1 U U F1 U U MS Qualifier	70 - 130         70 - 130         70 - 130         Spike         Added         0.100         1.100	Result 0.09875 0.1308 0.1271 0.2702 0.1254	Qualifier F1 F1	mg/Kg mg/Kg mg/Kg mg/Kg		%Rec 99 131 127 135 125	Prep Prep %Rec Limits 70 - 130 70 - 190 Prep Prep	Type: To b Batch: 	blicate tal/NA 2411
Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-13850-4 Matrix: Solid Analysis Batch: 24110 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-13850-4 Matrix: Solid Analysis Batch: 24110 Analyte	99 99 A-1-H MS <b>Sample</b> Result <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <i>Sample</i> Sample	Sample Qualifier U F1 U F1 U F1 U MS Qualifier	70 - 130 70 - 130 <b>Spike</b> Added 0.100 0.100 0.200 0.100 0.200 0.100 <i>Limits</i> 70 - 130 70 - 130 70 - 130	Result           0.09875           0.1308           0.1271           0.2702           0.1254	Qualifier F1 F1	mg/Kg mg/Kg mg/Kg mg/Kg	lient Sa	%Rec 99 131 127 135 125	Prep %Rec Limits 70 - 130 70 - 190 70 - 190	pike Dup pike Sup pike Sup Type: Toto b Batch:	blicate tal/NA 24111 24111 24111 RPI
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-13850-4 Matrix: Solid Analysis Batch: 24110 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-13850-4 Matrix: Solid	99 99 A-1-H MS <b>Sample</b> Result <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <i>Sample</i> Sample	Sample Qualifier U F1 U F1 U F1 U MS Qualifier Sample Qualifier	70 - 130         70 - 130         70 - 130         Spike         Added         0.100         1.100	Result           0.09875           0.1308           0.1271           0.2702           0.1254	Qualifier F1 F1	mg/Kg mg/Kg mg/Kg mg/Kg		%Rec 99 131 127 135 125	Prep Prep %Rec Limits 70 - 130 70 - 190 Prep Prep	Type: To b Batch:  pike Dup Type: To	blicate 24111

<0.00200 UF1 Toluene 0.0996 0.1232 70 - 130 35 124 6 mg/Kg 0.0996 Ethylbenzene <0.00200 U 0.1164 mg/Kg 117 70 - 130 9 35 m-Xylene & p-Xylene <0.00401 UF1 0.199 0.2439 122 70 - 130 35 mg/Kg 10 o-Xylene <0.00200 U 0.0996 0.1147 mg/Kg 115 70 - 130 9 35

Eurofins Carlsbad

5 6 7

Job ID: 890-2200-1

SDG: 03E1558017

### Job ID: 890-2200-1 SDG: 03E1558017

Client: Ensolum Project/Site: PLU 15 TWR

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

Lab Sample ID: 880-13850-A-1 Matrix: Solid								U.I.		ample ID:		Туре: То	-
Analysis Batch: 24110											Pre	Batch:	: 24111
	MSD I	MSD											
Surrogate		Quali	fier	Limits									
4-Bromofluorobenzene (Surr)		Quum		70 - 130									
1,4-Difluorobenzene (Surr)	99			70 - 130									
ethod: 8015B NM - Diese		gani	ics (DR	O) (GC)									
_ab Sample ID: MB 880-23823/	/1-A	_								Client Sa	ample ID:	Method	l Blanł
Matrix: Solid											Prep	Type: To	otal/NA
Analysis Batch: 23813											Prep	Batch:	23823
	I	MB	MB										
Analyte	Res	sult	Qualifier	RL		U	nit	D	P	repared	Analy	zed	Dil Fac
Gasoline Range Organics	<5	0.0	U	50.0		m	g/Kg		04/2	20/22 09:58	04/20/22	10:25	1
GRO)-C6-C10	-			50.0						~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			
Diesel Range Organics (Over	<5	0.0	U	50.0		m	g/Kg		04/2	20/22 09:58	04/20/22	10:25	
C10-C28) Dll Range Organics (Over C28-C36)	<5	0.0	U	50.0		m	g/Kg		04/2	20/22 09:58	04/20/22	10:25	
		ΜΒ	МВ										
Surrogate	%Recov	ery	Qualifier	Limits					F	Prepared	Analy	zed	Dil Fac
-Chlorooctane		84		70 - 130					04/2	20/22 09:58	04/20/22	10:25	
o-Terphenyl	-	100		70 - 130					04/2	20/22 09:58	04/20/22	10:25	
ab Sample ID: LCS 880-2382: Matrix: Solid	3/2-A								Clien	t Sample	Prep	ontrol S Type: To Batch:	otal/N/
ab Sample ID: LCS 880-23823 Matrix: Solid Analysis Batch: 23813	3/2-A			Spike		LCS				-	Prep Prep %Rec	Type: To	otal/NA
Lab Sample ID: LCS 880-23823 Matrix: Solid Analysis Batch: 23813 Analyte	3/2-A			Added	Result	LCS Qualifie			Client	%Rec	Prep Prep %Rec Limits	Type: To	otal/NA
Lab Sample ID: LCS 880-23823 Matrix: Solid Analysis Batch: 23813 Analyte Gasoline Range Organics	3/2-A			•			er Uni mg/			-	Prep Prep %Rec	Type: To	otal/NA
Lab Sample ID: LCS 880-23823 Matrix: Solid Analysis Batch: 23813 Malyte Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over	3/2-A			Added	Result			۲g		%Rec	Prep Prep %Rec Limits	Type: To	otal/NA
Lab Sample ID: LCS 880-23823 Matrix: Solid Analysis Batch: 23813 Malyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over		LCS		Added	Result 1021		mg/	۲g		<b>%Rec</b>	Prep Prep %Rec Limits 70 - 130	Type: To	otal/NA
Lab Sample ID: LCS 880-23823 Matrix: Solid Analysis Batch: 23813 Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	LCS I	LCS Qualit	fier	Added	Result 1021		mg/	۲g		<b>%Rec</b>	Prep Prep %Rec Limits 70 - 130	Type: To	otal/NA
Lab Sample ID: LCS 880-23823 Matrix: Solid Analysis Batch: 23813 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	LCS I		fier	Added	Result 1021		mg/	۲g		<b>%Rec</b>	Prep Prep %Rec Limits 70 - 130	Type: To	otal/NA
Lab Sample ID: LCS 880-23823 Matrix: Solid Analysis Batch: 23813 Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate I-Chlorooctane	LCS I %Recovery (		fier	Added 1000 1000 <i>Limits</i>	Result 1021		mg/	۲g		<b>%Rec</b>	Prep Prep %Rec Limits 70 - 130	Type: To	otal/NA
Lab Sample ID: LCS 880-23823 Matrix: Solid Analysis Batch: 23813 Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate I-Chlorooctane	LCS I %Recovery 0 92		fier	Added 1000 1000 <i>Limits</i> 70 - 130	Result 1021		mg/	۲g		<b>%Rec</b>	Prep Prep %Rec Limits 70 - 130	Type: To	otal/NA
Lab Sample ID: LCS 880-23823 Matrix: Solid Analysis Batch: 23813 Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate I-Chlorooctane D-Terphenyl Lab Sample ID: LCSD 880-238	LCS I %Recovery 0 92 108		fier	Added 1000 1000 <i>Limits</i> 70 - 130	Result 1021		mg/	<g <g< td=""><td> <u>D</u></td><td><b>%Rec</b></td><td>Prep %Rec Limits 70 - 130 70 - 130</td><td>Type: To Batch: </td><td>otal/N/</td></g<></g 	<u>D</u>	<b>%Rec</b>	Prep %Rec Limits 70 - 130 70 - 130	Type: To Batch: 	otal/N/
Lab Sample ID: LCS 880-23823 Matrix: Solid Analysis Batch: 23813 Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate I-Chlorooctane D-Terphenyl Lab Sample ID: LCSD 880-238 Matrix: Solid	LCS I %Recovery 0 92 108		fier	Added 1000 1000 <i>Limits</i> 70 - 130	Result 1021		mg/	<g <g< td=""><td> <u>D</u></td><td>%Rec 102 84</td><td>Prep %Rec Limits 70 - 130 70 - 130 70 - 130</td><td>Type: To b Batch: b DI Samp</td><td>le Dup</td></g<></g 	<u>D</u>	%Rec 102 84	Prep %Rec Limits 70 - 130 70 - 130 70 - 130	Type: To b Batch: b DI Samp	le Dup
Lab Sample ID: LCS 880-23823 Matrix: Solid Analysis Batch: 23813 Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate -Chlorooctane -Terphenyl Lab Sample ID: LCSD 880-238 Matrix: Solid	LCS I %Recovery 0 92 108		fier	Added 1000 1000 <i>Limits</i> 70 - 130	Result 1021 841.0		mg/	<g <g< td=""><td> <u>D</u></td><td>%Rec 102 84</td><td>Prep %Rec Limits 70 - 130 70 - 130 70 - 130</td><td>Type: To Batch:  DI Samp Type: To</td><td>btal/NA 23823  btal/NA 23823</td></g<></g 	<u>D</u>	%Rec 102 84	Prep %Rec Limits 70 - 130 70 - 130 70 - 130	Type: To Batch:  DI Samp Type: To	btal/NA 23823  btal/NA 23823
Lab Sample ID: LCS 880-23823 Matrix: Solid Analysis Batch: 23813 Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate -Chlorooctane D-Terphenyl Lab Sample ID: LCSD 880-238 Matrix: Solid Analysis Batch: 23813 Analyte	LCS I %Recovery 0 92 108		fier	Added 1000 1000 <u>Limits</u> 70 - 130 70 - 130	Result 1021 841.0	Qualifie	mg/	<g <g Clien</g </g 	<u>D</u>	%Rec 102 84	Prep %Rec Limits 70 - 130 70 - 130 70 - 130 80 Contro Prep	Type: To Batch:  DI Samp Type: To	le Dup tal/NA 2382: 2382: 2382: 2382: RPI
Lab Sample ID: LCS 880-23823 Matrix: Solid Analysis Batch: 23813 Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate I-Chlorooctane D-Terphenyl Lab Sample ID: LCSD 880-238 Matrix: Solid Analysis Batch: 23813 Analyte Basoline Range Organics	LCS I %Recovery 0 92 108		fier	Added 1000 1000 <i>Limits</i> 70 - 130 70 - 130 <b>Spike</b>	Result 1021 841.0	Qualifie	mg/	<g <g Clien</g </g 	_ D_	%Rec 102 84	Prep %Rec Limits 70 - 130 70 - 130 70 - 130 80 Contro Prep %Rec	Type: To b Batch: b Batch: b Batch: b Batch:	le Dup stal/N/ 23823 
Lab Sample ID: LCS 880-23823 Matrix: Solid Analysis Batch: 23813 Malyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over 210-C28) Surrogate -Chlorooctane -Terphenyl Lab Sample ID: LCSD 880-238 Matrix: Solid Analysis Batch: 23813 Matrix: Solid Analysis Batch: 23813 Malyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over	LCS I %Recovery 0 92 108		fier	Added 1000 1000 <i>Limits</i> 70 - 130 70 - 130 Spike Added	Result 1021 841.0 LCSD Result	Qualifie	mg/ mg/	<g Clien</g 	_ D_	%Rec           102           84           nple ID: La           %Rec	Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 Prep %Rec Limits	Type: To batch: bl Samp Type: To b Batch: 	ble Dup 23823 23823 23823 23823 24 23823 RPI 20 21
Lab Sample ID: LCS 880-23823 Matrix: Solid Analysis Batch: 23813 Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate I-Chlorooctane D-Terphenyl Lab Sample ID: LCSD 880-2383 Matrix: Solid Analysis Batch: 23813 Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over	LCS I %Recovery 0 92 108	Quali		Added           1000           1000           1000           1000           1000 <i>Limits</i> 70 - 130           70 - 130           70 - 130           Added           1000	Result           1021           841.0           LCSD           Result           1035	Qualifie	er <u>Uni</u> mg/	<g Clien</g 	_ D_	%Rec           102           84           nple ID: La           %Rec           104	Prep %Rec Limits 70 - 130 70 - 130 70 - 130 ab Contro Prep %Rec Limits 70 - 130	DI Samp Type: To Di Samp Type: To Di Batch: RPD 1	bie Dur 23823 
Lab Sample ID: LCS 880-23823 Matrix: Solid Analysis Batch: 23813 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane D-Terphenyl Lab Sample ID: LCSD 880-238 Matrix: Solid Analysis Batch: 23813 Analyte Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	LCS 1 %Recovery 0 92 108 23/3-A	Qualii		Added           1000           1000           1000           1000           1000 <i>Limits</i> 70 - 130           70 - 130           70 - 130           Added           1000	Result           1021           841.0           LCSD           Result           1035	Qualifie	er <u>Uni</u> mg/	<g Clien</g 	_ D_	%Rec           102           84           nple ID: La           %Rec           104	Prep %Rec Limits 70 - 130 70 - 130 70 - 130 ab Contro Prep %Rec Limits 70 - 130	DI Samp Type: To Di Samp Type: To Di Batch: RPD 1	le Dup
Lab Sample ID: LCS 880-23823 Matrix: Solid Analysis Batch: 23813 Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane 2-Terphenyl Lab Sample ID: LCSD 880-238 Matrix: Solid Analysis Batch: 23813 Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	LCS I %Recovery 92 108 23/3-A	Qualii		Added           1000           1000           1000           1000           1000           70 - 130           70 - 130           70 - 130           1000           1000           1000	Result           1021           841.0           LCSD           Result           1035	Qualifie	er <u>Uni</u> mg/	<g Clien</g 	_ D_	%Rec           102           84           nple ID: La           %Rec           104	Prep %Rec Limits 70 - 130 70 - 130 70 - 130 ab Contro Prep %Rec Limits 70 - 130	DI Samp Type: To Di Samp Type: To Di Batch: RPD 1	ele Dup otal/NA 23823 23823 23823 ctal/NA 23823 RPE Limi 20

Lab Sample ID: 880-13895-A-1-B MS

# **QC Sample Results**

MS MS Result Qualifier

844.7

Unit

mg/Kg

D

Spike

Added

1000

Analysis Batch: 23813

Gasoline Range Organics

Matrix: Solid

Analyte

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

Sample Sample

<49.9 U

Result Qualifier

	Job ID: 890-2200-1 SDG: 03E1558017
Clien	t Sample ID: Matrix Spike Prep Type: Total/NA
	Prep Batch: 23823
	%Rec
%Rec	Limits

Page 69 of 255

(GRO)-C6-C10		0	1000	044.7		iiig/itg		00	10 - 100		
Diesel Range Organics (Over	<49.9	U	1000	779.8		mg/Kg		75	70 - 130		
C10-C28)											
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	77		70 - 130								
o-Terphenyl	81		70 - 130								
Lab Sample ID: 880-13895-A	-1-C MSD					c	lient S	ample II	): Matrix S	pike Dup	olicate
Matrix: Solid										Гуре: То	
Analysis Batch: 23813									Prep	Batch:	23823
-	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	<49.9	U	998	818.6		mg/Kg		80	70 - 130	3	20
(GRO)-C6-C10											
Diesel Range Organics (Over	<49.9	U	998	782.3		mg/Kg		76	70 - 130	0	20
C10-C28)											
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	78		70 - 130								
o-Terphenyl	81		70 - 130								

Lab Sample ID: MB 880-23840/1-A Matrix: Solid Analysis Batch: 23965									Client S	Sample ID: M Prep T		
Analysis Datch. 2000	МВ	МВ										
Analyte	Result	Qualifier		RL		Unit		D F	Prepared	Analyzed	b	Dil Fac
Chloride	<5.00	U		5.00		mg/K	g			04/21/22 18	3:29	1
 Lab Sample ID: LCS 880-23840/2-A								Clien	t Sample	D: Lab Cor	ntrol Sa	ample
Matrix: Solid										Prep T	ype: S	oluble
Analysis Batch: 23965												
			Spike		LCS	LCS				%Rec		
Analyte			Added		Result	Qualifier	Unit	D	%Rec	Limits		
Chloride			250		255.9		mg/Kg		102	90 - 110		
							Cli	ient San	nple ID:	Lab Control	Sampl	e Dup
Matrix: Solid										Prep T	ype: S	oluble
Analysis Batch: 23965												
			Spike		LCSD	LCSD				%Rec		RPD
Analyte			Added		Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride			250		256.1		mg/Kg		102	90 _ 110	0	20

Eurofins Carlsbad

Client: Ensolum

Project/Site: PLU 15 TWR

### Job ID: 890-2200-1 SDG: 03E1558017

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-13905-A-2	1-B MS							Client	Sample ID	: Matrix	Spike
Matrix: Solid									Prep	Type: So	oluble
Analysis Batch: 23965											
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	7.76		248	259.5		mg/Kg		102	90 - 110		
Lab Sample ID: 880-13905-A-2	1-C MSD					CI	ient Sa	ample ID	): Matrix Sp	oike Dup	licate
Matrix: Solid									Prep	Type: So	oluble
Analysis Batch: 23965											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	7.76		248	261.5		mg/Kg		102	90 - 110	1	20
Lab Sample ID: 890-2198-A-2-0	CMS							Client	Sample ID	: Matrix	Spike
Matrix: Solid										Type: So	
Analysis Batch: 23965											
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	155	F1	1250	1543	F1	mg/Kg		111	90 - 110		
Lab Sample ID: 890-2198-A-2-I	D MSD					CI	ient Sa	ample ID	): Matrix Sp	oike Dup	licate
Matrix: Solid									Prep	Type: So	oluble
Analysis Batch: 23965											
-	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	155	F1	1250	1514		mg/Kg		109	90 - 110	2	20

# **QC Association Summary**

Client: Ensolum Project/Site: PLU 15 TWR

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23967

23967

Job ID: 890-2200-1 SDG: 03E1558017

# GC VOA

### Prep Batch: 23967

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
890-2200-1	SS01	Total/NA	Solid	5035	
890-2200-2	SS02	Total/NA	Solid	5035	
MB 880-23967/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-23967/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-23967/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-13850-A-27-C MS	Matrix Spike	Total/NA	Solid	5035	
880-13850-A-27-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
nalysis Batch: 24109 Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Bato
890-2200-1	SS01	Total/NA	Solid	8021B	2396
890-2200-2	SS02	Total/NA	Solid	8021B	2396
	Method Blank	Total/NA	Solid	8021B	2396
MB 880-23967/5-A	Mothod Blank				
MB 880-23967/5-A LCS 880-23967/1-A	Lab Control Sample	Total/NA	Solid	8021B	23967

# 880-13850-A-27-D MSD Analysis Batch: 24110

880-13850-A-27-C MS

Matrix Spike

Matrix Spike Duplicate

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2200-2	SS02	Total/NA	Solid	8021B	24111
MB 880-24111/5-A	Method Blank	Total/NA	Solid	8021B	24111
LCS 880-24111/1-A	Lab Control Sample	Total/NA	Solid	8021B	24111
LCSD 880-24111/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	24111
880-13850-A-1-H MS	Matrix Spike	Total/NA	Solid	8021B	24111
880-13850-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	24111

Total/NA

Total/NA

Solid

Solid

8021B

8021B

### Prep Batch: 24111

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
890-2200-2	SS02	Total/NA	Solid	5035	
MB 880-24111/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-24111/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-24111/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-13850-A-1-H MS	Matrix Spike	Total/NA	Solid	5035	
880-13850-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

### Analysis Batch: 24178

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2200-1	SS01	Total/NA	Solid	Total BTEX	
890-2200-2	SS02	Total/NA	Solid	Total BTEX	

### GC Semi VOA

### Analysis Batch: 23813

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2200-1	SS01	Total/NA	Solid	8015B NM	23823
890-2200-2	SS02	Total/NA	Solid	8015B NM	23823
MB 880-23823/1-A	Method Blank	Total/NA	Solid	8015B NM	23823
LCS 880-23823/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	23823
LCSD 880-23823/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	23823
880-13895-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	23823

Eurofins Carlsbad

# **QC Association Summary**

Client: Ensolum Project/Site: PLU 15 TWR

### GC Semi VOA (Continued)

### Analysis Batch: 23813 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-13895-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	23823
rep Batch: 23823					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2200-1	SS01	Total/NA	Solid	8015NM Prep	
890-2200-2	SS02	Total/NA	Solid	8015NM Prep	
MB 880-23823/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-23823/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-23823/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-13895-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-13895-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	
nalysis Batch: 23927					
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2200-1	SS01	Total/NA	Solid	8015 NM	
890-2200-2	SS02	Total/NA	Solid	8015 NM	

# HPLC/IC

### Leach Batch: 23840

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2200-1	SS01	Soluble	Solid	DI Leach	
890-2200-2	SS02	Soluble	Solid	DI Leach	
MB 880-23840/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-23840/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-23840/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-13905-A-21-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-13905-A-21-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
890-2198-A-2-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2198-A-2-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

### Analysis Batch: 23965

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2200-1	SS01	Soluble	Solid	300.0	23840
890-2200-2	SS02	Soluble	Solid	300.0	23840
MB 880-23840/1-A	Method Blank	Soluble	Solid	300.0	23840
LCS 880-23840/2-A	Lab Control Sample	Soluble	Solid	300.0	23840
LCSD 880-23840/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	23840
880-13905-A-21-B MS	Matrix Spike	Soluble	Solid	300.0	23840
880-13905-A-21-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	23840
890-2198-A-2-C MS	Matrix Spike	Soluble	Solid	300.0	23840
890-2198-A-2-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	23840

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# Job ID: 890-2200-1

SDG: 03E1558017
Job ID: 890-2200-1 SDG: 03E1558017

#### Lab Sample ID: 890-2200-1 Matrix: Solid

Lab Sample ID: 890-2200-2

Matrix: Solid

Date Collected: 04/18/22 12:00 Date Received: 04/19/22 12:10

**Client Sample ID: SS01** 

Project/Site: PLU 15 TWR

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			4.96 g	5 mL	23967	04/21/22 16:00	MR	XEN MID
Total/NA	Analysis	8021B		50			24109	04/25/22 05:03	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			24178	04/25/22 12:21	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23927	04/21/22 10:45	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	23823	04/20/22 09:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			23813	04/20/22 17:23	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	23840	04/20/22 12:38	SC	XEN MID
Soluble	Analysis	300.0		5			23965	04/21/22 22:10	СН	XEN MID

#### Client Sample ID: SS02

Date Collected: 04/18/22 12:10 Date Received: 04/19/22 12:10

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	24111	04/24/22 22:21	MR	XEN MID
Total/NA	Analysis	8021B		100	5 mL	5 mL	24110	04/25/22 10:59	MR	XEN MID
Total/NA	Prep	5035			4.99 g	5 mL	23967	04/21/22 16:00	MR	XEN MID
Total/NA	Analysis	8021B		1			24109	04/25/22 04:42	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			24178	04/25/22 12:21	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23927	04/21/22 10:45	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	23823	04/20/22 09:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			23813	04/20/22 17:45	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	23840	04/20/22 12:38	SC	XEN MID
Soluble	Analysis	300.0		1			23965	04/21/22 22:19	СН	XEN MID

#### Laboratory References:

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

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### Eurofins Carlsbad

Accreditation/Certification Summary

Client: Ensolum Project/Site: PLU 15 TWR

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	T104704400-21-22	06-30-22
The following analytes	are included in this report, b	ut the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes for wh
the agency does not o				
the agency does not o Analysis Method	fer certification. Prep Method	Matrix	Analyte	
0,		Matrix Solid	Analyte Total TPH	

Job ID: 890-2200-1

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SDG: 03E1558017

Eurofins Carlsbad

Client: Ensolum Project/Site: PLU 15 TWR Job ID: 890-2200-1 SDG: 03E1558017

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

#### Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions. SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

Client: Ensolum Project/Site: PLU 15 TWR Job ID: 890-2200-1 SDG: 03E1558017

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2200-1	SS01	Solid	04/18/22 12:00	04/19/22 12:10	0.5
890-2200-2	SS02	Solid	04/18/22 12:10	04/19/22 12:10	0.5

				EL Paso, Hobbs, N	EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	443, Lubbock, T) 50, Carlsbad, NN	( (806) / 94-129 1 (575) 988-319(			www.xenco.com	com Page	of
Project Manager:	Ben Belill		Bill	Bill to: (if different)	Adrian Baker	(er				Work Or	Work Order Comments	S
Company Name:	Ensolum, LLC		Cor	Company Name:	XTO Energy, Inc	gy, Inc.		9	Program: UST/PST  PRP Brownfields RRC Superfund		trownfields 🗌	
Address:	2351 W Northwest Hwy Suite 1203A	Hwy Suite 1203/		Address:	3104 E. G	3104 E. Green Street		S	State of Project:	1	j	,
City, State ZIP:	Dallas, TX 75220			City, State ZIP:	Carlsbad, NM 88220	NM 88220			Reporting: Level II CLevel III PST/UST TRRP			TRRP
Phone:	9898540852		Email:						Deliverables: EDD		ADaPT	Other:
Project Name:	PLU 15 TWR	WR	Turn Around	und			ANAL	YSIS REQUEST	EST		Pre	Preservative Codes
Project Number:	03E1858017		Routine	-	Pres. Code						None: NO	0
Project Location:	EDDY COUNTY, NM		Due Date:								Cool: Cool	0
Sampler's Name:	Ben Belill		TAT starts the day received by	received by	_				-	-	HCL: HC	
PO #	NAPP2207746719		the lab, if received by 4:30pm		rs						H2S04: H2	N
SAMPLE RECEIPT	IPT Temp Blank:	(Yes No	Wet Ice:	Yes No	.0)						H <sub>3</sub> PO <sub>4</sub> : HP	÷
Samples Received Intact:	Η	Thermomete	1	FCO-M	-						NaHSO4: NABIS	NABIS
Cooler Custody Seals:	IS: YES NO NA	Correction Factor:	tor:	-0.2			800.220	800-2200 Chain of Custody	ustody		Na25203: Na503	Naso
Sample Custody Seals:	Yes No	NA Temperature Reading:	leading:	.6		1	030-22			1	Zn Acetate+NaUH: Zn	Ite+NaO
Total Containers:		Corrected Temperature:	perature:	1		(802						000100
Sample Identification	ntification Matrix	Date Sampled	Time De Sampled	Depth Grab/ #	C # ont of CHLOI TPH (8	BTEX					Sa	Sample Comments
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Total 200.7 / 6010 ircle Method(s) and I	Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed		8RCRA 13PPM TCLP / SPLP	Texas 11 6010: 8RC	Al Sb As Ba RA Sb As Ba	Be B Cd C	Ca Cr Co C r Co Cu Pb	CuFePbMgN bMnMoNiSe	1g Mn Mo Ni Se Ag Ti U	K Se Ag Si Hg:1	Ag SiO <sub>2</sub> Na Sr Ti Sn U Hg:1631/245.1/7470	Sn U V Zi 7470 / 7471
otice: Signature of this - service. Eurofins Xenc Eurofins Xenco. A min	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 or 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.	ent of samples constit cost of samples and s be applied to each pr	utes a valid purch shall not assume a oject and a charge	nase order from cil any responsibility e of \$5 for each sa	lent company to E for any losses or mple submitted t	urofins Xenco, its expenses incurre b Eurofins Xenco,	affiliates and su d by the client if a but not analyzed	bcontractors. It such losses are . These terms w	ubcontractors. It assigns standard terms and conditions such losses are due to circumstances beyond the control d. These terms will be enforced unless previously negotiat	terms and conditions and conditions and conditions are seen to be a conditional the conditions and the conditions are seen as a condition of the conditions and the conditions are seen as a conditi	vns itrol stlated.	
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Chain of Custody Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300

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	Custody Seals Intact Custody Seal No	Relinquished by	Relinquished by	Relyquished by	Empty Kit Relinquished by	Deliverable Requested 1 II III IV Other (specify)	Possible Hazard Identification Unconfirmed	Note Since laboratory accreditations are subject to change Eurofins Environment Testing South Central LLC places the ownership of method analyte & accreditation compliance upon out subcontract laboratories This sample shipment is forwarded under chain-of-custody if the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Central LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Central LLC attention immediately. If all requested accreditations are current to date return the signed Chain of Custody attesting to said complicance to Eurofins Environment Testing South Central LLC attention immediately. If all requested accreditations are current to date return the signed Chain of Custody attesting to said complicance to Eurofins Environment Testing South Central LLC attention immediately.				SS02 (890-2200-2)	SS01 (890-2200-1)		Sample Identification - Client ID (Lab ID)	Site:	Project Name PLU 15 TWR	Email	Phone: 432-704-5440(Tel)	State Zip TX 79701	City Midland	Address 1211 W Florida Ave	Company Eurofins Environment Testing South Centr	ntact: g/Receiving	Client Information (Sub Contract Lab)	1089 N Canal St. Carisbad NM 86220 Phone 575-988-3199 Fax: 575-988-3199	23456789
		Date/Time:	Date/Time (	Date/Infe		Primary Deliverable Rank 2		ment Testing South Centra d above for analysis/tests/r n Central LLC attention imr			 	4/18/22	4/18/22	X	Sample Date	SSOW#:	Project #: 89000093	WO #	PO #		TAT Requested (days):	Due Date Requested 4/25/2022		Phone:	Sampler	0	9 10 11
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Job Number: 890-2200-1 SDG Number: 03E1558017

List Source: Eurofins Carlsbad

#### Login Sample Receipt Checklist

Client: Ensolum

Login Number: 2200 List Number: 1 Creator: Clifton, Cloe

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

N/A

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

Job Number: 890-2200-1 SDG Number: 03E1558017

List Source: Eurofins Midland

List Creation: 04/20/22 10:37 AM

#### Login Sample Receipt Checklist

Client: Ensolum

Login Number: 2200 List Number: 2 Creator: Teel, Brianna

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

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

Received by OCD: 8/10/2022 10:53:56 AM

LINKS

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## Environment Testing America

## **ANALYTICAL REPORT**

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

#### Laboratory Job ID: 890-2569-1

Laboratory Sample Delivery Group: 03E1558015 Client Project/Site: PLU 15 TWR

#### For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

RAMER

Authorized for release by: 7/25/2022 10:38:42 AM Jessica Kramer, Project Manager (432)704-5440 Jessica.Kramer@et.eurofinsus.com

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

SDG: 03E1558015

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Dil Fac

DL, RA, RE, IN

DL

DLC

EDL

LOD

LOQ

MCL

MDA

MDC MDL

ML

MPN

MQL

NC

ND NEG

POS

PQL PRES

QC

RL RPD

TEF

TEQ

TNTC

RER

**Dilution Factor** 

Detection Limit (DoD/DOE)

Estimated Detection Limit (Dioxin)

Limit of Detection (DoD/DOE)

Method Detection Limit

Minimum Level (Dioxin)

Most Probable Number

Not Calculated

Negative / Absent

Positive / Present Practical Quantitation Limit

Presumptive

Quality Control

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Reporting Limit or Requested Limit (Radiochemistry)

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

Method Quantitation Limit

Limit of Quantitation (DoD/DOE)

Decision Level Concentration (Radiochemistry)

EPA recommended "Maximum Contaminant Level"

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

Minimum Detectable Activity (Radiochemistry) Minimum Detectable Concentration (Radiochemistry)

ceived by OC	CD: 8/10/2022 10:53:56 AM	Page 83 of .	255
	Definitions/Glossary		
Client: Ensol Project/Site:		Job ID: 890-2569-1 SDG: 03E1558015	2
Qualifiers			3
GC VOA Qualifier	Qualifier Description		4
F1	MS and/or MSD recovery exceeds control limits.		
F2	MS/MSD RPD exceeds control limits		5
S1+	Surrogate recovery exceeds control limits, high biased.		
U	Indicates the analyte was analyzed for but not detected.		
GC Semi VO	Α		
Qualifier	Qualifier Description		
*+	LCS and/or LCSD is outside acceptance limits, high biased.		
*1	LCS/LCSD RPD exceeds control limits.		8
S1+	Surrogate recovery exceeds control limits, high biased.		
U	Indicates the analyte was analyzed for but not detected.		9
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)		

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

**Eurofins Carlsbad** 

#### Job ID: 890-2569-1

#### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-2569-1

#### Receipt

The samples were received on 7/18/2022 12:12 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.8°C

#### GC VOA

Method 8021B: Surrogate recovery for the following samples were outside control limits: PH01 (890-2569-1) and PH01A (890-2569-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 880-30267 and analytical batch 880-30326 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.

Method 8021B: Surrogate recovery for the following samples were outside control limits: PH01 (890-2569-1) and (880-17211-A-1-C). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

#### GC Semi VOA

Method 8015MOD\_NM: Surrogate recovery for the following sample was outside control limits: (LCS 880-30080/2-A). Evidence of matrix interferences is not obvious.

Method 8015MOD\_NM: Surrogate recovery for the following sample was outside control limits: PH01 (890-2569-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD\_NM: The surrogate recovery for the blank associated with preparation batch 880-30080 and analytical batch 880-30146 was outside the upper control limits.

Method 8015MOD\_NM: The laboratory control sample (LCS) associated with preparation batch 880-30080 and analytical batch 880-30146 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

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

#### HPLC/IC

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

Method: 8021B - Volatile Organic Compounds (GC)

Result Qualifier

0.0106

0.854

4.26

9.98

5.19

15.2

758 S1+

102

Qualifier

%Recovery

#### **Client Sample Results**

RL

0.00200

0.199

0.199

0.398

0.199

0.398

Limits

70 - 130

70 - 130

Unit

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

D

Prepared

07/21/22 09:27

07/21/22 13:37

07/21/22 13:37

07/21/22 13:37

07/21/22 13:37

07/21/22 13:37

Prepared

07/21/22 09:27

07/21/22 09:27

Job ID: 890-2569-1 SDG: 03E1558015

#### **Client Sample ID: PH01**

Project/Site: PLU 15 TWR

Date Collected: 07/14/22 10:25 Date Received: 07/18/22 12:12

Sample Depth: 2'

Analyte

Benzene

Toluene

o-Xylene

Surrogate

Ethylbenzene

Xylenes, Total

m-Xylene & p-Xylene

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

Client: Ensolum

Lab	Sample	ID:	89	0	-2	569	<b>)</b> -'	1
						_		

Analyzed

07/21/22 14:27

07/22/22 22:33

07/22/22 22:33

07/22/22 22:33

07/22/22 22:33

07/22/22 22:33

Analyzed

07/21/22 14:27

07/21/22 14:27

Matrix: Solid

Dil Fac

1

100

100

100

100

100

1

1

Dil Fac

5
8
9
13

Method: Total BTEX - Total BTEX Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	20.3		0.398	mg/Kg			07/21/22 15:53	1
– Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte	• · ·	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	6340		50.0	mg/Kg			07/21/22 12:58	1
- Method: 8015B NM - Diesel Rang	e Organics (D	RO) (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	1770	*1 *+	50.0	mg/Kg		07/19/22 16:15	07/20/22 22:21	1
Diesel Range Organics (Over C10-C28)	3850	*1 *+	50.0	mg/Kg		07/19/22 16:15	07/20/22 22:21	1
Oll Range Organics (Over C28-C36)	721		50.0	mg/Kg		07/19/22 16:15	07/20/22 22:21	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	134	S1+	70 - 130			07/19/22 16:15	07/20/22 22:21	1
o-Terphenyl	120		70 - 130			07/19/22 16:15	07/20/22 22:21	1
Method: 300.0 - Anions, Ion Chro	matography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	101		5.00	mg/Kg			07/22/22 09:17	1
Client Sample ID: PH01A						Lab Sar	nple ID: 890-	2569-2
Date Collected: 07/14/22 10:30							Matri	x: Solid
Date Received: 07/18/22 12:12								
Sample Depth: 3'								
Method: 8021B - Volatile Organic	Compounds	(GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		07/21/22 09:27	07/21/22 14:06	1
Toluene	<0.00100	11	0.00199	ma/Ka		07/21/22 09.27	07/21/22 14:06	1

·				•••••		· ····· <b>j</b> - · ·	
Benzene	< 0.00199	U	0.00199	mg/Kg	07/21/22 09:27	07/21/22 14:06	1
Toluene	<0.00199	U	0.00199	mg/Kg	07/21/22 09:27	07/21/22 14:06	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg	07/21/22 09:27	07/21/22 14:06	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg	07/21/22 09:27	07/21/22 14:06	1
o-Xylene	0.00222		0.00199	mg/Kg	07/21/22 09:27	07/21/22 14:06	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg	07/21/22 09:27	07/21/22 14:06	1

**Eurofins Carlsbad** 

7/25/2022

#### **Client Sample Results**

Job ID: 890-2569-1 SDG: 03E1558015

Matrix: Solid

#### **Client Sample ID: PH01A**

Date Collected: 07/14/22 10:30 Date Received: 07/18/22 12:12

Project/Site: PLU 15 TWR

Sample Depth: 3'

Client: Ensolum

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	154	S1+	70 - 130			07/21/22 09:27	07/21/22 14:06	1
1,4-Difluorobenzene (Surr)	97		70 - 130			07/21/22 09:27	07/21/22 14:06	1
Method: Total BTEX - Total BTEX	<b>Calculation</b>							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			07/21/22 15:53	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			07/21/22 12:58	1
Method: 8015B NM - Diesel Rang	pe Organics (D	RO) (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U *1 *+	50.0	mg/Kg		07/19/22 16:15	07/20/22 22:42	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U *1 *+	50.0	mg/Kg		07/19/22 16:15	07/20/22 22:42	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/19/22 16:15	07/20/22 22:42	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130			07/19/22 16:15	07/20/22 22:42	1
o-Terphenyl	120		70 - 130			07/19/22 16:15	07/20/22 22:42	1
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble						
					_			
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Lab Sample ID: 890-2569-2

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

Percent Surrogate Recovery (Acceptance Limits) BFB1 DFBZ1 Client Sample ID (70-130) (70-130) Lab Sample ID 880-16985-A-1-H MS Matrix Spike 87 107 880-16985-A-1-I MSD Matrix Spike Duplicate 118 94 880-17211-A-1-A MS Matrix Spike 101 99 880-17211-A-1-B MSD Matrix Spike Duplicate 111 90 890-2569-1 PH01 758 S1+ 102 890-2569-2 PH01A 97 154 S1+ LCS 880-30209/1-A Lab Control Sample 116 93 LCS 880-30267/1-A Lab Control Sample 96 120 LCSD 880-30209/2-A Lab Control Sample Dup 96 104 LCSD 880-30267/2-A Lab Control Sample Dup 94 105 MB 880-30209/5-A Method Blank 101 104 MB 880-30267/5-A Method Blank 97 109 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)
880-17086-A-11-C MS	Matrix Spike	87	85
880-17086-A-11-D MSD	Matrix Spike Duplicate	88	87
890-2569-1	PH01	134 S1+	120
890-2569-2	PH01A	106	120
LCS 880-30080/2-A	Lab Control Sample	150 S1+	149 S1+
LCSD 880-30080/3-A	Lab Control Sample Dup	114	115
MB 880-30080/1-A	Method Blank	141 S1+	168 S1+

1CO = 1-Chlorooctane OTPH = o-Terphenyl

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Job ID: 890-2569-1 SDG: 03E1558015

Prep Type: Total/NA

Prep Type: Total/NA

#### **QC Sample Results**

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

Method: 8021B - Volatile Or	ganic Compo	ounds (GC	;)						
Lab Sample ID: MB 880-30209/5 Matrix: Solid	5- <b>A</b>					Client Sa	mple ID: Metho Prep Type: 1	Total/NA	4
Analysis Batch: 30192	МВ	МВ					Prep Batch	1: 30209	5
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:27	07/21/22 11:20	1	6
Toluene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:27	07/21/22 11:20	1	_
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:27	07/21/22 11:20	1	7
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/21/22 09:27	07/21/22 11:20	1	
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:27	07/21/22 11:20	1	8
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/21/22 09:27	07/21/22 11:20	1	
	МВ	МВ							9
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	101		70 - 130			07/21/22 09:27	07/21/22 11:20	1	10
1,4-Difluorobenzene (Surr)	104		70 - 130			07/21/22 09:27	07/21/22 11:20	1	

#### Lab Sample ID: LCS 880-30209/1-A Matrix: Solid

#### Analysis Batch: 30192

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.08401		mg/Kg		84	70 - 130	
Toluene	0.100	0.09906		mg/Kg		99	70 - 130	
Ethylbenzene	0.100	0.1113		mg/Kg		111	70 - 130	
m-Xylene & p-Xylene	0.200	0.2318		mg/Kg		116	70 - 130	
o-Xylene	0.100	0.1269		mg/Kg		127	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	116		70 - 130
1,4-Difluorobenzene (Surr)	93		70 - 130

#### Lab Sample ID: LCSD 880-30209/2-A

#### Matrix: Solid

Analysis Batch: 30192							Prep	Batch:	30209
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.1030		mg/Kg		103	70 - 130	20	35
Toluene	0.100	0.09343		mg/Kg		93	70 - 130	6	35
Ethylbenzene	0.100	0.09535		mg/Kg		95	70 - 130	15	35
m-Xylene & p-Xylene	0.200	0.1889		mg/Kg		94	70 - 130	20	35
o-Xylene	0.100	0.1032		mg/Kg		103	70 - 130	21	35

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

#### Lab Sample ID: 880-16985-A-1-H MS

#### Matrix: Solid Analysia Rataby 20102

Analysis Batch: 30192									Prep	Batch: 30209
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U	0.0998	0.07821		mg/Kg		78	70 - 130	
Toluene	<0.00201	U	0.0998	0.09070		mg/Kg		91	70 - 130	

**Eurofins Carlsbad** 

Prep Type: Total/NA

**Client Sample ID: Matrix Spike** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Job ID: 890-2569-1

Lab Sample ID: 880-16985-A-1-H MS

Lab Sample ID: 880-16985-A-1-I MSD

#### **QC Sample Results**

MS MS

MSD MSD

Qualifier

Unit

mg/Kg

mg/Kg

mg/Kg

Result

0.09555

0.1898

0.1013

Spike

Added

0.0998

0.200

0.0998

Limits

70 - 130

70 - 130

Spike

Analysis Batch: 30192

4-Bromofluorobenzene (Surr)

Analysis Batch: 30192

1,4-Difluorobenzene (Surr)

Matrix: Solid

Analyte

o-Xylene

Surrogate

Matrix: Solid

Analyte Benzene

Toluene

o-Xylene

Ethylbenzene

m-Xylene & p-Xylene

Ethylbenzene

m-Xylene & p-Xylene

Sample Sample

<0.00201

<0.00402 U

<0.00201 U

107

87

%Recovery

**Result Qualifier** 

U

MS MS

Sample Sample

<0.00201 U

<0.00201 U

<0.00201 U

<0.00402 U

<0.00201 U

Result Qualifier

Qualifier

%Rec

Limits

70 - 130

70 - 130

70 - 130

%Rec

**Client Sample ID: Method Blank** 

07/22/22 11:11

07/22/22 11:11

**Client Sample ID: Lab Control Sample** 

07/21/22 13:37

07/21/22 13:37

%Rec

96

95

102

D

#### **Client Sample ID: Matrix Spike** Prep Type: Total/NA Prep Batch: 30209 7 **Client Sample ID: Matrix Spike Duplicate** Prep Type: Total/NA Prep Batch: 30209 RPD RPD Limit 9 35 6 35 10 35 35 14

35

1

1

16

Prep Type: Total/NA

Prep Batch: 30267

Added	Result	Qualifier	Unit	D	%Rec	Limits
0.100	0.08560		mg/Kg		85	70 - 130
0.100	0.09653		mg/Kg		96	70 - 130
0.100	0.1057		mg/Kg		105	70 - 130
0.200	0.2190		mg/Kg		109	70 - 130
0.100	0.1191		mg/Kg		119	70 - 130
Limits						

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	118		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

#### Lab Sample ID: MB 880-30267/5-A Matrix: Solid Analysis Batch: 30326

	MB	мв						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00200	U	0.00200	mg/Kg		07/21/22 13:37	07/22/22 11:11	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/21/22 13:37	07/22/22 11:11	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/21/22 13:37	07/22/22 11:11	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/21/22 13:37	07/22/22 11:11	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/21/22 13:37	07/22/22 11:11	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/21/22 13:37	07/22/22 11:11	1
	MB	MB						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

4-Bromofluorobenzene (Surr)	97	70 - 130
1,4-Difluorobenzene (Surr)	109	70 - 130

#### Lab Sample ID: LCS 880-30267/1-A Matrix: Solid Analysis Batch: 30326

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.08370		mg/Kg		84	70 - 130	
Toluene	0.100	0.09615		mg/Kg		96	70 - 130	
Ethylbenzene	0.100	0.1058		mg/Kg		106	70 - 130	
m-Xylene & p-Xylene	0.200	0.2262		mg/Kg		113	70 - 130	

**Eurofins Carlsbad** 

Prep Type: Total/NA

Prep Batch: 30267

Lab Sample ID: LCS 880-30267/1-A

#### **QC Sample Results**

Client: Ensolum Project/Site: PLU 15 TWR

Analysis Batch: 30326

Matrix: Solid

10, 200 2560 1

Job ID: 890-2569-1 SDG: 03E1558015

Prep Type: Total/NA

Prep Batch: 30267

**Client Sample ID: Lab Control Sample** 

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

			Spike	LCS	LCS				%Rec		
Analyte			Added		Qualifier	Unit	D	%Rec	Limits		
p-Xylene			0.100	0.1266		mg/Kg		127	70 - 130		
Surra anata	LCS %Recovery		Lingita								
Surrogate 4-Bromofluorobenzene (Surr)		Quaimer	Limits 70 - 130								
1,4-Difluorobenzene (Surr)	96		70 - 130 70 - 130								
	30		10 - 150								
Lab Sample ID: LCSD 880-3	0267/2-A					Clie	nt Sam	ple ID: I	Lab Contro	ol Sample	e Duj
Matrix: Solid								· · · ·		Type: Tot	
Analysis Batch: 30326									Prep	Batch:	3026
			Spike	LCSD	LCSD				%Rec		RP
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Lim
Benzene			0.100	0.1006		mg/Kg		101	70 - 130	18	3
Toluene			0.100	0.08529		mg/Kg		85	70 - 130	12	3
Ethylbenzene			0.100	0.08257		mg/Kg		83	70 - 130	25	3
m-Xylene & p-Xylene			0.200	0.1615		mg/Kg		81	70 - 130	33	3
o-Xylene			0.100	0.09189		mg/Kg		92	70 - 130	32	3
	1050	LCSD									
Surrogate			Limits								
4-Bromofluorobenzene (Surr)		quamer	70 - 130								
	• .										
1,4-Difluorobenzene (Surr)	105 <b>A-1-A MS</b>		70 - 130					Client	Sample ID Prep T	: Matrix Type: Tot	
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17211-4 Matrix: Solid	A-1-A MS	Samala		МС	ме			Client	Prep T Prep		tal/N/
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17211-4 Matrix: Solid Analysis Batch: 30326	A-1-A MS Sample	Sample	Spike		MS	Unit	Р		Prep T Prep %Rec	Type: Tot	tal/N/
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17211-A Matrix: Solid Analysis Batch: 30326 Analyte	A-1-A MS Sample	Qualifier	Spike Added	Result	Qualifier	_ Unit	D	%Rec	Prep T Prep %Rec Limits	Type: Tot	tal/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17211-4 Matrix: Solid Analysis Batch: 30326 Analyte Benzene	A-1-A MS Sample 	Qualifier U F1 F2	Spike 	<b>Result</b> 0.03468	Qualifier F1	mg/Kg	D	%Rec 34	Prep T Prep %Rec Limits 70 - 130	Type: Tot	tal/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17211-4 Matrix: Solid Analysis Batch: 30326 Analyte Benzene Toluene	A-1-A MS Sample Result <0.00200 <0.00200	Qualifier U F1 F2 U F1 F2	Spike Added 0.0998 0.0998	<b>Result</b> 0.03468 0.03720	Qualifier F1 F1	mg/Kg mg/Kg	D	% <b>Rec</b> 34 37	Prep T Prep %Rec Limits 70 - 130 70 - 130	Type: Tot	tal/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17211-4 Matrix: Solid Analysis Batch: 30326 Analyte Benzene Toluene Ethylbenzene	A-1-A MS Sample Result <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.0	Qualifier U F1 F2 U F1 F2 U F1 F2 U F1 F2	Spike Added 0.0998 0.0998 0.0998	Result           0.03468           0.03720           0.03732	Qualifier F1 F1 F1	mg/Kg mg/Kg mg/Kg	D	%Rec 34 37 37	Prep T           Prep           %Rec           Limits           70 - 130           70 - 130           70 - 130	Type: Tot	tal/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17211-4 Matrix: Solid Analysis Batch: 30326 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	A-1-A MS Sample Result <ul> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> </ul>	<b>Qualifier</b> U F1 F2 U F1 F2 U F1 F2 U F1 F2 U F1 F2	Spike Added 0.0998 0.0998 0.0998 0.200	Result           0.03468           0.03720           0.03732           0.07597	Qualifier F1 F1 F1 F1	mg/Kg mg/Kg mg/Kg mg/Kg	<u> </u>	<mark>%Rec</mark> 34 37 37 37	Prep T           Prep           %Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	Type: Tot	tal/N/
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17211-4 Matrix: Solid Analysis Batch: 30326 Analyte Benzene Toluene Ethylbenzene	A-1-A MS Sample Result <0.00200 <0.00200 <0.00200 <0.00399 <0.00200	Qualifier U F1 F2 U F1 F2 U F1 F2 U F1 F2 U F1 F2 U F1 F2	Spike Added 0.0998 0.0998 0.0998	Result           0.03468           0.03720           0.03732	Qualifier F1 F1 F1 F1	mg/Kg mg/Kg mg/Kg	<u>D</u>	%Rec 34 37 37	Prep T           Prep           %Rec           Limits           70 - 130           70 - 130           70 - 130	Type: Tot	tal/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17211-4 Matrix: Solid Analysis Batch: 30326 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene	A-1-A MS Sample Result <0.00200 <0.00200 <0.00200 <0.00399 <0.00200 MS	Qualifier U F1 F2 U F1 F2 U F1 F2 U F1 F2 U F1 F2 U F1 F2 MS	Spike Added 0.0998 0.0998 0.0998 0.200 0.0998	Result           0.03468           0.03720           0.03732           0.07597	Qualifier F1 F1 F1 F1	mg/Kg mg/Kg mg/Kg mg/Kg	<u> </u>	<mark>%Rec</mark> 34 37 37 37	Prep T           Prep           %Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	Type: Tot	tal/N/
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17211-4 Matrix: Solid Analysis Batch: 30326 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate	A-1-A MS Sample Result <ul> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li><i>MS</i></li> <li>%Recovery</li> </ul>	Qualifier U F1 F2 U F1 F2 U F1 F2 U F1 F2 U F1 F2 U F1 F2 MS	Spike Added 0.0998 0.0998 0.200 0.200 0.0998 Limits	Result           0.03468           0.03720           0.03732           0.07597	Qualifier F1 F1 F1 F1	mg/Kg mg/Kg mg/Kg mg/Kg	<u> </u>	<mark>%Rec</mark> 34 37 37 37	Prep T           Prep           %Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	Type: Tot	tal/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17211-4 Matrix: Solid Analysis Batch: 30326 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr)	A-1-A MS Sample Result <ul> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>MS</li> <li>%Recovery</li> <li>101</li> </ul>	Qualifier U F1 F2 U F1 F2 U F1 F2 U F1 F2 U F1 F2 U F1 F2 MS	Spike           Added           0.0998           0.0998           0.0998           0.200           0.0998           Limits           70 - 130	Result           0.03468           0.03720           0.03732           0.07597	Qualifier F1 F1 F1 F1	mg/Kg mg/Kg mg/Kg mg/Kg	<u> </u>	<mark>%Rec</mark> 34 37 37 37	Prep T           Prep           %Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	Type: Tot	tal/N/
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17211-4 Matrix: Solid Analysis Batch: 30326 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate	A-1-A MS Sample Result <ul> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li><i>MS</i></li> <li>%Recovery</li> </ul>	Qualifier U F1 F2 U F1 F2 U F1 F2 U F1 F2 U F1 F2 U F1 F2 MS	Spike Added 0.0998 0.0998 0.200 0.200 0.0998 Limits	Result           0.03468           0.03720           0.03732           0.07597	Qualifier F1 F1 F1 F1	mg/Kg mg/Kg mg/Kg mg/Kg	<u>D</u>	<mark>%Rec</mark> 34 37 37 37	Prep T           Prep           %Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	Type: Tot	tal/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17211-4 Matrix: Solid Analysis Batch: 30326 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr)	A-1-A MS Sample Result <ul> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00399</li> <li>&lt;0.00200</li> </ul> <li><i>MS</i> %Recovery 101 99</li>	Qualifier U F1 F2 U F1 F2 U F1 F2 U F1 F2 U F1 F2 U F1 F2 MS	Spike           Added           0.0998           0.0998           0.0998           0.200           0.0998           Limits           70 - 130	Result           0.03468           0.03720           0.03732           0.07597	Qualifier F1 F1 F1 F1	mg/Kg mg/Kg mg/Kg mg/Kg		%Rec 34 37 37 37 45	Prep T           Prep           %Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	Type: Tot Batch: : 	tal/N/ 30267
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17211-4 Matrix: Solid Analysis Batch: 30326 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17211-4	A-1-A MS Sample Result <ul> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00399</li> <li>&lt;0.00200</li> </ul> <li><i>MS</i> %Recovery 101 99</li>	Qualifier U F1 F2 U F1 F2 U F1 F2 U F1 F2 U F1 F2 U F1 F2 MS	Spike           Added           0.0998           0.0998           0.0998           0.200           0.0998           Limits           70 - 130	Result           0.03468           0.03720           0.03732           0.07597	Qualifier F1 F1 F1 F1	mg/Kg mg/Kg mg/Kg mg/Kg		%Rec 34 37 37 37 45	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	Type: Tot Batch: : 	tal/NA 3026
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17211-4 Matrix: Solid Analysis Batch: 30326 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17211-4 Matrix: Solid	A-1-A MS Sample Result <ul> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00399</li> <li>&lt;0.00200</li> </ul> <li><i>MS</i> %Recovery 101 99</li>	Qualifier U F1 F2 U F1 F2 U F1 F2 U F1 F2 U F1 F2 U F1 F2 MS	Spike           Added           0.0998           0.0998           0.0998           0.200           0.0998           Limits           70 - 130	Result           0.03468           0.03720           0.03732           0.07597	Qualifier F1 F1 F1 F1	mg/Kg mg/Kg mg/Kg mg/Kg		%Rec 34 37 37 37 45	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	Type: Tot Batch: : 	licato
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17211-4 Matrix: Solid Analysis Batch: 30326 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17211-4 Matrix: Solid	A-1-A MS Sample Result <ul> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00399</li> <li>&lt;0.00200</li> </ul> <li><i>MS</i> %Recovery 101 99</li>	Qualifier U F1 F2 U F1 F2 U F1 F2 U F1 F2 U F1 F2 MS Qualifier	Spike           Added           0.0998           0.0998           0.0998           0.200           0.0998           Limits           70 - 130	Result           0.03468           0.03720           0.03732           0.07597           0.04442	Qualifier F1 F1 F1 F1	mg/Kg mg/Kg mg/Kg mg/Kg		%Rec 34 37 37 37 45	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	Type: Tot Batch: : 	blicate
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17211-4 Matrix: Solid Analysis Batch: 30326 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17211-4 Matrix: Solid Analysis Batch: 30326	A-1-A MS Sample Result <0.00200 <0.00200 <0.00200 <0.00200 MS %Recovery 101 99 A-1-B MSD Sample	Qualifier U F1 F2 U F1 F2 U F1 F2 U F1 F2 U F1 F2 MS Qualifier	Spike           Added           0.0998           0.0998           0.0998           0.200           0.0998           0.200           0.0998           D.200           0.0998           0.200           0.0998           0.200           0.0998           D.200           0.0998	Result           0.03468           0.03720           0.03732           0.07597           0.04442	Qualifier F1 F1 F1 F1 F1 F1	mg/Kg mg/Kg mg/Kg mg/Kg		%Rec 34 37 37 37 45	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 9: Matrix Sp Prep T Prep T	Type: Tot Batch: : 	tal/NJ 3026
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17211-4 Matrix: Solid Analysis Batch: 30326 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17211-4 Matrix: Solid Analysis Batch: 30326 Analyte	A-1-A MS Sample Result <0.00200 <0.00200 <0.00200 <0.00200 MS %Recovery 101 99 A-1-B MSD Sample	Qualifier U F1 F2 U F1 F2 U F1 F2 U F1 F2 U F1 F2 MS Qualifier Sample Qualifier	Spike           Added           0.0998           0.0998           0.0998           0.200           0.0998           0.200           0.0998           Limits           70 - 130           70 - 130           70 - 130           Spike	Result           0.03468           0.03720           0.03732           0.07597           0.04442	Qualifier F1 F1 F1 F1 F1 MSD Qualifier	mg/Kg mg/Kg mg/Kg mg/Kg	ient Sa	%Rec 34 37 37 45	Prep T Prep %Rec Limits 70 - 130 70 - 190 %Rec	Dike Dup Dike Dup Dype: Tot Diatch: 3	blicat tal/N/ 3026
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17211-4 Matrix: Solid Analysis Batch: 30326 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17211-4 Matrix: Solid Analysis Batch: 30326 Analyte Benzene	A-1-A MS	Qualifier           U F1 F2           MS           Qualifier           U F1 F2	Spike           Added           0.0998           0.0998           0.0998           0.200           0.0998           Limits           70 - 130           70 - 130           70 - 130           Spike           Added	Result           0.03468           0.03720           0.03732           0.07597           0.04442           MSD           Result	Qualifier F1 F1 F1 F1 F1 F1 F1 F1 F1 F1 F1 F1 F1	mg/Kg mg/Kg mg/Kg mg/Kg Cl	ient Sa	%Rec 34 37 37 45 ample ID	Prep T Prep %Rec Limits 70 - 130 70 - 190 %Rec Limits	Dike Dup Dike Dup Dype: Tot Datch: 3	licate tal/N/ 3026
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17211-4 Matrix: Solid Analysis Batch: 30326 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr)	A-1-A MS Sample Result <ul> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>MS</li> <li>%Recovery</li> <li>101</li> <li>99</li> </ul> <li>A-1-B MSD</li> <li>Sample Result <ul> <li>&lt;0.00200</li> </ul></li>	Qualifier           U F1 F2           MS           Qualifier           U F1 F2           U F1 F2	Spike           Added           0.0998           0.0998           0.200           0.298           0.200           0.0998           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130           0.091           Spike           Added           0.100	Result           0.03468           0.03720           0.03732           0.07597           0.04442           MSD           Result           0.07374	Qualifier F1 F1 F1 F1 F1 F1 F1 F1 F1 F1 F2 F2 F2	mg/Kg mg/Kg mg/Kg mg/Kg Cl	ient Sa	%Rec           34           37           37           45	Prep T Prep 7 %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 9: Matrix Sp Prep 7 Prep 7 %Rec Limits 70 - 130	pike Dup Type: Tot Batch: : Pike Dup Type: Tot Batch: : <u>RPD</u> 72	blicate tal/NA 30267 Plicate tal/NA 30267 RPI Limi 33 33
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17211-4 Matrix: Solid Analysis Batch: 30326 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17211-4 Matrix: Solid Analysis Batch: 30326 Analyte Benzene Toluene	A-1-A MS Sample Result <ul> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li><i>MS</i></li> <li><i>%Recovery</i></li> <li>101</li> <li>99</li> </ul> <li>A-1-B MSD</li> <li>Sample Result <ul> <li>&lt;0.00200</li> <li><ul> <li><ul> <li><ul> <li>A-1.00</li> <li><ul> <l< td=""><td>Qualifier U F1 F2 U F1 F2 U F1 F2 U F1 F2 U F1 F2 MS Qualifier U F1 F2 U F1 F2 U F1 F2 U F1 F2 U F1 F2 U F1 F2</td><td>Spike           Added           0.0998           0.0998           0.200           0.0998           0.200           0.0998          </td><td>Result           0.03468           0.03720           0.03732           0.07597           0.04442           MSD           Result           0.07374           0.08333</td><td>Qualifier           F1           F1           F1           F1           F2           F2</td><td>mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg</td><td>ient Sa</td><td>%Rec           34           37           37           45</td><td>Prep T Prep 7 %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 %Rec Limits 70 - 130 70 - 130</td><td>Dike Dup Type: Tot Dike Dup Type: Tot Distance: Content Distance: Content Distance:</td><td>tal/NA 30267</td></l<></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li>	Qualifier U F1 F2 U F1 F2 U F1 F2 U F1 F2 U F1 F2 MS Qualifier U F1 F2 U F1 F2 U F1 F2 U F1 F2 U F1 F2 U F1 F2	Spike           Added           0.0998           0.0998           0.200           0.0998           0.200           0.0998	Result           0.03468           0.03720           0.03732           0.07597           0.04442           MSD           Result           0.07374           0.08333	Qualifier           F1           F1           F1           F1           F2           F2	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	ient Sa	%Rec           34           37           37           45	Prep T Prep 7 %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 %Rec Limits 70 - 130 70 - 130	Dike Dup Type: Tot Dike Dup Type: Tot Distance: Content Distance:	tal/NA 30267

#### **QC Sample Results**

#### Job ID: 890-2569-1 SDG: 03E1558015

Client: Ensolum Project/Site: PLU 15 TWR

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

Matrix: Solid											Prep Ty Prep B		
Analysis Batch: 30326											Prep E	atch:	3026
	MSD												
Surrogate	%Recovery	Qua	lifier	Limits									
4-Bromofluorobenzene (Surr)	111			70 - 130									
1,4-Difluorobenzene (Surr)	90			70 - 130									
ethod: 8015B NM - Diese	I Range O	rgar	nics (DF	RO) (GC)									
ab Sample ID: MB 880-30080	/1-A									Client Sa	mple ID: M		
Matrix: Solid											Prep Ty		
Analysis Batch: 30146											Prep B	atch:	3008
			MB										
Analyte			Qualifier	RI		Uni		<u>D</u>		repared	Analyzed		Dil Fa
Gasoline Range Organics GRO)-C6-C10	<	<50.0	U	50.0	)	mg/	Kg		07/19	9/22 16:15	07/20/22 15	:46	
Diesel Range Organics (Over C10-C28)	<	<50.0	U	50.0	)	mg/	Kg		07/19	9/22 16:15	07/20/22 15	:46	
Oll Range Organics (Over C28-C36)	<	<50.0	U	50.0	)	mg/	Kg		07/19	9/22 16:15	07/20/22 15	:46	
		MB	МВ										
Surrogate	%Reco	overy	Qualifier	Limits					Pi	repared	Analyzed	1	Dil Fa
-Chlorooctane		141	S1+	70 - 130	-				07/1	9/22 16:15	07/20/22 15	:46	
-Terphenyl		168	S1+	70 - 130					07/1	9/22 16:15	07/20/22 15	:46	
nalyte asoline Range Organics				Spike Added 1000		LCS Qualifier *+	Unit mg/Kg		D	%Rec	%Rec Limits 70 - 130		
GRO)-C6-C10 Diesel Range Organics (Over				1000	1530	*+	mg/Kg			153	70 - 130		
:10-C28)										100			
	LCS	LCS											
urrogate	%Recovery		lifier	Limits									
-Chlorooctane	150			70 - 130									
-Terphenyl	149	S1+		70 - 130									
ab Sample ID: LCSD 880-300	80/3-A						CI	ient	Sam	ple ID: L	ab Control		
Aatrix: Solid											Prep Ty		
Analysis Batch: 30146											Prep B	atch:	
				Spike		LCSD					%Rec		RP
nalyte				Added		Qualifier	Unit		D	%Rec	Limits	RPD	Lim
Basoline Range Organics GRO)-C6-C10				1000	1032	*1	mg/Kg			103	70 - 130	26	2
liesel Range Organics (Over				1000	1144	*1	mg/Kg			114	70 - 130	29	2
:10-C28)													
(10-C28)	LCSD	LCS	D										
	LCSD %Recovery			Limits									
C10-C28) Surrogate 1-Chlorooctane				Limits 70 - 130									

Lab Sample ID: 880-17086-A-11-C MS

#### **QC Sample Results**

MS MS

983.6

843.1

Result Qualifier

Unit

mg/Kg

mg/Kg

D

%Rec

96

84

Spike

Added

1000

1000

Limits 70 - 130

70 - 130

Analysis Batch: 30146

Gasoline Range Organics

Diesel Range Organics (Over

Matrix: Solid

(GRO)-C6-C10

Analyte

C10-C28)

Surrogate

o-Terphenyl

1-Chlorooctane

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

Sample Sample

Result Qualifier

<50.0 U \*1 \*+

<50.0 U \*1 \*+

MS MS

%Recovery Qualifier

87

85

Prep Type: Total/NA

Prep Batch: 30080

**Client Sample ID: Matrix Spike** 

%Rec

Limits

70 - 130

70 - 130

Lab Sample ID: 880-17086-A- Matrix: Solid Analysis Batch: 30146	11-D MSD					CI	lient Sa	ample IC		oike Dup Type: To Batch:	tal/NA
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1 *+	999	989.4		mg/Kg		97	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<50.0	U *1 *+	999	863.0		mg/Kg		86	70 - 130	2	20
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	88		70 - 130								
o-Terphenyl	87		70 - 130								

#### Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-30059/1-A Matrix: Solid Analysis Batch: 30226									Client S	Sample ID: M Prep T		
	MB	MB										
Analyte	Result	Qualifier		RL		Unit		D P	repared	Analyze	k	Dil Fac
Chloride	<5.00	U		5.00		mg/k	ίg			07/22/22 08	:50	1
Lab Sample ID: LCS 880-30059/2-A Matrix: Solid Analysis Batch: 30226								Client	t Sample	e ID: Lab Cor Prep T		
			Spike		LCS	LCS				%Rec		
Analyte			Added		Result	Qualifier	Unit	D	%Rec	Limits		
Chloride			250		267.1		mg/Kg		107	90 - 110		
Lab Sample ID: LCSD 880-30059/3-A Matrix: Solid Analysis Batch: 30226							CI	ient San	nple ID:	Lab Control Prep T		
			Spike		LCSD	LCSD				%Rec		RPD
Analyte			Added		Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride			250		267.6		mg/Kg		107	90 - 110	0	20

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Released to Imaging: 11/22/2022 11:30:50 AM

Client: Ensolum

Project/Site: PLU 15 TWR

#### Job ID: 890-2569-1 SDG: 03E1558015

#### Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-2569-1 MS Matrix: Solid Analysis Batch: 30226									Client Sa Prep	mple ID: Type: S	
Analyte	•	Sample Qualifier	Spike Added 250		MS Qualifier	<mark>Unit</mark> mg/Kg	<u>D</u>	<b>%Rec</b>	%Rec Limits 90 - 110		
Lab Sample ID: 890-2569-1 MSD Matrix: Solid Analysis Batch: 30226									Client Sa Prep	mple ID: Type: S	
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	101		250	371.7		mg/Kg		108	90 - 110	0	20

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#### Received by OCD: 8/10/2022 10:53:56 AM

**QC** Association Summary

Client: Ensolum Project/Site: PLU 15 TWR Job ID: 890-2569-1 SDG: 03E1558015

#### **GC VOA**

#### alvoia P . -----

ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
90-2569-1	PH01	Total/NA	Solid	8021B	30209
890-2569-2	PH01A	Total/NA	Solid	8021B	30209
MB 880-30209/5-A	Method Blank	Total/NA	Solid	8021B	30209
LCS 880-30209/1-A	Lab Control Sample	Total/NA	Solid	8021B	30209
LCSD 880-30209/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30209
380-16985-A-1-H MS	Matrix Spike	Total/NA	Solid	8021B	30209
880-16985-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30209
ep Batch: 30209					
_ab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
90-2569-1	PH01	Total/NA	Solid	5035	
390-2569-2	PH01A	Total/NA	Solid	5035	
/IB 880-30209/5-A	Method Blank	Total/NA	Solid	5035	
_CS 880-30209/1-A	Lab Control Sample	Total/NA	Solid	5035	
_CSD 880-30209/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
380-16985-A-1-H MS	Matrix Spike	Total/NA	Solid	5035	
880-16985-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
ep Batch: 30267					
ab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
90-2569-1	PH01	Total/NA	Solid	5035	
IB 880-30267/5-A	Method Blank	Total/NA	Solid	5035	
CS 880-30267/1-A	Lab Control Sample	Total/NA	Solid	5035	
CSD 880-30267/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
380-17211-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-17211-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
nalysis Batch: 30295					
_ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
390-2569-1	PH01	Total/NA	Solid	Total BTEX	
890-2569-2	PH01A	Total/NA	Solid	Total BTEX	
nalysis Batch: 30326					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
390-2569-1	PH01	Total/NA	Solid	8021B	30267
/IB 880-30267/5-A	Method Blank	Total/NA	Solid	8021B	30267
CS 880-30267/1-A	Lab Control Sample	Total/NA	Solid	8021B	30267
CSD 880-30267/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30267
	Matrix Spike	Total/NA	Solid	8021B	30267
380-17211-A-1-A MS					

Prep Batch: 30080

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2569-1	PH01	Total/NA	Solid	8015NM Prep	
890-2569-2	PH01A	Total/NA	Solid	8015NM Prep	
MB 880-30080/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30080/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30080/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-17086-A-11-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	

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#### **QC Association Summary**

Client: Ensolum Project/Site: PLU 15 TWR

GC Semi VOA (Continued)

#### Prep Batch: 30080 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
380-17086-A-11-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep		
nalysis Batch: 30146	;					
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	
890-2569-1	PH01	Total/NA	Solid	8015B NM	30080	
890-2569-2	PH01A	Total/NA	Solid	8015B NM	30080	
MB 880-30080/1-A	Method Blank	Total/NA	Solid	8015B NM	30080	
LCS 880-30080/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30080	
LCSD 880-30080/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30080	
880-17086-A-11-C MS	Matrix Spike	Total/NA	Solid	8015B NM	30080	
880-17086-A-11-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30080	
nalysis Batch: 30254						
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-2569-1	PH01	Total/NA	Solid	8015 NM		
890-2569-2	PH01A	Total/NA	Solid	8015 NM		
IPLC/IC						

#### HPLC/IC

#### Leach Batch: 30059

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2569-1	PH01	Soluble	Solid	DI Leach	
890-2569-2	PH01A	Soluble	Solid	DI Leach	
MB 880-30059/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-30059/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-30059/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2569-1 MS	PH01	Soluble	Solid	DI Leach	
890-2569-1 MSD	PH01	Soluble	Solid	DI Leach	

#### Analysis Batch: 30226

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2569-1	PH01	Soluble	Solid	300.0	30059
890-2569-2	PH01A	Soluble	Solid	300.0	30059
MB 880-30059/1-A	Method Blank	Soluble	Solid	300.0	30059
LCS 880-30059/2-A	Lab Control Sample	Soluble	Solid	300.0	30059
LCSD 880-30059/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30059
890-2569-1 MS	PH01	Soluble	Solid	300.0	30059
890-2569-1 MSD	PH01	Soluble	Solid	300.0	30059

Job ID: 890-2569-1 SDG: 03E1558015

Job ID: 890-2569-1 SDG: 03E1558015

#### Lab Sample ID: 890-2569-1 Matrix: Solid

Client Sample ID: PH01 Date Collected: 07/14/22 10:25 Date Received: 07/18/22 12:12

Project/Site: PLU 15 TWR

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			5.01 g	5 mL	30209	07/21/22 09:27	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30192	07/21/22 14:27	MR	XEN MID
Total/NA	Prep	5035			5.03 g	5 mL	30267	07/21/22 13:37	MR	XEN MID
Total/NA	Analysis	8021B		100	5 mL	5 mL	30326	07/22/22 22:33	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30295	07/21/22 15:53	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30254	07/21/22 12:58	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	30080	07/19/22 16:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30146	07/20/22 22:21	SM	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	30059	07/19/22 11:04	СН	XEN MID
Soluble	Analysis	300.0		1			30226	07/22/22 09:17	SMC	XEN MID

#### **Client Sample ID: PH01A**

Date Collected: 07/14/22 10:30 Date Received: 07/18/22 12:12

#### Lab Sample ID: 890-2569-2

Matrix: Solid

5 6

9

12 13

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	30209	07/21/22 09:27	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30192	07/21/22 14:06	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30295	07/21/22 15:53	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30254	07/21/22 12:58	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	30080	07/19/22 16:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30146	07/20/22 22:42	SM	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	30059	07/19/22 11:04	СН	XEN MID
Soluble	Analysis	300.0		1			30226	07/22/22 09:45	SMC	XEN MID

#### Laboratory References:

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

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Accreditation/Certification Summary

Client: Ensolum Project/Site: PLU 15 TWR

Laboratory: Eurofins Midland

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

nority Program Identification Number Expiration Date							
xas	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	ay include analytes fo			
the agency does not o		Matrix	Analyte				
Analysis Method	fer certificationPrep Method	Matrix	Analyte				
6 ,		Matrix Solid	Analyte Total TPH				

10

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Job ID: 890-2569-1

SDG: 03E1558015

Eurofins Carlsbad

Client: Ensolum Project/Site: PLU 15 TWR Job ID: 890-2569-1 SDG: 03E1558015

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

#### Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions. SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

Client: Ensolum Project/Site: PLU 15 TWR

#### Job ID: 890-2569-1 SDG: 03E1558015

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2569-1	PH01	Solid	07/14/22 10:25	07/18/22 12:12	2'
890-2569-2	PH01A	Solid	07/14/22 10:30	07/18/22 12:12	3'

Project Manager: B	Ben Belill			Bill to: (if different)	ent)	Garre	Garrett Green	ă		Work C	Work Order Comments
	Ensolum, LLC			Company Name:	me:	XTO	XTO Energy, Inc.	, Inc.	Progra	Program: UST/PST   PRP Brownfields RRC	Brownfields
	3122 National parks Hwy	ks Hwy		Address:		3104	3104 E. Green Street	en Stre	State o	State of Project:	1
e ZIP:	Carlsbad, NM 88220	20		City, State ZIP:	Ģ	Carls	Carlsbad, NM 88220	M 8822	Reporti	Reporting: Level II Level III PST/UST TRRP	
	9898540852		Ē	Email: bbelill@ensolum.com	olum.cc	m			Deliver	Deliverables: EDD	ADaPT  Other:
Project Name:	PLU 15 TWR	TWR	1	Turn Around	$\vdash$				ANALYSIS REQUEST		Preservative Codes
Project Number:	03E1558015	58015	✓ Routine	e 🗌 Rush	Pres. Code	0 7					None: NO
Project Location:	EDDY COUNTY, NM	JNTY, NM	Due Date:	9							Cool: Cool
Sampler's Name:	Conner Shore	Shore	TAT starts	TAT starts the day received by	by					_	HCL: HC
PO#			the lab, if	the lab, if received by 4:30pm	L			_			H <sub>2</sub> S0 <sub>4</sub> : H <sub>2</sub>
SAMPLE RECEIPT	Temp Blank:	IK: Yes	No Wet Ice:	CTES NO	nete	.0)					H <sub>3</sub> PO <sub>4</sub> : HP
Samples Received Intact:	2		Thermometer ID:	Three as	uran	300					NaHSO4: NABIS
Cooler Custody Seals:	Yes No	NIA Correc	Correction Factor:	:0:0	Pa	PA:			In the interim of Custody	-	Na2S2O3: NaSO3
Sample Custody Seals:	Yes No	WA Tempe	Temperature Reading:	P.	12	:S (E		1	890-2569 01		Zn Acetate+NaOH: Zn
Total Containers:		Correc	Corrected Temperature:	5	1	RIDE	015)	802			NaOH+Ascorbic Acid: SAPC
Sample Identification		Matrix Date Sampled	te Time pled Sampled	d Depth Grab/	np Cont	CHLOP	TPH (8	BTEX (			Sample Comments
PH01	s	71.75	71:15/2022 /025	2' Comp	np 1	×	×	×			
PH01A	S	71/35	718512022 1030	3' Comp	np 1	×	×	×			
PH01B	S	7135	7125/2022 1040	4' Comp	np 1	×	×	×			*HOLD Pending 3' sample
		17/14/000	lodes		┢	┝					
				$\setminus$	╞	-					Cost Center: 2027711001
					+						
			-		┝	t					Incident Numbers:
1					+	$\uparrow$					nAPP2207746719
Lu					+	╋					
Total 200.7 / 6010	0 200.8 / 6020:	<u>.</u>	8RCRA 1	13PPM Texas 11		AI Sb As	Ва	Be B (	Cd Ca Cr Co Cu Fe Pb Mg Mn	Mn Mo Ni K Se Ag S	SiO <sub>2</sub> Na Sr TI Sn U
Circle Method(s) and Metal(s) to be analyzed	Metal(s) to be a	inalyzed	TCLP	TCLP / SPLP 6010: 8RCRA	BRCRA		Sb As Ba Be	Be C	Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U		Hg: 1631 / 245.1 / 7470
Notice: Signature of this doc of service. Eurofins Xenco v	cument and relinquish will be flable only for t		es constitutes a val ples and shall not a	d purchase order fro ssume any responsi	om client bility for a	company any loss	y to Euro es or exp	fins Xenc enses in rofins Xe	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 share 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 will be made and a subcont and a share and scheme any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of the cost of samples and scheme and scheme and scheme and scheme submitted to Eurofins Xenco but not analyzed. These terms will be enforced unless previously negotiated.	itandard terms and conditic cumstances beyond the cor rced unless previously neg	ens trol rilated.
Relinguished by: (Signature)	(Signature)		Received by: (Signature)	nature)		Date	Date/Time		Relinquished by: (Signature)	Received by: (Signature)	ignature)
28		Trans	e o	Yokat	7	18	B	J.	V		
	1		(	0							

5 6

12 13 14

eurofins

Environment Testing

Chain of Custody

Houston, TX (281) 204-200, 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 Hohse NM (575) 902-7550 Carlshad NM (575) 988-3199

Work Order No:

Job Number: 890-2569-1 SDG Number: 03E1558015

List Source: Eurofins Carlsbad

#### Login Sample Receipt Checklist

Client: Ensolum

#### Login Number: 2569 List Number: 1 Creator: Stutzman, Amanda

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

Job Number: 890-2569-1 SDG Number: 03E1558015

List Source: Eurofins Midland

List Creation: 07/19/22 11:13 AM

#### Login Sample Receipt Checklist

Client: Ensolum

Login Number: 2569 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: 8/10/2022 10:53:56 AM

LINKS

Review your project results through

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## Environment Testing America

## **ANALYTICAL REPORT**

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

#### Laboratory Job ID: 890-2570-1

Laboratory Sample Delivery Group: 03E1558015 Client Project/Site: PLU 15 TWR

#### For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

RAMER

Authorized for release by: 7/25/2022 10:33:12 AM Jessica Kramer, Project Manager (432)704-5440 Jessica.Kramer@et.eurofinsus.com

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

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

Laboratory Job ID: 890-2570-1 SDG: 03E1558015

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	Definitions/Glossary		
Client: Ensolum	1	Job ID: 890-2570-1	
Project/Site: PL	U 15 TWR	SDG: 03E1558015	
Qualifiers			
GC VOA			
Qualifier	Qualifier Description		
F1	MS and/or MSD recovery exceeds control limits.		- 2
S1+	Surrogate recovery exceeds control limits, high biased.		
U	Indicates the analyte was analyzed for but not detected.		
GC Semi VOA			
Qualifier	Qualifier Description		
*+	LCS and/or LCSD is outside acceptance limits, high biased.		
*1	LCS/LCSD RPD exceeds control limits.		
S1+	Surrogate recovery exceeds control limits, high biased.		
U	Indicates the analyte was analyzed for but not detected.		
HPLC/IC			
Qualifier	Qualifier Description		
U	Indicates the analyte was analyzed for but not detected.		
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 RL	Relative Error Ratio (Radiochemistry)		
RPD	Reporting Limit or Requested Limit (Radiochemistry)		
	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

.

Project/Site: PLU 15 TWR

Job ID: 890-2570-1 SDG: 03E1558015

#### Job ID: 890-2570-1

#### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-2570-1

#### Receipt

The samples were received on 7/18/2022 12:12 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.8°C

#### GC VOA

Method 8021B: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 880-30208 and analytical batch 880-30191 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.

Method 8021B: Surrogate recovery for the following sample was outside control limits: PH02 (890-2570-1). 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: PH02 (890-2570-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

#### GC Semi VOA

Method 8015MOD\_NM: Surrogate recovery for the following sample was outside control limits: (LCS 880-30080/2-A). Evidence of matrix interferences is not obvious.

Method 8015MOD NM: The surrogate recovery for the blank associated with preparation batch 880-30080 and analytical batch 880-30146 was outside the upper control limits.

Method 8015MOD NM: The laboratory control sample (LCS) associated with preparation batch 880-30080 and analytical batch 880-30146 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

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

#### HPLC/IC

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

#### **Client Sample Results**

Job ID: 890-2570-1 SDG: 03E1558015

#### Client Sample ID: PH02

Project/Site: PLU 15 TWR

Date Collected: 07/15/22 09:00 Date Received: 07/18/22 12:12

Sample Depth: 1'

Client: Ensolum

Lab Sample ID:	890-2570-1
	Matrix: Solid

Method: 8021B - Volatile Organi Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00328		0.00200	mg/Kg		07/21/22 09:25	07/21/22 12:56	1
Toluene	0.102		0.00200	mg/Kg		07/21/22 09:25	07/21/22 12:56	1
Ethylbenzene	0.0307		0.00200	mg/Kg		07/21/22 09:25	07/21/22 12:56	1
m-Xylene & p-Xylene	17.4		0.398	mg/Kg		07/23/22 18:30	07/24/22 17:14	100
o-Xylene	8.45		0.199	mg/Kg		07/23/22 18:30	07/24/22 17:14	100
Xylenes, Total	25.9		0.398	mg/Kg		07/23/22 18:30	07/24/22 17:14	100
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	614	S1+	70 - 130			07/21/22 09:25	07/21/22 12:56	1
1,4-Difluorobenzene (Surr)	108		70 - 130			07/21/22 09:25	07/21/22 12:56	1
Method: Total BTEX - Total BTE	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	26.0		0.398	mg/Kg			07/22/22 16:06	1
Method: 8015 NM - Diesel Rang	e Organics (DR	0) (GC)						
Method: 8015 NM - Diesel Rang Analyte		<mark>O) (GC)</mark> Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
-			<b>RL</b> 50.0	Unit mg/Kg	<u>D</u>	Prepared	Analyzed	Dil Fac
Analyte Total TPH	Result 5530	Qualifier			<u>D</u>	Prepared		
Analyte	Result 5530 See Organics (D	Qualifier			<u>D</u> 	Prepared		1
Analyte Total TPH Method: 8015B NM - Diesel Ran	Result 5530 See Organics (D	Qualifier RO) (GC)	50.0	mg/Kg			07/21/22 12:58	1
Analyte Total TPH Method: 8015B NM - Diesel Ran Analyte Gasoline Range Organics	Result 5530 ge Organics (D Result	Qualifier RO) (GC) Qualifier	50.0	mg/Kg Unit		Prepared	07/21/22 12:58 Analyzed	1 Dil Fac
Analyte Total TPH Method: 8015B NM - Diesel Ran Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	result 5530 rege Organics (D Result 1110	Qualifier RO) (GC) Qualifier *1 *+	50.0 RL 50.0	Unit mg/Kg		Prepared 07/19/22 16:15	07/21/22 12:58 Analyzed 07/20/22 23:03	1 Dil Fac 1
Analyte Total TPH Method: 8015B NM - Diesel Ran Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over	result result result result result 1110 3710	Qualifier RO) (GC) Qualifier *1 *+ *1 *+	50.0 RL 50.0 50.0	mg/Kg Unit mg/Kg mg/Kg		Prepared 07/19/22 16:15 07/19/22 16:15	07/21/22 12:58 Analyzed 07/20/22 23:03 07/20/22 23:03	1 1
Analyte Total TPH Method: 8015B NM - Diesel Ran Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	result result result result result 1110 3710 707	Qualifier RO) (GC) Qualifier *1 *+ *1 *+	50.0 RL 50.0 50.0 50.0	mg/Kg Unit mg/Kg mg/Kg		Prepared 07/19/22 16:15 07/19/22 16:15 07/19/22 16:15	07/21/22 12:58 Analyzed 07/20/22 23:03 07/20/22 23:03 07/20/22 23:03	1 Dil Fac 1 1 1
Analyte Total TPH Method: 8015B NM - Diesel Ran Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	result result result result result 1110 3710 707 %Recovery	Qualifier RO) (GC) Qualifier *1 *+ *1 *+	50.0 <b>RL</b> 50.0 50.0 50.0 Limits	mg/Kg Unit mg/Kg mg/Kg		Prepared 07/19/22 16:15 07/19/22 16:15 07/19/22 16:15 Prepared	07/21/22 12:58 Analyzed 07/20/22 23:03 07/20/22 23:03 07/20/22 23:03 Analyzed	Dil Fac 1 1 1 Dil Fac
Analyte Total TPH Method: 8015B NM - Diesel Ran Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result           5530           Ige Organics (D)           Result           1110           3710           707           %Recovery           118           110	Qualifier RO) (GC) Qualifier *1 *+ *1 *+ Qualifier	50.0 <b>RL</b> 50.0 50.0 50.0 <u>Limits</u> 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 07/19/22 16:15 07/19/22 16:15 07/19/22 16:15 Prepared 07/19/22 16:15	07/21/22 12:58 Analyzed 07/20/22 23:03 07/20/22 23:03 07/20/22 23:03 Analyzed 07/20/22 23:03	1 Dil Fac 1 1 1 1 <i>Dil Fac</i> 1
Analyte Total TPH Method: 8015B NM - Diesel Ran Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result           199 Organics (D)           Result           1110           3710           707           %Recovery           118           110	Qualifier RO) (GC) Qualifier *1 *+ *1 *+ Qualifier	50.0 <b>RL</b> 50.0 50.0 50.0 <u>Limits</u> 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 07/19/22 16:15 07/19/22 16:15 07/19/22 16:15 Prepared 07/19/22 16:15	07/21/22 12:58 Analyzed 07/20/22 23:03 07/20/22 23:03 07/20/22 23:03 Analyzed 07/20/22 23:03	1 Dil Fac 1 1 1 1 <i>Dil Fac</i> 1
Analyte Total TPH Method: 8015B NM - Diesel Ran Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Method: 300.0 - Anions, Ion Chr	Result           199 Organics (D)           Result           1110           3710           707           %Recovery           118           110	Qualifier RO) (GC) Qualifier *1 *+ *1 *+ Qualifier Soluble	50.0 <b>RL</b> 50.0 50.0 50.0 <b>Limits</b> 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg mg/Kg	D	Prepared 07/19/22 16:15 07/19/22 16:15 07/19/22 16:15 Prepared 07/19/22 16:15 07/19/22 16:15	07/21/22 12:58 Analyzed 07/20/22 23:03 07/20/22 23:03 07/20/22 23:03 07/20/22 23:03 07/20/22 23:03	1 Dil Fac 1 1 1 1 <i>Dil Fac</i> 1 1
Analyte Total TPH Method: 8015B NM - Diesel Ran Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Method: 300.0 - Anions, Ion Chr Analyte	Result 5530 1ge Organics (D Result 1110 3710 707 %Recovery 118 110 romatography - Result	Qualifier RO) (GC) Qualifier *1 *+ *1 *+ Qualifier Soluble	50.0 <b>RL</b> 50.0 50.0 50.0 <b>Limits</b> 70 - 130 70 - 130 <b>RL</b>	mg/Kg Unit mg/Kg mg/Kg mg/Kg	D	Prepared 07/19/22 16:15 07/19/22 16:15 07/19/22 16:15 07/19/22 16:15 07/19/22 16:15 07/19/22 16:15 Prepared	07/21/22 12:58 Analyzed 07/20/22 23:03 07/20/22 23:03 07/20/22 23:03 07/20/22 23:03 07/20/22 23:03 07/20/22 23:03 07/20/22 23:03	1 Dil Fac 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

Method: 8021B - Volatile Organic Con	npounds (	(GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/23/22 18:30	07/24/22 16:13	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/23/22 18:30	07/24/22 16:13	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/23/22 18:30	07/24/22 16:13	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		07/23/22 18:30	07/24/22 16:13	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/23/22 18:30	07/24/22 16:13	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		07/23/22 18:30	07/24/22 16:13	1
m-Xylene & p-Xylene o-Xylene	<0.00200	U	0.00399 0.00200	mg/Kg mg/Kg		07/23/22 18:30	07/24/22 16:13	1 1 1

Eurofins Carlsbad

Released to Imaging: 11/22/2022 11:30:50 AM

#### **Client Sample Results**

SDG: 03E1558015

#### **Client Sample ID: PH02A**

Date Collected: 07/15/22 10:40 Date Received: 07/18/22 12:12

Project/Site: PLU 15 TWR

Sample Depth: 3'

Client: Ensolum

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130			07/23/22 18:30	07/24/22 16:13	1
1,4-Difluorobenzene (Surr)	93		70 - 130			07/23/22 18:30	07/24/22 16:13	1
Method: Total BTEX - Total BTE	(Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			07/22/22 16:06	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			07/21/22 12:58	1
Method: 8015B NM - Diesel Rang Analyte		RO) (GC) Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics		U *1 *+	50.0	mg/Kg		07/19/22 16:15	07/20/22 23:23	1
(GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	<50.0	U *1 *+	50.0	mg/Kg		07/19/22 16:15	07/20/22 23:23	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/19/22 16:15	07/20/22 23:23	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	94		70 - 130			07/19/22 16:15	07/20/22 23:23	1
	109		70 - 130			07/19/22 16:15	07/20/22 23:23	1
o-Terphenyl	109							
		Soluble						
o-Terphenyl Method: 300.0 - Anions, Ion Chro Analyte	omatography -	Soluble Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Job ID: 890-2570-1

## Lab Sample ID: 890-2570-2 Matrix: Solid
# 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
880-17264-A-22-C MS	Matrix Spike	100	88		
880-17264-A-22-D MSD	Matrix Spike Duplicate	101	96		6
890-2566-A-1-G MS	Matrix Spike	83	100		
890-2566-A-1-H MSD	Matrix Spike Duplicate	109	99		
890-2570-1	PH02	614 S1+	108		
890-2570-2	PH02A	109	93		8
LCS 880-30208/1-A	Lab Control Sample	96	97		
LCS 880-30478/1-A	Lab Control Sample	106	98		O
LCSD 880-30208/2-A	Lab Control Sample Dup	109	92		3
LCSD 880-30478/2-A	Lab Control Sample Dup	105	97		
MB 880-30208/5-A	Method Blank	79	95		
MB 880-30478/5-A	Method Blank	98	86		
<b>.</b>					
Surrogate Legend					
BFB = 4-Bromofluoroben					
DFBZ = 1,4-Difluorobenz	ene (Surr)				

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

#### Matrix: Solid

-			
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-17086-A-11-C MS	Matrix Spike	87	85
880-17086-A-11-D MSD	Matrix Spike Duplicate	88	87
890-2570-1	PH02	118	110
890-2570-2	PH02A	94	109
LCS 880-30080/2-A	Lab Control Sample	150 S1+	149 S1+
LCSD 880-30080/3-A	Lab Control Sample Dup	114	115
MB 880-30080/1-A	Method Blank	141 S1+	168 S1+

1CO = 1-Chlorooctane OTPH = o-Terphenyl Page 109 of 255

Prep Type: Total/NA

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

Lab Sample ID: MB 880-30208/5-A Matrix: Solid						Client Sa	mple ID: Metho Prep Type: 1	
Analysis Batch: 30191							Prep Batch	
	МВ	МВ						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:25	07/21/22 12:04	1
Toluene	<0.00200	U	0.00200	mg/Kg	9	07/21/22 09:25	07/21/22 12:04	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg	9	07/21/22 09:25	07/21/22 12:04	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg	]	07/21/22 09:25	07/21/22 12:04	1
o-Xylene	<0.00200	U	0.00200	mg/Kg	9	07/21/22 09:25	07/21/22 12:04	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg	9	07/21/22 09:25	07/21/22 12:04	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	79		70 - 130			07/21/22 09:25	07/21/22 12:04	1
1,4-Difluorobenzene (Surr)	95		70 - 130			07/21/22 09:25	07/21/22 12:04	1
Lab Sample ID: LCS 880-30208/1-A					(	Client Sample I	D: Lab Control	Sample
Matrix: Solid							Prep Type: 1	
Analysis Batch: 30191							Prep Batch	
			Sniko	201 201			%Pec	

Spike	LCS	LCS				%Rec	
Added	Result	Qualifier	Unit	D	%Rec	Limits	
0.100	0.09280		mg/Kg		93	70 - 130	
0.100	0.09172		mg/Kg		92	70 - 130	
0.100	0.09500		mg/Kg		95	70 - 130	
0.200	0.1827		mg/Kg		91	70 - 130	
0.100	0.09784		mg/Kg		98	70 - 130	
	Added 0.100 0.100 0.100 0.100 0.200	Added         Result           0.100         0.09280           0.100         0.09172           0.100         0.09500           0.200         0.1827	Added         Result         Qualifier           0.100         0.09280         -           0.100         0.09172         -           0.100         0.09500         -           0.200         0.1827         -	Added         Result         Qualifier         Unit           0.100         0.09280         mg/Kg           0.100         0.09172         mg/Kg           0.100         0.09500         mg/Kg           0.200         0.1827         mg/Kg	Added         Result         Qualifier         Unit         D           0.100         0.09280         mg/Kg         mg/Kg           0.100         0.09172         mg/Kg           0.100         0.09500         mg/Kg           0.200         0.1827         mg/Kg	Added         Result         Qualifier         Unit         D         %Rec           0.100         0.09280         mg/Kg         93           0.100         0.09172         mg/Kg         92           0.100         0.09500         mg/Kg         95           0.200         0.1827         mg/Kg         91	Added         Result         Qualifier         Unit         D         %Rec         Limits           0.100         0.09280         mg/Kg         93         70 - 130           0.100         0.09172         mg/Kg         92         70 - 130           0.100         0.09500         mg/Kg         95         70 - 130           0.100         0.09500         mg/Kg         95         70 - 130           0.200         0.1827         mg/Kg         91         70 - 130

	LCS		
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	96		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

## Lab Sample ID: LCSD 880-30208/2-A

#### Matrix: Solid Local Destail

Analysis Batch: 30191							Prep	Batch:	30208
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09320		mg/Kg		93	70 - 130	0	35
Toluene	0.100	0.09504		mg/Kg		95	70 - 130	4	35
Ethylbenzene	0.100	0.09691		mg/Kg		97	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.1873		mg/Kg		94	70 - 130	2	35
o-Xylene	0.100	0.1033		mg/Kg		103	70 - 130	5	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	109		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

#### Lab Sample ID: 890-2566-A-1-G MS Matrix: Solid

#### Analysis Batch: 30191

Analysis Datch. 30191									Fre	p batch: 304	200
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Benzene	0.0535		0.0998	0.07076	F1	mg/Kg		17	70 - 130		
Toluene	0.0607		0.0998	0.06762	F1	mg/Kg		7	70 - 130		

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Job ID: 890-2570-1

SDG: 03E1558015

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

**Client Sample ID: Matrix Spike** Prep Type: Total/NA Prep Batch: 30208

Lab Sample ID: 890-2566-A-1-G MS

# **QC Sample Results**

MS MS

0.07426 F1

0.1436 F1

0.07377 F1

**Result Qualifier** 

Unit

mg/Kg

mg/Kg

mg/Kg

Spike

Added

0.0998

0.200

0.0998

Limits

70 - 130

70 - 130

Client: Ensolum Project/Site: PLU 15 TWR

Analysis Batch: 30191

Matrix: Solid

Analyte

o-Xylene

Surrogate

Ethylbenzene

m-Xylene & p-Xylene

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

Sample Sample

MS MS

83

100

Qualifier

Qualifier

Result

0.191

0.0103

0.0397

%Recovery

Job ID: 890-2570-1 SDG: 03E1558015

Prep Type: Total/NA

Prep Batch: 30208

**Client Sample ID: Matrix Spike** 

%Rec

Limits

70 - 130

70 - 130

70 - 130

%Rec

-117

67

34

D

# 7

Client Sample ID: Matrix Spike D	uplicate
Prep Type: 1	otal/NA
Pren Batch	. 30208

**Client Sample ID: Method Blank** 

07/24/22 14:29

07/24/22 14:29

**Client Sample ID: Lab Control Sample** 

07/23/22 18:30

07/23/22 18:30

Prep Type: Total/NA Prep Batch: 30478

Matrix: Solid Analysis Batch: 30191

Lab Sample ID: 890-2566-A-1-H MSD

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

Allalysis Datch. 30191									гіер	Datch.	30200	
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.0535		0.0994	0.08725	F1	mg/Kg		34	70 - 130	21	35	
Toluene	0.0607		0.0994	0.08422	F1	mg/Kg		24	70 - 130	22	35	
Ethylbenzene	0.191		0.0994	0.08803	F1	mg/Kg		-104	70 - 130	17	35	
m-Xylene & p-Xylene	0.0103		0.199	0.1708		mg/Kg		81	70 - 130	17	35	Ē
o-Xylene	0.0397		0.0994	0.09152	F1	mg/Kg		52	70 - 130	21	35	

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	109		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

#### Lab Sample ID: MB 880-30478/5-A Matrix: Solid Analysis Batch: 30484

	MB	мв						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/23/22 18:30	07/24/22 14:29	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/23/22 18:30	07/24/22 14:29	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/23/22 18:30	07/24/22 14:29	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/23/22 18:30	07/24/22 14:29	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/23/22 18:30	07/24/22 14:29	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/23/22 18:30	07/24/22 14:29	1
	MB	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

4-Bromofluorobenzene (Surr)	98	70 - 130
1,4-Difluorobenzene (Surr)	86	70 - 130

#### Lab Sample ID: LCS 880-30478/1-A Matrix: Solid Analysis Batch: 30484

	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzene	0.100	0.1098		mg/Kg		110	70 - 130
Toluene	0.100	0.1086		mg/Kg		109	70 - 130
Ethylbenzene	0.100	0.1126		mg/Kg		113	70 - 130
m-Xylene & p-Xylene	0.200	0.2291		mg/Kg		115	70 - 130

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Prep Type: Total/NA

Prep Batch: 30478

# Released to Imaging: 11/22/2022 11:30:50 AM

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Client: Ensolum Project/Site: PLU 15 TWR

Matrix: Solid

Lab Sample ID: LCS 880-30478/1-A

Prep Type: Total/NA

**Client Sample ID: Lab Control Sample** 

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

									Dress	Potch:	30478
Analysis Batch: 30484									Prep	Datch.	
			Spike		LCS				%Rec		
Analyte			Added		Qualifier	Unit	D	%Rec	Limits		
o-Xylene			0.100	0.1252		mg/Kg		125	70 - 130		
	LCS	LCS									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	106		70 - 130								
1,4-Difluorobenzene (Surr)	98		70 - 130								
Lab Sample ID: LCSD 880-3	0478/2-A					Clie	nt Sam	nple ID: I	Lab Contro	l Sample	e Dur
Matrix: Solid										ype: Tot	
Analysis Batch: 30484										Batch:	
			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Benzene			0.100	0.1024		mg/Kg		102	70 - 130	7	35
Toluene			0.100	0.1005		mg/Kg		101	70 - 130	8	35
Ethylbenzene			0.100	0.1036		mg/Kg		104	70 - 130	8	35
m-Xylene & p-Xylene			0.200	0.2101		mg/Kg		105	70 - 130	9	35
o-Xylene			0.100	0.1148		mg/Kg		115	70 - 130	9	35
0-Xylene			0.100	0.1140		ing/itg		115	70 - 100	5	00
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	105		70 - 130								
4-Bromonuorobenzene (Sum)											
1,4-Difluorobenzene (Surr)	97 <b>A-22-C MS</b>		70 - 130					Client		ype: Tot	tal/N/
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17264-A Matrix: Solid	A-22-C MS	Samula		MC	мс			Client	Prep T Prep		tal/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17264-A Matrix: Solid Analysis Batch: 30484	A-22-C MS Sample	Sample	Spike	MS	MS	Unit	Γ		Prep T Prep %Rec	ype: Tot	tal/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17264-A Matrix: Solid Analysis Batch: 30484 Analyte	A-22-C MS Sample Result	Qualifier	Spike Added	Result	MS Qualifier	_ Unit	<u>D</u>	%Rec	Prep 1 Prep %Rec Limits	ype: Tot	tal/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17264-A Matrix: Solid Analysis Batch: 30484 Analyte Benzene	A-22-C MS Sample 	Qualifier	Spike Added 0.100	<b>Result</b> 0.07613		mg/Kg	<u>D</u>	%Rec 76	Prep 1 Prep %Rec Limits 70 - 130	ype: Tot	tal/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17264-4 Matrix: Solid Analysis Batch: 30484 Analyte Benzene Toluene	A-22-C MS Sample 	Qualifier U U	<b>Spike</b> Added 0.100 0.100	<b>Result</b> 0.07613 0.08980		mg/Kg mg/Kg	D	<b>%Rec</b> 76 89	Prep T Prep %Rec Limits 70 - 130 70 - 130	ype: Tot	tal/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17264-4 Matrix: Solid Analysis Batch: 30484 Analyte Benzene Toluene Ethylbenzene	A-22-C MS Sample example <0.00200 <0.00200 <0.00200	Qualifier U U U	Spike Added 0.100 0.100 0.100	Result 0.07613 0.08980 0.09841		mg/Kg mg/Kg mg/Kg	<u> </u>	%Rec 76 89 98	Prep T           Prep           %Rec           Limits           70 - 130           70 - 130           70 - 130	ype: Tot	tal/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17264-4 Matrix: Solid Analysis Batch: 30484 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	A-22-C MS Sample Result <0.00200 <0.00200 <0.00200 <0.00200 <0.00399	Qualifier U U U U	Spike Added 0.100 0.100 0.100 0.201	<b>Result</b> 0.07613 0.08980 0.09841 0.1966		mg/Kg mg/Kg mg/Kg mg/Kg	<u> </u>	<b>%Rec</b> 76 89 98 98	Prep T           Prep           %Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	ype: Tot	tal/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17264-4 Matrix: Solid Analysis Batch: 30484 Analyte Benzene Toluene Ethylbenzene	A-22-C MS Sample example <0.00200 <0.00200 <0.00200	Qualifier U U U U	Spike Added 0.100 0.100 0.100	Result 0.07613 0.08980 0.09841		mg/Kg mg/Kg mg/Kg	<u> </u>	%Rec 76 89 98	Prep T           Prep           %Rec           Limits           70 - 130           70 - 130           70 - 130	ype: Tot	tal/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17264-4 Matrix: Solid Analysis Batch: 30484 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	A-22-C MS Sample Result <0.00200 <0.00200 <0.00200 <0.00200 <0.00399	Qualifier U U U U U U	Spike Added 0.100 0.100 0.100 0.201	<b>Result</b> 0.07613 0.08980 0.09841 0.1966		mg/Kg mg/Kg mg/Kg mg/Kg	<u> </u>	<b>%Rec</b> 76 89 98 98	Prep T           Prep           %Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	ype: Tot	tal/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17264-4 Matrix: Solid Analysis Batch: 30484 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	A-22-C MS Sample Result <0.00200 <0.00200 <0.00200 <0.00399 <0.00200	Qualifier U U U U U U MS	Spike Added 0.100 0.100 0.100 0.201	<b>Result</b> 0.07613 0.08980 0.09841 0.1966		mg/Kg mg/Kg mg/Kg mg/Kg	<u>D</u>	<b>%Rec</b> 76 89 98 98	Prep T           Prep           %Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	ype: Tot	tal/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17264-4 Matrix: Solid Analysis Batch: 30484 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene	A-22-C MS Sample Result <0.00200 <0.00200 <0.00200 <0.00399 <0.00200 MS	Qualifier U U U U U U MS	Spike           Added           0.100           0.100           0.100           0.201           0.100	<b>Result</b> 0.07613 0.08980 0.09841 0.1966		mg/Kg mg/Kg mg/Kg mg/Kg	D	<b>%Rec</b> 76 89 98 98	Prep T           Prep           %Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	ype: Tot	tal/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17264-4 Matrix: Solid Analysis Batch: 30484 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate	A-22-C MS Sample Result <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 MS %Recovery	Qualifier U U U U U U MS	Spike           Added           0.100           0.100           0.100           0.100           0.100           0.100           0.201           0.100           Limits	<b>Result</b> 0.07613 0.08980 0.09841 0.1966		mg/Kg mg/Kg mg/Kg mg/Kg	<u>D</u>	<b>%Rec</b> 76 89 98 98	Prep T           Prep           %Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	ype: Tot	tal/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17264-4 Matrix: Solid Analysis Batch: 30484 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr)	A-22-C MS Sample Result <ul> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>MS</li> <li>%Recovery</li> <li>100</li> <li>88</li> </ul>	Qualifier U U U U U U MS	Spike           Added           0.100           0.100           0.100           0.100           0.100           0.100           0.201           0.100           Limits           70 - 130	<b>Result</b> 0.07613 0.08980 0.09841 0.1966		mg/Kg mg/Kg mg/Kg mg/Kg		%Rec 76 89 98 98 105	Prep T           Prep           %Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	ype: Tof Batch: :	tal/NA 30478
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17264-4 Matrix: Solid Analysis Batch: 30484 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr)	A-22-C MS Sample Result <ul> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>MS</li> <li>%Recovery</li> <li>100</li> <li>88</li> </ul>	Qualifier U U U U U U MS	Spike           Added           0.100           0.100           0.100           0.100           0.100           0.100           0.201           0.100           Limits           70 - 130	<b>Result</b> 0.07613 0.08980 0.09841 0.1966		mg/Kg mg/Kg mg/Kg mg/Kg		%Rec 76 89 98 98 105	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	Dike Dup	dicate
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17264-4 Matrix: Solid Analysis Batch: 30484 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17264-4 Matrix: Solid	A-22-C MS Sample Result <ul> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>MS</li> <li>%Recovery</li> <li>100</li> <li>88</li> </ul>	Qualifier U U U U U U MS	Spike           Added           0.100           0.100           0.100           0.100           0.100           0.100           0.201           0.100           Limits           70 - 130	<b>Result</b> 0.07613 0.08980 0.09841 0.1966		mg/Kg mg/Kg mg/Kg mg/Kg		%Rec 76 89 98 98 105	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	Dike Dup	licate
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17264-4 Matrix: Solid Analysis Batch: 30484 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17264-4	A-22-C MS Sample Result <ul> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> </ul> <li><i>%Recovery</i> <ul> <li><i>%Recovery</i></li> <li><i>100</i> <ul> <li>88</li> </ul> </li> </ul></li>	Qualifier U U U U U U MS	Spike           Added           0.100           0.100           0.100           0.100           0.100           0.100           0.201           0.100           Limits           70 - 130	Result 0.07613 0.08980 0.09841 0.1966 0.1051		mg/Kg mg/Kg mg/Kg mg/Kg		%Rec 76 89 98 98 105	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	Dike Dup	licate tal/NA 30478
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17264-4 Matrix: Solid Analysis Batch: 30484 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17264-4 Matrix: Solid	A-22-C MS Sample Result <ul> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li><i>MS</i></li> <li><i>%Recovery</i></li> <li>100</li> <li>88</li> </ul> A-22-D MSD	Qualifier U U U U U MS Qualifier	Spike           Added           0.100           0.100           0.100           0.100           0.201           0.100           0.201           0.100           0.201           0.100           0.201           0.100           0.201           0.100           0.201           0.100	Result 0.07613 0.08980 0.09841 0.1966 0.1051 MSD	Qualifier	mg/Kg mg/Kg mg/Kg mg/Kg		%Rec 76 89 98 98 105	Prep T Prep %Rec Limits 70 - 130 70 - 130	Dike Dup	olicate tal/NA 30478
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17264-4 Matrix: Solid Analysis Batch: 30484 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17264-4 Matrix: Solid Analysis Batch: 30484	A-22-C MS Sample Result <ul> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li><i>MS</i></li> <li><i>%Recovery</i></li> <li>100</li> <li>88</li> </ul> A-22-D MSD	Qualifier U U U U U MS Qualifier Sample Qualifier	Spike           Added           0.100           0.100           0.100           0.100           0.201           0.100           0.201           0.100           0.201           0.100           0.201           0.100           Description           0.100           Limits           70 - 130           70 - 130           Spike	Result 0.07613 0.08980 0.09841 0.1966 0.1051 MSD	Qualifier	mg/Kg mg/Kg mg/Kg mg/Kg	ient Sa	%Rec 76 89 98 98 105	Prep T Prep %Rec Limits 70 - 130 70 - 190 %Rec	Dike Dup Batch: 3	olicate tal/NA 30478 30478 tal/NA 30478 RPE Limi
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17264-4 Matrix: Solid Analysis Batch: 30484 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17264-4 Matrix: Solid Analysis Batch: 30484 Analyte	A-22-C MS	Qualifier U U U U U MS Qualifier U	Spike           Added           0.100           0.100           0.100           0.100           0.201           0.100           0.201           0.100           0.201           0.100           0.201           0.100           Description           Description           Spike           Added	Result           0.07613           0.08980           0.09841           0.1966           0.1051	Qualifier	mg/Kg mg/Kg mg/Kg mg/Kg Cl	ient Sa	%Rec 76 89 98 98 105	Prep T Prep %Rec Limits 70 - 130 70 - 190 70 - 130 70 - 190 70 - 1	Dike Dup Type: Tot Batch: 3 Dike Dup Type: Tot Batch: 3 RPD	olicate tal/NA 30478 olicate tal/NA 30478 RPC Limit
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17264-4 Matrix: Solid Analysis Batch: 30484 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17264-4 Matrix: Solid Analysis Batch: 30484 Analyte Benzene	A-22-C MS Sample Result <ul> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li><i>MS</i></li> <li><i>%Recovery</i></li> <li>100</li> <li>88</li> </ul> A-22-D MSD Sample <ul> <li>Result</li> <li>&lt;0.00200</li> </ul>	Qualifier U U U U U U MS Qualifier U U U	Spike           Added           0.100           0.100           0.100           0.100           0.201           0.100           0.201           0.100           0.201           0.100           0.201           0.100           D.100           D.100           D.100           D.0100	Result           0.07613           0.08980           0.09841           0.1966           0.1051	Qualifier	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	ient Sa	%Rec           76           89           98           98           105	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 Prep T Prep %Rec Limits 70 - 130 70 - 130	Dike Dup Type: Tof Batch: 3 Dike Dup Type: Tof Batch: 3 RPD 20	olicate tal/NA 30478 blicate tal/NA 30478 RPD Limit 35 35
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17264-4 Matrix: Solid Analysis Batch: 30484 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17264-4 Matrix: Solid Analysis Batch: 30484 Analyte Benzene Toluene	A-22-C MS Sample Result <ul> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> </ul> <li>MS <ul> <li>%Recovery</li> <li>100</li> <li>88</li> </ul> </li> <li>A-22-D MSD <ul> <li>Sample</li> <li>Result</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> <li>&lt;0.00200</li> </ul></li>	Qualifier U U U U U U U MS Qualifier U U U U	Spike           Added           0.100           0.100           0.100           0.100           0.201           0.100           0.201           0.100           0.201           0.100           0.201           0.100           D.100           Limits           70 - 130           70 - 130           Spike           Added           0.0998           0.0998	Result           0.07613           0.08980           0.09841           0.1966           0.1051	Qualifier	mg/Kg mg/Kg mg/Kg mg/Kg Cl	ient Sa	%Rec           76           89           98           98           105	Prep T Prep 7 %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 9: Matrix Sp Prep 7 Prep 7 %Rec Limits 70 - 130	Dike Dup Type: Tot Dike Dup Type: Tot Batch: 3 20 2	tal/NA 30478

#### Job ID: 890-2570-1 SDG: 03E1558015

Client: Ensolum Project/Site: PLU 15 TWR

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

	2-D MSD							Sile		unpie ID.	Matrix Sp Prep 1	ріке Би Гуре: То	-
Analysis Batch: 30484												Batch:	
	MSD I	MSD											
Surrogate	%Recovery	Quali	fier	Limits									
4-Bromofluorobenzene (Surr)	101			70 - 130									
1,4-Difluorobenzene (Surr)	96			70 - 130									
ethod: 8015B NM - Diese	l Range Org	gan	ics (DR	O) (GC)									
_ab Sample ID: MB 880-30080	/1-A									Client Sa	ample ID:	Method	Blan
Matrix: Solid											Prep 7	Гуре: То	otal/N/
Analysis Batch: 30146											Prep	Batch:	3008
-	I	MB	МВ										
Analyte	Res	sult	Qualifier	RL		Unit		D	Р	repared	Analyz	zed	Dil Fa
Gasoline Range Organics GRO)-C6-C10	<5	0.0	U	50.0		mg/K	g	_	07/1	9/22 16:15	07/20/22	15:46	
Diesel Range Organics (Over C10-C28)	<5	0.0	U	50.0		mg/K	g		07/1	9/22 16:15	07/20/22	15:46	
Oll Range Organics (Over C28-C36)	<5	0.0	U	50.0		mg/K	g		07/1	9/22 16:15	07/20/22	15:46	
		MB	МВ										
Surrogate	%Recov	-	Qualifier	Limits					P	repared	Analyz	zed	Dil Fa
-Chlorooctane	1	141	S1+	70 - 130					07/1	9/22 16:15	07/20/22	15:46	
-Terphenyl		168	S1+	70 - 130					07/1	9/22 16:15	07/20/22	15:46	
Analysis Batch: 30146												Batch:	
				Spike	LCS				_	~-	%Rec		
				Added	Result	Qualifier	Unit		D	%Rec	Limits		
Gasoline Range Organics				-		Qualifier	Unit mg/Kg		<u>D</u>	%Rec			
Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over				Added	Result	Qualifier			<u>D</u>		Limits		
Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over	LCS I	LCS		Added	Result 1334	Qualifier *+	mg/Kg		<u>D</u>	133	Limits 70 - 130		
Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28)		LCS Quali	fier	Added	Result 1334	Qualifier *+	mg/Kg		<u>D</u>	133	Limits 70 - 130		
Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	%Recovery		fier	Added	Result 1334	Qualifier *+	mg/Kg		<u>D</u>	133	Limits 70 - 130		
Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over 210-C28) Surrogate -Chlorooctane	%Recovery	<b>Quali</b> S1+	fier	Added 1000 1000 <i>Limits</i>	Result 1334	Qualifier *+	mg/Kg		<u>D</u>	133	Limits 70 - 130		
Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate I-Chlorooctane D-Terphenyl	%Recovery 0 150 3 149 3	<b>Quali</b> S1+	fier	Added 1000 1000 <i>Limits</i> 70 - 130	Result 1334	Qualifier *+	mg/Kg mg/Kg	ient		133	Limits 70 - 130		 le Du
Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate I-Chlorooctane D-Terphenyl Lab Sample ID: LCSD 880-300	%Recovery 0 150 3 149 3	<b>Quali</b> S1+	fier	Added 1000 1000 <i>Limits</i> 70 - 130	Result 1334	Qualifier *+	mg/Kg mg/Kg	ient		133	Limits 70 - 130 70 - 130 <b>ab Contro</b>		
Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate I-Chlorooctane D-Terphenyl Lab Sample ID: LCSD 880-300 Matrix: Solid	%Recovery 0 150 3 149 3	<b>Quali</b> S1+	fier	Added 1000 1000 <i>Limits</i> 70 - 130	Result 1334	Qualifier *+	mg/Kg mg/Kg	ient		133	Limits 70 - 130 70 - 130 ab Contro Prep 1	· Type: To	otal/N
Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate I-Chlorooctane D-Terphenyl Lab Sample ID: LCSD 880-300 Matrix: Solid	%Recovery 0 150 3 149 3	<b>Quali</b> S1+	fier	Added 1000 1000 <i>Limits</i> 70 - 130	Result 1334 1530	Qualifier *+	mg/Kg mg/Kg	ient		133	Limits 70 - 130 70 - 130 ab Contro Prep 1		otal/N/ 3008
Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate I-Chlorooctane D-Terphenyl Lab Sample ID: LCSD 880-300 Matrix: Solid Analysis Batch: 30146	%Recovery 0 150 3 149 3	<b>Quali</b> S1+	fier	Added 1000 1000 <u>Limits</u> 70 - 130 70 - 130	Result           1334           1530           LCSD	Qualifier *+ *+	mg/Kg mg/Kg	ient		133 153	Limits 70 - 130 70 - 130 ab Contro Prep 1 Prep	· Type: To	otal/N/ 3008 RP
Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over 2010-C28) Gurrogate -Chlorooctane -Terphenyl Lab Sample ID: LCSD 880-300 Matrix: Solid Analysis Batch: 30146 Sasoline Range Organics	%Recovery 0 150 3 149 3	<b>Quali</b> S1+	fier	Added 1000 1000 <i>Limits</i> 70 - 130 70 - 130 Spike	Result           1334           1530           LCSD	Qualifier *+ *+ LCSD Qualifier	mg/Kg mg/Kg Cl	ient	Sam	133	Limits 70 - 130 70 - 130 ab Contro Prep 1 Prep %Rec	Type: To Batch:	otal/N 3008 RP Lim
Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over 210-C28) Surrogate -Chlorooctane -Terphenyl Lab Sample ID: LCSD 880-300 Matrix: Solid Analysis Batch: 30146 Sasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over	%Recovery 0 150 3 149 3	<b>Quali</b> S1+	fier	Added 1000 1000 <i>Limits</i> 70 - 130 70 - 130 70 - 130	Result 1334 1530 LCSD Result	Qualifier *+ *+ LCSD Qualifier *1	mg/Kg mg/Kg Cl	ient	Sam	133 153 nple ID: La	Limits 70 - 130 70 - 130 ab Contro Prep 1 Prep %Rec Limits	Type: To Batch: 	2000 3008 RPI Lim
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane p-Terphenyl Lab Sample ID: LCSD 880-300 Matrix: Solid Analysis Batch: 30146 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	%Recovery 0 150 3 149 3	Quali S1+ S1+		Added           1000           1000           1000           1000           1000 <i>Limits</i> 70 - 130           70 - 130           70 - 130           Added           1000	Result           1334           1530           LCSD           Result           1032	Qualifier *+ *+ LCSD Qualifier *1	CI Unit mg/Kg	ient	Sam	133 153 nple ID: La <u>%Rec</u> 103	Limits 70 - 130 70 - 130 ab Contro Prep 1 %Rec Limits 70 - 130	Type: To Batch: RPD 26	otal/NA
Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane p-Terphenyl Lab Sample ID: LCSD 880-300 Matrix: Solid Analysis Batch: 30146 Analyte Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	<u>%Recovery</u> 150 149 80/3-A	Quali S1+ S1+		Added           1000           1000           1000           1000           1000 <i>Limits</i> 70 - 130           70 - 130           70 - 130           Added           1000	Result           1334           1530           LCSD           Result           1032	Qualifier *+ *+ LCSD Qualifier *1	CI Unit mg/Kg	ient	Sam	133 153 nple ID: La <u>%Rec</u> 103	Limits 70 - 130 70 - 130 ab Contro Prep 1 %Rec Limits 70 - 130	Type: To Batch: RPD 26	20000000000000000000000000000000000000
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane p-Terphenyl Lab Sample ID: LCSD 880-300 Matrix: Solid Analysis Batch: 30146 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	<u>%Recovery</u> 150 149 80/3-A	Quali S1+ S1+ LCSE		Added           1000           1000           1000           1000           1000           70 - 130           70 - 130           70 - 130           1000           1000           1000	Result           1334           1530           LCSD           Result           1032	Qualifier *+ *+ LCSD Qualifier *1	CI Unit mg/Kg	ient	Sam	133 153 nple ID: La <u>%Rec</u> 103	Limits 70 - 130 70 - 130 ab Contro Prep 1 %Rec Limits 70 - 130	Type: To Batch: RPD 26	20000000000000000000000000000000000000

Lab Sample ID: 880-17086-A-11-C MS

Lab Sample ID: 880-17086-A-11-D MSD

# **QC Sample Results**

MS MS

983.6

843.1

Result Qualifier

Unit

mg/Kg

mg/Kg

D

%Rec

96

84

Spike

Added

1000

1000

Limits

70 - 130

70 - 130

Analysis Batch: 30146

Gasoline Range Organics

Diesel Range Organics (Over

Matrix: Solid

(GRO)-C6-C10

Analyte

C10-C28)

Surrogate

o-Terphenyl

1-Chlorooctane

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

Sample Sample

Result Qualifier

<50.0 U \*1 \*+

<50.0 U \*1 \*+

MS MS

%Recovery Qualifier

87

85

Prep Type: Total/NA

Prep Batch: 30080

**Client Sample ID: Matrix Spike** 

%Rec

Limits

70 - 130

70 - 130

5
7
8
9

9					
	olicate	oike Dup	: Matrix Sp	ample ID	Client Sa
		Satch:			
	RPD		%Rec		
	Limit	RPD	Limits	%Rec	D
_	20	1	70 - 130	97	

Matrix: Solid									Prep T	ype: To	tal/NA
Analysis Batch: 30146									Prep	Batch:	30080
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	<50.0	U *1 *+	999	989.4		mg/Kg		97	70 - 130	1	20
(GRO)-C6-C10											
Diesel Range Organics (Over	<50.0	U *1 *+	999	863.0		mg/Kg		86	70 - 130	2	20
C10-C28)											
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	88		70 _ 130								
o-Terphenyl	87		70 - 130								
	Analyte Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane	Analyte Sample Analyte Result Gasoline Range Organics (Over <50.0 GRO)-C6-C10 Diesel Range Organics (Over <50.0 C10-C28) MSD Surrogate %Recovery I-Chlorooctane 88	SampleSampleAnalyteResultQualifierGasoline Range Organics<50.0	SampleSampleSpikeAnalyteResultQualifierAddedGRO)-C6-C10<50.0	SampleSampleSpikeMSDAnalyteResultQualifierAddedResultGRO)-C6-C10<50.0	SampleSampleSpikeMSDMSDAnalyteResultQualifierAddedResultQualifierGasoline Range Organics<50.0	SampleSampleSpikeMSDMSDAnalyteResultQualifierAddedResultQualifierUnitGasoline Range Organics<50.0	SampleSampleSpikeMSDMSDAnalyteResultQualifierAddedResultQualifierUnitDGasoline Range Organics<50.0	SampleSampleSpikeMSDMSDAnalyteResultQualifierAddedResultQualifierUnitD%RecGRO)-C6-C10999989.4mg/Kg97GRO)-C6-C10999863.0mg/Kg86Diesel Range Organics (Over C10-C28)97MSDMSD86Surrogate 1-Chlorooctane <td< td=""><td>SampleSampleSpikeMSDMSD%RecAnalyteResultQualifierAddedResultQualifierUnitD%RecLimitsGRO)-C6-C10&lt;</td><td>SampleSampleSpikeMSDMSD%RecAnalyteResultQualifierAddedResultQualifierUnitD%RecLimitsRPDGRO)-C6-C10&lt;</td>99989.4mg/Kg9770 - 1301GRO)-C6-C10&lt;</td<>	SampleSampleSpikeMSDMSD%RecAnalyteResultQualifierAddedResultQualifierUnitD%RecLimitsGRO)-C6-C10<	SampleSampleSpikeMSDMSD%RecAnalyteResultQualifierAddedResultQualifierUnitD%RecLimitsRPDGRO)-C6-C10<

#### Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-30059/1-A Matrix: Solid Analysis Batch: 30226									Client S	Sample ID: M Prep Ty		
	МВ	МВ										
Analyte	Result	Qualifier		RL		Unit		D F	Prepared	Analyzec	I	Dil Fac
Chloride	<5.00	U		5.00		mg/K	9	_		07/22/22 08	:50	1
Lab Sample ID: LCS 880-30059/2-A								Clien	t Sample	e ID: Lab Con	trol Sa	ample
Matrix: Solid										Prep Ty	/pe: So	oluble
Analysis Batch: 30226												
			Spike		LCS	LCS				%Rec		
Analyte			Added		Result	Qualifier	Unit	D	%Rec	Limits		
Chloride			250		267.1		mg/Kg		107	90 - 110		
Lab Sample ID: LCSD 880-30059/3-A							CI	ient San	nple ID:	Lab Control	Sample	e Dup
Matrix: Solid									· · ·	Prep Ty		
Analysis Batch: 30226											•	
-			Spike		LCSD	LCSD				%Rec		RPD
Analyte			Added		Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride			250		267.6		mg/Kg		107	90 _ 110	0	20

# QC Sample Results

Client: Ensolum Project/Site: PLU 15 TWR Job ID: 890-2570-1 SDG: 03E1558015

# Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-2569-A	A-1-B MS							Client	Sample ID		- 1 - C
Matrix: Solid									Prep	Type: So	oluble
Analysis Batch: 30226											
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	101		250	370.4		mg/Kg		108	90 - 110		
-											
Lab Sample ID: 890-2569-A Matrix: Solid Analysis Batch: 30226	A-1-C MSD					Cli	ent Sa	ample ID	): Matrix Sp Prep	oike Dup Type: So	
Matrix: Solid	A-1-C MSD Sample	Sample	Spike	MSD	MSD	Cli	ent Sa	ample ID			
Matrix: Solid	Sample	Sample Qualifier	Spike Added		MSD Qualifier	Cli	ent Sa D	ample ID %Rec	Prep		oluble

# **QC Association Summary**

Client: Ensolum Project/Site: PLU 15 TWR Page 116 of 255

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SDG: 03E1558015

# GC VOA

#### Analysis Batch: 30191

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2570-1	PH02	Total/NA	Solid	8021B	30208
MB 880-30208/5-A	Method Blank	Total/NA	Solid	8021B	30208
LCS 880-30208/1-A	Lab Control Sample	Total/NA	Solid	8021B	30208
LCSD 880-30208/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30208
890-2566-A-1-G MS	Matrix Spike	Total/NA	Solid	8021B	30208
890-2566-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30208
Prep Batch: 30208					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2570-1	PH02	Total/NA	Solid	5035	
MB 880-30208/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30208/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30208/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2566-A-1-G MS	Matrix Spike	Total/NA	Solid	5035	
890-2566-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
Analysis Batch: 30438					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2570-1	PH02	Total/NA	Solid	Total BTEX	
890-2570-2	PH02A	Total/NA	Solid	Total BTEX	
Prep Batch: 30478					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2570-1	PH02	Total/NA	Solid	5035	
890-2570-2	PH02A	Total/NA	Solid	5035	
MB 880-30478/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30478/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30478/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17264-A-22-C MS	Matrix Spike	Total/NA	Solid	5035	
880-17264-A-22-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
Analysis Batch: 30484					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2570-1	PH02	Total/NA	Solid	8021B	30478
890-2570-2	PH02A	Total/NA	Solid	8021B	30478
MB 880-30478/5-A	Method Blank	Total/NA	Solid	8021B	30478
LCS 880-30478/1-A	Lab Control Sample	Total/NA	Solid	8021B	30478
LCSD 880-30478/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30478

#### GC Semi VOA

Prep Batch: 30080

880-17264-A-22-C MS

880-17264-A-22-D MSD

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2570-1	PH02	Total/NA	Solid	8015NM Prep	
890-2570-2	PH02A	Total/NA	Solid	8015NM Prep	
MB 880-30080/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30080/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30080/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-17086-A-11-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	

Total/NA

Total/NA

Solid

Solid

8021B

8021B

Eurofins Carlsbad

```
Released to Imaging: 11/22/2022 11:30:50 AM
```

Matrix Spike

Matrix Spike Duplicate

30478

GC Semi VOA (Continued)

#### Prep Batch: 30080 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
880-17086-A-11-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep		5
Analysis Batch: 30146						
_ Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-2570-1	PH02	Total/NA	Solid	8015B NM	30080	
890-2570-2	PH02A	Total/NA	Solid	8015B NM	30080	
MB 880-30080/1-A	Method Blank	Total/NA	Solid	8015B NM	30080	
LCS 880-30080/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30080	8
LCSD 880-30080/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30080	
880-17086-A-11-C MS	Matrix Spike	Total/NA	Solid	8015B NM	30080	9
880-17086-A-11-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30080	
Analysis Batch: 30255						
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	
890-2570-1	PH02	Total/NA	Solid	8015 NM		
890-2570-2	PH02A	Total/NA	Solid	8015 NM		
HPLC/IC						
Leach Batch: 30059						1
 Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	

# HPLC/IC

#### Leach Batch: 30059

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2570-1	PH02	Soluble	Solid	DI Leach	
890-2570-2	PH02A	Soluble	Solid	DI Leach	
MB 880-30059/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-30059/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-30059/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2569-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2569-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### Analysis Batch: 30226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2570-1	PH02	Soluble	Solid	300.0	30059
890-2570-2	PH02A	Soluble	Solid	300.0	30059
MB 880-30059/1-A	Method Blank	Soluble	Solid	300.0	30059
LCS 880-30059/2-A	Lab Control Sample	Soluble	Solid	300.0	30059
LCSD 880-30059/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30059
890-2569-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30059
890-2569-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30059

Job ID: 890-2570-1

SDG: 03E1558015

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Batch

Туре

Prep

Prep

Analysis

Analysis

Analysis

Analysis

Analysis

Analysis

Leach

Prep

Batch

Method

5035

8021B

5035

8021B

Total BTEX

8015NM Prep

8015B NM

DI Leach

300.0

8015 NM

Initial

Amount

5.03 g

5 mL

4.99 g

10.00 g

5.02 g

Final

Amount

5 mL

5 mL

5 mL

10 mL

50 mL

Batch

30478

30484

30208

30191

30438

30255

30080

30146

30059

30226

Number

Dil

100

1

1

1

1

1

Factor

Run

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Soluble

Soluble

Job ID: 890-2570-1 SDG: 03E1558015

Lab

XEN MID

# Lab Sample ID: 890-2570-1 Matrix: Solid

Analyst

MR

MR

MR

MR

SM

SM

DM

SM

СН

SMC

Prepared

or Analyzed

07/23/22 18:30

07/24/22 17:14

07/21/22 09:25

07/21/22 12:56

07/22/22 16:06

07/21/22 12:58

07/19/22 16:15

07/20/22 23:03

07/19/22 11:04

07/22/22 09:54

#### Client Sample ID: PH02A

Date Collected: 07/15/22 10:40 Date Received: 07/18/22 12:12

# Lab Sample ID: 890-2570-2

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	30478	07/23/22 18:30	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30484	07/24/22 16:13	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30438	07/22/22 16:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30255	07/21/22 12:58	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	30080	07/19/22 16:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30146	07/20/22 23:23	SM	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	30059	07/19/22 11:04	СН	XEN MID
Soluble	Analysis	300.0		1			30226	07/22/22 10:04	SMC	XEN MID

#### Laboratory References:

XEN 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	Ν	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	ay include analytes fo
the agency does not o		Matrix	Analyta	
Analysis Method	fer certification. Prep Method	Matrix	Analyte	
0,		Matrix Solid	Analyte Total TPH	

10

Job ID: 890-2570-1

SDG: 03E1558015

# **Method Summary**

Client: Ensolum Project/Site: PLU 15 TWR Job ID: 890-2570-1 SDG: 03E1558015

Method	Method Description	Protocol	Laboratory
3021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

#### Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions. SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

11 12 13 14

Client: Ensolum Project/Site: PLU 15 TWR

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2570-1	PH02	Solid	07/15/22 09:00	07/18/22 12:12	1'
890-2570-2	PH02A	Solid	07/15/22 10:40	07/18/22 12:12	3'

Project Manager: Ben Belill	Belill		B	Bill to: (if different)		Garret	Garrett Green		Work Order Comments	mments
Company Name: Enso	Ensolum, LLC		0	Company Name:		XTO E	XTO Energy, Inc.	Progra	Program: UST/PST  PRP Brownfields RRC Superfund	
	3122 National parks Hwy	Ψwy	A	Address:		3104 E	3104 E. Green Street		State of Project:	]
e ZIP:	Carlsbad, NM 88220		c	City, State ZIP:		Carlsb	Carlsbad, NM 88220		Reporting: Level II CLevel III PST/UST TRRP	
	9898540852		Email: b	Email: bbelill@ensolum.com	Im.con	3			Deliverables: EDD 🗌 ADaPT 🗔	Other:
Project Name:	PLU 15 TWR	VR .	Turn Around	round				ANALYSIS REQUEST		Preservative Codes
Project Number:	03E1558015	15	<ul> <li>Routine</li> </ul>	Rush	Pres. Code					None: NO DI Water: H <sub>2</sub> O
Project Location:	EDDY COUNTY, NM		Due Date:							0
Sampler's Name:	Conner Shore	ore	TAT starts the day received by	lay received by			-		-	
PO #:			the lab, if received by 4:30pm	ved by 4:30pm	ers			Custody	4 890-2570 Chain of Custody	H <sub>2</sub> SO <sub>4</sub> : H <sub>2</sub> NaOH: Na
SAMPLE RECEIPT	Temp Blank:	CTOR NO	Wet Ice:	No (AB)	net	.0)			-	H <sub>3</sub> PO <sub>4</sub> : HP
Samples Received Intact:	(res) No	Thermometer ID:	10 T	nn .00	Jaran	300				NaHSO4: NABIS
Cooler Custody Seals:	Yes No MIA	Correction Factor:	ctor:	6.6-	Pa	PA:				Na2S2O3: NASO3
Sample Custody Seals:	Yes No NIA	Temperature Reading:	Reading:	6.0		S (E	1	418 147 15 1411 1421 1411 1411		Zn Acetate+NaOH: Zn
Total Containers:		Corrected Temperature:	nperature:	5.8		RIDE			-	NaOH+Ascorbic Acid: SAPC
Sample Identification	tion Matrix	X Date Sampled	Time Sampled	Depth Grab/ Comp	# of Cont	CHLOP	TPH (8 BTEX (			Sample Comments
PH02	S	7/15/2022	900 1	' Comp	-	×	××			
PH02A	s	7/15/2022	1040 3	Comp	-	×	×			
PH02B	S	7/15/2022	1045 4		-	×	×			*HOLD Pending 3' sample
							-			
			X	_			-			Cost Center: 2027711001
				_						Incident Numbers:
	1									nAPP2205638843
( p)							-			
Total 200.7 / 6010	200.8 / 6020:		BRCRA 13PPM	RA 13PPM Texas 11 AI S	AIS	Sh As	Ba Be B	Cd Ca Cr Co Cu Fe Pb Mg Mn	tiu K Se Ag SiO <sub>2</sub> Na Tiu Ha: 1631/2	Sr TI Sn U V Zn 245.1/7470/7471
Circle method(s) and metal(s) to be allalyzed	etai(s) to be anal	Daz <i>k</i>						US AS DE	tandard terms and conditions	
łotice: Signature of this docume f service. Eurofins Xenco will b f Eurofins Xenco. A minimum c	ent and relinquishmer be liable only for the c charge of \$85.00 will b	t of samples const ost of samples and e applied to each p	itutes a valid pure shall not assume roject and a char	chase order from e any responsibilit ge of \$5 for each a	client co ty for an sample :	y losses submitte	to Eurofins Xe t or expenses ed to Eurofins	Notce: Signature of this document and relinquishment of samples constitutes a value purchase order from client company to Eurofins Xenco, its simulates and subcontractors. It is assigned to the same and value on the ontroi of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any rasponsibility for any losses or expenses incurred by the clance hass are due to contractors. Eurofins Xenco will be liable only for the cost of samples and shall not assume any rasponsibility for any losses or expenses incurred by the clance hasses are due to cost of samples and shall not assume any rasponsibility for any losses or expenses incurred by the clance hasses are due to cost of samples by ond 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 of	standard terms and conducers cumstances beyond the control riced unless previously negotiated.	
Relinquished by: (Signature)	)nature)	Received	Received by; (Signature)	re)		Date/Time	Time	Relinquished by: (Signature)	Received by: (Signature)	<ol> <li>Date/Time</li> </ol>
1221	D	100	r s	the f	14	RAD		3		
1						7	12			

4 5 6

11 12 13

seurofins

Environment Testing

Chain of Custody

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

Work Order No:

# Login Sample Receipt Checklist

Client: Ensolum

#### Login Number: 2570 List Number: 1 Creator: Stutzman, Amanda

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

14

Job Number: 890-2570-1 SDG Number: 03E1558015

#### List Source: Eurofins Carlsbad

# Login Sample Receipt Checklist

Client: Ensolum

<6mm (1/4").

Login Number: 2570 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	

Job Number: 890-2570-1 SDG Number: 03E1558015 List Source: Eurofins Midland 5 6 7 8 9 10 11 12 13 List Creation: 07/19/22 11:13 AM

Received by OCD: 8/10/2022 10:53:56 AM

LINKS

EOL

Have a Question?

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# Environment Testing America

# **ANALYTICAL REPORT**

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

# Laboratory Job ID: 890-2571-1

Laboratory Sample Delivery Group: 03E1558015 Client Project/Site: PLU 15 TWR Revision: 1

# For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

RAMER

Authorized for release by: 8/1/2022 10:58:24 AM

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

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

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

Laboratory Job ID: 890-2571-1 SDG: 03E1558015

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	Definitions/Glossary		
Client: Ensolu Project/Site: F	um	Job ID: 890-2571-1 SDG: 03E1558015	2
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 VO	Δ		
Qualifier	Qualifier Description		
*+	LCS and/or LCSD is outside acceptance 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)		4
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		
	Not Calculated		
ND NEG	Not Detected at the reporting limit (or MDL or EDL if shown)		
NEG	Negative / Absent Positive / Present		
POS PQL	Positive / Present Practical Quantitation Limit		
PQL PRES	Practical Quantitation Limit Presumptive		
QC	Presumptive Quality Control		
RER	Quality Control Relative Error Ratio (Radiochemistry)		
RL	Reporting Limit or Requested Limit (Radiochemistry)		
RL RPD	Relative Percent Difference, a measure of the relative difference between two points		
KFU	Relative Felcent Difference, a measure of the relative uniference between two points		

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

TEF

TEQ

TNTC

# **Case Narrative**

Client: Ensolum Project/Site: PLU 15 TWR

# Job ID: 890-2571-1

#### Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-2571-1

#### REVISION

The report being provided is a revision of the original report sent on 7/25/2022. The report (revision 1) is being revised due to Per client email, requesting TPH re runs on all samples.

Report revision history

#### Receipt

The samples were received on 7/18/2022 12:12 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.8°C

#### GC VOA

Method 8021B: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 880-30208 and analytical batch 880-30191 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.

#### GC Semi VOA

Method 8015MOD\_NM: The laboratory control sample (LCS) associated with preparation batch 880-30992 and analytical batch 880-31051 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

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

#### HPLC/IC

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

Job ID: 890-2571-1 SDG: 03E1558015

Job ID: 890-2571-1 SDG: 03E1558015

# **Client Sample ID: PH03** Date Collected: 07/15/22 12:10

Lab Sample ID: 890-2571-1

Matrix: Solid

Date Received: 07/18/22 12:12 Sample Depth: 0.5'

Project/Site: PLU 15 TWR

Client: Ensolum

Method: 8021B - Volatile Orga					_	_	<b>.</b>	<b>B</b> <sup>11</sup> =
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199		0.00199	mg/Kg		07/21/22 09:25	07/21/22 13:49	1
Toluene	<0.00199		0.00199	mg/Kg			07/21/22 13:49	1
Ethylbenzene	<0.00199		0.00199	mg/Kg			07/21/22 13:49	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		07/21/22 09:25	07/21/22 13:49	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		07/21/22 09:25	07/21/22 13:49	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		07/21/22 09:25	07/21/22 13:49	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		70 - 130			07/21/22 09:25	07/21/22 13:49	1
1,4-Difluorobenzene (Surr)	79		70 - 130			07/21/22 09:25	07/21/22 13:49	1
- Method: Total BTEX - Total BT	<b>FEX Calcula</b>	tion						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			07/22/22 16:06	1
_ Method: 8015 NM - Diesel Rar	nge Organic	s (DRO) ((	GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9		49.9	mg/Kg			07/21/22 12:58	1
_				0 0				
Method: 8015B NM - Diesel Ra Analyte	• •	ics (DRO) Qualifier	• •	Unit	D	Proparad	Applyzod	Dil Fac
Gasoline Range Organics	Kesuit <49.9					Prepared 07/29/22 11:03	Analyzed 07/30/22 18:25	
(GRO)-C6-C10	<49.9	0	49.9	mg/Kg		07/29/22 11:03	07/30/22 16:25	1
Diesel Range Organics (Over C10-C28)	<49.9	U *+	49.9	mg/Kg		07/29/22 11:03	07/30/22 18:25	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		07/29/22 11:03	07/30/22 18:25	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	77		70 - 130			07/29/22 11:03	07/30/22 18:25	1
o-Terphenyl	97		70 - 130			07/29/22 11:03	07/30/22 18:25	1
_ Method: 300.0 - Anions, Ion C	hromatogra	iphy - Solu	ıble					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.55		5.00	mg/Kg			07/22/22 10:13	1
Client Sample ID: PH03A						Lab Samp	le ID: 890-2	2571-2
Date Collected: 07/15/22 12:15								: Solid
Date Received: 07/18/22 12:12							inder 17	
Sample Depth: 1'								
 Method: 8021B - Volatile Orga	nic Compo				-			
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00202	U	0.00202	mg/Kg		07/21/22 09:25	07/21/22 14:15	1
Toluene	<0.00202		0.00202	mg/Kg		07/21/22 09:25	07/21/22 14:15	1
Ethylbenzene	< 0.00202		0.00202	mg/Kg			07/21/22 14:15	1
m-Xylene & p-Xylene	< 0.00403		0.00403	mg/Kg			07/21/22 14:15	
o-Xylene	< 0.00202		0.00202	mg/Kg			07/21/22 14:15	1
Xylenes, Total	< 0.00403		0.00403	mg/Kg			07/21/22 14:15	1
	0.00100	-	0.00100					

Limits Prepared 70 - 130 07/21/22 09:25 07/21/22 14:15

**Eurofins Carlsbad** 

Analyzed

Surrogate

4-Bromofluorobenzene (Surr)

%Recovery Qualifier

106

Dil Fac

# **Client Sample Results**

Job ID: 890-2571-1 SDG: 03E1558015

Date Collected: 07/15/22 12:15
Date Received: 07/18/22 12:12
Sample Depth: 1'

**Client Sample ID: PH03A** 

Project/Site: PLU 15 TWR

**Client: Ensolum** 

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

Surrogate	%Recovery Qu	ualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	91		70 - 130			07/21/22 09:25	07/21/22 14:15	1
Method: Total BTEX - To	tal BTEX Calculation	n						
Analyte	Result Qu	ualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403 U		0.00403	mg/Kg			07/22/22 16:06	1
Method: 8015 NM - Diese	el Range Organics (	DRO) (GO	C)					
Analyte	Result Qu	ualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9 U		49.9	mg/Kg			07/21/22 12:58	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9	U	49.9	mg/Kg		07/29/22 11:03	07/30/22 18:46	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<49.9	U *+	49.9	mg/Kg		07/29/22 11:03	07/30/22 18:46	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		07/29/22 11:03	07/30/22 18:46	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130			07/29/22 11:03	07/30/22 18:46	1
o-Terphenyl	128		70 - 130			07/29/22 11:03	07/30/22 18:46	1

# Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	32.0	4.95	mg/Kg			07/22/22 10:40	1

# **Client Sample ID: PH03B** Date Collected: 07/15/22 12:25

#### Date Received: 07/18/22 12:12 Sample Depth: 3'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:25	07/21/22 14:41	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:25	07/21/22 14:41	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:25	07/21/22 14:41	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		07/21/22 09:25	07/21/22 14:41	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:25	07/21/22 14:41	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		07/21/22 09:25	07/21/22 14:41	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			07/21/22 09:25	07/21/22 14:41	1
1,4-Difluorobenzene (Surr)	98		70 - 130			07/21/22 09:25	07/21/22 14:41	1
Method: Total BTEX - Tota	I BTEX Calcula	tion						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			07/22/22 16:06	1
	Range Organic	s (DRO) (0	SC)					
Method: 8015 NM - Diesel								
Method: 8015 NM - Diesel Analyte		Qualifier	, RL	Unit	D	Prepared	Analyzed	Dil Fac

#### **Eurofins Carlsbad**

Lab Sample ID: 890-2571-2 Matrix: Solid 5 Lab Sample ID: 890-2571-3

Matrix: Solid

RL

50.0

50.0

50.0

RL

5.05

Limits

70 - 130

70 - 130

Unit

mg/Kg

mg/Kg

mg/Kg

Unit

mg/Kg

D

D

Prepared

Prepared

Prepared

Dil Fac

1

1

1

1

1

1

Dil Fac

Dil Fac

Job ID: 890-2571-1 SDG: 03E1558015

# Client Sample ID: PH03B

Project/Site: PLU 15 TWR

Gasoline Range Organics

Diesel Range Organics (Over

Oll Range Organics (Over C28-C36)

Client: Ensolum

Analyte

C10-C28)

Surrogate

o-Terphenyl

Analyte

Chloride

1-Chlorooctane

(GRO)-C6-C10

Date Collected: 07/15/22 12:25 Date Received: 07/18/22 12:12 Sample Depth: 3'

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

Method: 300.0 - Anions, Ion Chromatography - Soluble

Result Qualifier

Qualifier

<50.0 U

<50.0 U

95

120

154

**Result Qualifier** 

%Recovery

<50.0 U\*+

Lab Sample ID: 890-2571-3 Matrix: Solid

Analyzed

Analyzed

Analyzed

07/22/22 10:50

07/29/22 11:03 07/30/22 19:08

07/29/22 11:03 07/30/22 19:08

07/29/22 11:03 07/30/22 19:08

07/29/22 11:03 07/30/22 19:08

07/29/22 11:03 07/30/22 19:08

# **Surrogate Summary**

**Client: Ensolum** Project/Site: PLU 15 TWR

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

			Per
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-2566-A-1-G MS	Matrix Spike	83	100
890-2566-A-1-H MSD	Matrix Spike Duplicate	109	99
890-2571-1	PH03	86	79
890-2571-2	PH03A	106	91
890-2571-3	PH03B	101	98
LCS 880-30208/1-A	Lab Control Sample	96	97
LCSD 880-30208/2-A	Lab Control Sample Dup	109	92
MB 880-30208/5-A	Method Blank	79	95

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

			Per	cent Surrogate Recovery
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2571-1	PH03	77	97	
890-2571-2	PH03A	97	128	
890-2571-3	PH03B	95	120	
890-2663-A-1-B MS	Matrix Spike	81	93	
890-2663-A-1-C MSD	Matrix Spike Duplicate	85	98	
LCS 880-30992/2-A	Lab Control Sample	115	110	
LCSD 880-30992/3-A	Lab Control Sample Dup	118	117	
MB 880-30992/1-A	Method Blank	101	115	

#### Surrogate Legend

1CO = 1-Chlorooctane OTPH = o-Terphenyl

5 6

Prep Type: Total/NA

Prep Type: Total/NA

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**Client Sample ID: Method Blank** 

**Client Sample ID: Lab Control Sample** 

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

Job ID: 890-2571-1 SDG: 03E1558015

Prep Type: Total/NA Prep Batch: 30208

**Prep Type: Total/NA** 

Prep Type: Total/NA

**Client: Ensolum** Project/Site: PLU 15 TWR

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

#### Lab Sample ID: MB 880-30208/5-A **Matrix: Solid Analysis Batch: 30191**

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:25	07/21/22 12:04	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:25	07/21/22 12:04	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:25	07/21/22 12:04	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/21/22 09:25	07/21/22 12:04	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:25	07/21/22 12:04	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/21/22 09:25	07/21/22 12:04	1
	MB	MB						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	79		70 - 130			07/21/22 09:25	07/21/22 12:04	1
1,4-Difluorobenzene (Surr)	95		70 - 130			07/21/22 09:25	07/21/22 12:04	1

#### Lab Sample ID: LCS 880-30208/1-A Matrix: Solid Analysis Batch: 30191

Analysis Batch: 30191							Prep Batch	: 30208
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09280		mg/Kg		93	70 - 130	
Toluene	0.100	0.09172		mg/Kg		92	70 - 130	
Ethylbenzene	0.100	0.09500		mg/Kg		95	70 - 130	
m-Xylene & p-Xylene	0.200	0.1827		mg/Kg		91	70 - 130	
o-Xylene	0.100	0.09784		mg/Kg		98	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	96		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

#### Lab Sample ID: LCSD 880-30208/2-A Matrix: Solid

#### Analysis Batch: 30191

Analysis Batch: 30191								atch:	30208
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09320		mg/Kg		93	70 - 130	0	35
Toluene	0.100	0.09504		mg/Kg		95	70 - 130	4	35
Ethylbenzene	0.100	0.09691		mg/Kg		97	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.1873		mg/Kg		94	70 - 130	2	35
o-Xylene	0.100	0.1033		mg/Kg		103	70 - 130	5	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	109		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

#### Lab Sample ID: 890-2566-A-1-G MS Matrix: Solid

Matrix: Solid Analysis Batch: 30191										pe: Total/NA atch: 30208
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.0535		0.0998	0.07076	F1	mg/Kg		17	70 - 130	
Toluene	0.0607		0.0998	0.06762	F1	mg/Kg		7	70 - 130	

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**Client Sample ID: Matrix Spike** 

# Released to Imaging: 11/22/2022 11:30:50 AM

Spike

Added

0.0998

0.200

0.0998

Limits

70 - 130

70 - 130

Client: Ensolum

Lab Sample ID: 890-2566-A-1-G MS

Project/Site: PLU 15 TWR

Analysis Batch: 30191

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

Matrix: Solid

Analyte

o-Xylene

Surrogate

Ethylbenzene

m-Xylene & p-Xylene

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

Sample Sample

MS MS

%Recovery Qualifier

83

100

0.191

0.0103

0.0397

**Result Qualifier** 

					SDG: 03E1558015	
(Conti	nued)					
			CI	ient Sa	mple ID: Matrix Spike Prep Type: Total/NA Prep Batch: 30208	4
MS	MS				%Rec	
Result	Qualifier	Unit	D	%Rec	Limits	
0.07426	F1	mg/Kg	_	-117	70 - 130	
0.1436	F1	mg/Kg		67	70 - 130	
0.07377	F1	mg/Kg		34	70 - 130	
						Q
		Client Sa	mp	le ID: N	latrix Spike Duplicate Prep Type: Total/NA	
MSD	MSD				Prep Batch: 30208 %Rec RPD	

**Client Sample ID: Method Blank** 

Analyzed

Prep Type: Total/NA

07/29/22 11:03 07/30/22 10:06

07/29/22 11:03 07/30/22 10:06

**Client Sample ID: Lab Control Sample** 

Dil Fac

1

1

Prepared

Prep Type: Total/NA

Lab Sample ID: 890-2566-A-1-H MSD	
Matrix: Solid	
Analysis Batch: 30191	

Analysis Datch. Julist									гіер ц	baltin.	JU200	
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.0535		0.0994	0.08725	F1	mg/Kg		34	70 - 130	21	35	
Toluene	0.0607		0.0994	0.08422	F1	mg/Kg		24	70 - 130	22	35	ī
Ethylbenzene	0.191		0.0994	0.08803	F1	mg/Kg		-104	70 - 130	17	35	
m-Xylene & p-Xylene	0.0103		0.199	0.1708		mg/Kg		81	70 - 130	17	35	i.
o-Xylene	0.0397		0.0994	0.09152	F1	mg/Kg		52	70 - 130	21	35	
	MSD	MSD										
Surrogate	%Recovery	Qualifier	Limits									

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	109		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

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

#### Lab Sample ID: MB 880-30992/1-A **Matrix: Solid** Analysis Batch: 31051

Analysis Batch: 31051							Prep Batch:	30992
-	MB	МВ					-	
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		07/29/22 11:03	07/30/22 10:06	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		07/29/22 11:03	07/30/22 10:06	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/29/22 11:03	07/30/22 10:06	1
	MB	MB						

Surrogate	%Recovery Qualif	fier Limits
1-Chlorooctane	101	70 - 130
o-Terphenyl	115	70 - 130

#### Lab Sample ID: LCS 880-30992/2-A Matrix: Solid Analysis Batch: 31051

Analysis Batch: 31051							Prep B	atch: 30992
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	1068		mg/Kg		107	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	1467	*+	mg/Kg		147	70 - 130	
C10-C28)								

Client: Ensolum Project/Site: PLU 15 TWR

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

Lab Sample ID: LCS 880- Matrix: Solid	STOPPIE-M								: Lab Cor Prep Ty		
Analysis Batch: 31051										atch: 3	
	LCS	LCS									
Surrogate	%Recovery		Limits								
1-Chlorooctane			70 - 130								
o-Terphenyl	110		70 - 130								
Lab Sample ID: LCSD 88	0_30002/3_A					liont Sa	mnlo		o Control	Sample	
Matrix: Solid	0-30332/3-A						inpie	ID. Lat	Prep Ty		
Analysis Batch: 31051										Batch: 3	
Analysis Datch. 51051			Spike	LCSD	LCSD				%Rec		RI
Analyte			Added		Qualifier	Unit	D	%Rec	Limits	RPD	Lir
Gasoline Range Organics			1000	1074	guainter	mg/Kg		107	70 - 130	1	
(GRO)-C6-C10			1000	1074		iiig/itg		107	70-150	1	
Diesel Range Organics (Over			1000	1539	*+	mg/Kg		154	70 - 130	5	
C10-C28)						0 0					
	1.000	LCSD									
Sumo noto			Lineite								
Surrogate 1-Chlorooctane	% <b>Recovery</b> 118	Quaimer	Limits 70 - 130								
o-Terphenyl	117		70 - 130								
Matrix: Solid		Sampla	Spiko	МС	Me						al/I
Matrix: Solid Analysis Batch: 31051	Sample	Sample Qualifier	Spike Added		MS Qualifier	Unit	D	%Rec	Prep Ty	pe: Tot	al/N
Matrix: Solid Analysis Batch: 31051 Analyte Gasoline Range Organics	Sample	Qualifier	-			Unit mg/Kg	D	% <b>Rec</b>	Prep Ty Prep E %Rec	pe: Tot	al/N
Matrix: Solid Analysis Batch: 31051 Analyte Gasoline Range Organics (GRO)-C6-C10	Sample Result <49.9	Qualifier U	<b>Added</b> 999	<b>Result</b> 701.4		mg/Kg	D	70	Prep Ty Prep B %Rec Limits 70 - 130	pe: Tot	al/N
Matrix: Solid Analysis Batch: 31051 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Sample Result	Qualifier U	Added	Result			D		Prep Ty Prep B %Rec Limits	pe: Tot	al/N
Matrix: Solid Analysis Batch: 31051 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Sample Result <49.9 <49.9	Qualifier U	<b>Added</b> 999	<b>Result</b> 701.4		mg/Kg	<u>D</u>	70	Prep Ty Prep B %Rec Limits 70 - 130	pe: Tot	al/N
Matrix: Solid Analysis Batch: 31051 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Sample Result <49.9 <49.9	Qualifier U + MS	<b>Added</b> 999	<b>Result</b> 701.4		mg/Kg	<u>D</u>	70	Prep Ty Prep B %Rec Limits 70 - 130	pe: Tot	al/N
Matrix: Solid Analysis Batch: 31051 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	Sample Result <49.9 <49.9 MS	Qualifier U + MS	Added 999 999	<b>Result</b> 701.4		mg/Kg	<u>D</u>	70	Prep Ty Prep B %Rec Limits 70 - 130	pe: Tot	al/N
Matrix: Solid Analysis Batch: 31051 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane	Sample Result <49.9 <49.9 MS %Recovery	Qualifier U + MS	Added 999 999 Limits	<b>Result</b> 701.4		mg/Kg	D_	70	Prep Ty Prep B %Rec Limits 70 - 130	pe: Tot	al/N
Matrix: Solid Analysis Batch: 31051 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl	Sample Result <49.9 <49.9 MS %Recovery 81 93	Qualifier U + MS	Added           999           999           999           Limits           70 - 130	<b>Result</b> 701.4		mg/Kg mg/Kg		85	Prep Ty Prep E %Rec Limits 70 - 130 70 - 130	pe: Tot 3atch: 3	al// 309
Matrix: Solid Analysis Batch: 31051 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-2663	Sample Result <49.9 <49.9 MS %Recovery 81 93	Qualifier U + MS	Added           999           999           999           Limits           70 - 130	<b>Result</b> 701.4		mg/Kg mg/Kg		85	Prep Ty Prep E %Rec Limits 70 - 130 70 - 130	pe: Tot Batch: 3	al// 309
Lab Sample ID: 890-2663 Matrix: Solid Analysis Batch: 31051 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-2663 Matrix: Solid Analysis Batch: 31051	Sample Result <49.9 <49.9 MS %Recovery 81 93	Qualifier U + MS	Added           999           999           999           Limits           70 - 130	<b>Result</b> 701.4		mg/Kg mg/Kg		85	Prep Ty Prep E %Rec Limits 70 - 130 70 - 130	pe: Tot Batch: 3  ke Dup pe: Tot	al// 309  lica al//
Matrix: Solid Analysis Batch: 31051 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-2663	Sample Result <49.9 <49.9 <i>MS</i> <i>%Recovery</i> 81 93 8-A-1-C MSD	Qualifier U *+ MS Qualifier	Added 999 999 <u>Limits</u> 70 - 130 70 - 130	Result 701.4 868.3	Qualifier	mg/Kg mg/Kg		85	Prep Ty Prep E %Rec Limits 70 - 130 70 - 130	pe: Tot Batch: 3  ke Dup pe: Tot	al/N 309  lica al/N 309
Matrix: Solid Analysis Batch: 31051 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane p-Terphenyl Lab Sample ID: 890-2663 Matrix: Solid Analysis Batch: 31051	Sample <u>Result</u> <49.9 <49.9 MS <u>%Recovery</u> 81 93 S-A-1-C MSD Sample	Qualifier U + MS	Added 999 999 <u>Limits</u> 70 - 130 70 - 130 Spike	Result 701.4 868.3 MSD	Qualifier	mg/Kg mg/Kg	Samp	70 85 Ie ID: N	Prep Ty Prep E %Rec Limits 70 - 130 70 - 130 70 - 130	pe: Tot Batch: 3  ke Dup pe: Tot	al// 309  lica al// 309 R
Matrix: Solid Analysis Batch: 31051 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-2663 Matrix: Solid Analysis Batch: 31051 Analyte Gasoline Range Organics	Sample <u>Result</u> <49.9 <49.9 MS <u>%Recovery</u> 81 93 S-A-1-C MSD Sample	Qualifier U *+ MS Qualifier Sample Qualifier	Added 999 999 <u>Limits</u> 70 - 130 70 - 130	Result 701.4 868.3 MSD	Qualifier	mg/Kg mg/Kg Client \$	Samp	85	Prep Ty Prep E %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130	pe: Tot Batch: 3  pe: Tot Batch: 3	al// 309  lica al// 309 R 
Matrix: Solid Analysis Batch: 31051 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-2663 Matrix: Solid Analysis Batch: 31051 Analyte Gasoline Range Organics (GRO)-C6-C10	Sample Result <49.9 <49.9 MS %Recovery 81 93 S-A-1-C MSD Sample Result	Qualifier U *+ MS Qualifier U	Added 999 999 <u>Limits</u> 70 - 130 70 - 130 70 - 130	Result           701.4           868.3           MSD           Result           732.4	Qualifier	mg/Kg mg/Kg Client S Unit mg/Kg	Samp	70 85 Ie ID: N	Prep Ty Prep E %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	ke Dup pe: Tot Batch: 3 Pe: Tot Batch: 3 <u>RPD</u> 4	al/  309 
Matrix: Solid Analysis Batch: 31051 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-2663 Matrix: Solid Analysis Batch: 31051 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Sample Result <49.9 <49.9 MS %Recovery 81 93 S-A-1-C MSD Sample Result <49.9	Qualifier U *+ MS Qualifier U	Added 999 999 <u>Limits</u> 70 - 130 70 - 130 70 - 130 Spike Added	Result 701.4 868.3 MSD Result	Qualifier	mg/Kg mg/Kg Client \$ Unit	Samp	70 85 Ie ID: N <u>%Rec</u> 73	Prep Ty Prep E %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 Matrix Spil Prep Ty Prep E %Rec Limits 70 - 130	ke Dup pe: Tot Batch: 3 Pe: Tot Batch: 3 	al/  309 
Matrix: Solid Analysis Batch: 31051 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-2663 Matrix: Solid Analysis Batch: 31051 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Sample Result <49.9 <49.9 <i>MS</i> <i>%Recovery</i> 81 93 8-A-1-C MSD Sample Result <49.9	Qualifier U *+ MS Qualifier U	Added 999 999 <u>Limits</u> 70 - 130 70 - 130 70 - 130 Spike Added	Result           701.4           868.3           MSD           Result           732.4	Qualifier	mg/Kg mg/Kg Client S Unit mg/Kg	Samp	70 85 Ie ID: N <u>%Rec</u> 73	Prep Ty Prep E %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 Matrix Spil Prep Ty Prep E %Rec Limits 70 - 130	ke Dup pe: Tot Batch: 3 Pe: Tot Batch: 3 <u>RPD</u> 4	al/N 3099  al/N 3099 RI Lir
Matrix: Solid Analysis Batch: 31051 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-2663 Matrix: Solid	Sample Result <49.9 <49.9 <i>MS</i> <i>%Recovery</i> 81 93 8-A-1-C MSD Sample Result <49.9	Qualifier U *+ MS Qualifier U U *+ U *+ MSD	Added 999 999 <u>Limits</u> 70 - 130 70 - 130 70 - 130 Spike Added	Result           701.4           868.3           MSD           Result           732.4	Qualifier	mg/Kg mg/Kg Client S Unit mg/Kg	Samp	70 85 Ie ID: N <u>%Rec</u> 73	Prep Ty Prep E %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 Matrix Spil Prep Ty Prep E %Rec Limits 70 - 130	ke Dup pe: Tot Batch: 3 Pe: Tot Batch: 3 <u>RPD</u> 4	al/N 3099
Matrix: Solid Analysis Batch: 31051 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-2663 Matrix: Solid Analysis Batch: 31051 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Sample Result <49.9 <49.9 <i>MS</i> <i>%Recovery</i> 81 93 8-A-1-C MSD Sample Result <49.9 <49.9 <i>MSD</i>	Qualifier U *+ MS Qualifier U U *+ U *+ MSD	Added           999           999           130           70 - 130           70 - 130           70 - 130           999           999           999           999           999           999	Result           701.4           868.3           MSD           Result           732.4	Qualifier	mg/Kg mg/Kg Client S Unit mg/Kg	Samp	70 85 Ie ID: N <u>%Rec</u> 73	Prep Ty Prep E %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 Matrix Spil Prep Ty Prep E %Rec Limits 70 - 130	ke Dup pe: Tot Batch: 3 Pe: Tot Batch: 3 <u>RPD</u> 4	al/N 3099 

Client: Ensolum

# **QC Sample Results**

Job ID: 890-2571-1 SDG: 03E1558015

Project/Site: PLU 15 TWR Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-30	0059/1-A								C	Clie	nt Sam	ple ID: M		
Matrix: Solid												Prep I	ype: So	Siuble
Analysis Batch: 30226														
Ameliate	D.	MB ME	-				11		<b>_</b>	Π.		Awaha	- a al 👘	
Analyte		sult Qu	alitier				Unit		D	Pr	epared	Analy		Dil Fac
Chloride	<:	5.00 U			5.00		mg/K	g				07/22/22	08:50	1
Lab Sample ID: LCS 880-3	30059/2-A							Cli	ent \$	San	nple ID:	: Lab Coi	ntrol Sa	ample
Matrix: Solid													ype: So	
Analysis Batch: 30226														
-				Spike		LCS	LCS					%Rec		
Analyte				Added	Re	sult	Qualifier	Unit		D	%Rec	Limits		
Chloride				250	2	67.1		mg/Kg			107	90 - 110		
												0	o	. <b>.</b>
Lab Sample ID: LCSD 880	-30059/3-A						C	lient S	amp	ole	ID: Lab	Control		
Matrix: Solid												Prep I	ype: So	
Analysis Batch: 30226				Spike		-en	LCSD					%Rec		RPD
				•	_									RFU
Analyto				hohhA	Ra	eult	Qualifior	Unit		п	%Roc	l imite	RPD	Limit
				Added 250			Qualifier	Unit ma/Ka		D	%Rec 107	Limits	<b>RPD</b>	
				Added 250		<b>sult</b> 67.6	Qualifier	Unit mg/Kg		<b>D</b>	<b>%Rec</b> 107	Limits 90 - 110		
Chloride							Qualifier			-	107		0	20
Analyte Chloride Lab Sample ID: 890-2569-4 Matrix: Solid	A-1-B MS						Qualifier			-	107	90 - 110	0	20 Spike
Chloride Lab Sample ID: 890-2569-/	A-1-B MS						Qualifier			-	107	90 - 110	0 Matrix	
Chloride Lab Sample ID: 890-2569-/ Matrix: Solid	A-1-B MS Sample	Sample				67.6	Qualifier			-	107	90 - 110	0 Matrix	20 Spike
Chloride Lab Sample ID: 890-2569- Matrix: Solid Analysis Batch: 30226 Analyte	Sample Result	Sample Qualifie		250 Spike Added	2	MS sult		mg/Kg Unit		-	107 ient Sar	90 - 110 mple ID: Prep T %Rec Limits	0 Matrix	20 Spike
Chloride Lab Sample ID: 890-2569- Matrix: Solid Analysis Batch: 30226	Sample			250 Spike	2	67.6 MS	MS	mg/Kg		_ Cli	107	90 - 110 mple ID: Prep T %Rec	0 Matrix	20 Spike
Chloride Lab Sample ID: 890-2569- Matrix: Solid Analysis Batch: 30226 Analyte Chloride	Sample Result 101			250 Spike Added	2	MS sult	MS	mg/Kg Unit mg/Kg		_ Cli	107 ient Sar <u>%Rec</u> 108	90 - 110 mple ID: Prep T %Rec Limits 90 - 110	Matrix S ype: Sc	Spike
Chloride Lab Sample ID: 890-2569- Matrix: Solid Analysis Batch: 30226 Analyte Chloride Lab Sample ID: 890-2569-	Sample Result 101			250 Spike Added	2	MS sult	MS	mg/Kg Unit mg/Kg	t Sai	_ Cli	107 ient Sar <u>%Rec</u> 108	90 - 110 mple ID: Prep T %Rec Limits 90 - 110 latrix Spi	Matrix S ype: Sc	Spike bluble
Chloride Lab Sample ID: 890-2569- Matrix: Solid Analysis Batch: 30226 Analyte Chloride Lab Sample ID: 890-2569- Matrix: Solid	Sample Result 101			250 Spike Added	2	MS sult	MS	mg/Kg Unit mg/Kg	t Sai	_ Cli	107 ient Sar <u>%Rec</u> 108	90 - 110 mple ID: Prep T %Rec Limits 90 - 110 latrix Spi	Matrix S ype: Sc	Spike bluble
Chloride Lab Sample ID: 890-2569- Matrix: Solid Analysis Batch: 30226 Analyte Chloride Lab Sample ID: 890-2569-	Sample Result 101	Qualifie	er	250 Spike Added	2	67.6 MS sult 70.4	MS	mg/Kg Unit mg/Kg	t Sai	_ Cli	107 ient Sar <u>%Rec</u> 108	90 - 110 mple ID: Prep T %Rec Limits 90 - 110 latrix Spi	Matrix S ype: Sc	Spike bluble
Chloride Lab Sample ID: 890-2569- Matrix: Solid Analysis Batch: 30226 Analyte Chloride Lab Sample ID: 890-2569- Matrix: Solid	Sample Result 101 A-1-C MSD Sample	Qualifie	er	250 Spike Added 250	2 	67.6 MS sult 70.4	MS Qualifier	mg/Kg Unit mg/Kg	t Sai	_ Cli	107 ient Sar <u>%Rec</u> 108	90 - 110 mple ID: Prep T %Rec Limits 90 - 110 latrix Spi Prep T	Matrix S ype: Sc	Spike bluble

# **QC Association Summary**

Client: Ensolum Project/Site: PLU 15 TWR

# GC VOA

## Analysis Batch: 30191

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2571-1	PH03	Total/NA	Solid	8021B	30208
890-2571-2	PH03A	Total/NA	Solid	8021B	30208
890-2571-3	PH03B	Total/NA	Solid	8021B	30208
MB 880-30208/5-A	Method Blank	Total/NA	Solid	8021B	30208
LCS 880-30208/1-A	Lab Control Sample	Total/NA	Solid	8021B	30208
LCSD 880-30208/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30208
890-2566-A-1-G MS	Matrix Spike	Total/NA	Solid	8021B	30208
890-2566-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30208

### Prep Batch: 30208

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-2571-1	PH03	Total/NA	Solid	5035		
890-2571-2	PH03A	Total/NA	Solid	5035		
890-2571-3	PH03B	Total/NA	Solid	5035		
MB 880-30208/5-A	Method Blank	Total/NA	Solid	5035		
LCS 880-30208/1-A	Lab Control Sample	Total/NA	Solid	5035		
LCSD 880-30208/2-A	Lab Control Sample Dup	Total/NA	Solid	5035		
890-2566-A-1-G MS	Matrix Spike	Total/NA	Solid	5035		
890-2566-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035		
Analysis Batch: 3043	20					
Analysis Datch. 304						

Lab Sample ID 890-2571-1	Client Sample ID PH03	Prep Type Total/NA	Matrix Solid	Total BTEX	Prep Batch
890-2571-2	PH03A	Total/NA	Solid	Total BTEX	
890-2571-3	PH03B	Total/NA	Solid	Total BTEX	

# GC Semi VOA

#### Analysis Batch: 30256

Lab Sample ID 890-2571-1	Client Sample ID	Prep Type Total/NA	Matrix	Method 8015 NM	Prep Batch
890-2571-2	PH03A	Total/NA	Solid	8015 NM	
890-2571-3	PH03B	Total/NA	Solid	8015 NM	

#### Prep Batch: 30992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2571-1	PH03	Total/NA	Solid	8015NM Prep	
890-2571-2	PH03A	Total/NA	Solid	8015NM Prep	
890-2571-3	PH03B	Total/NA	Solid	8015NM Prep	
MB 880-30992/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30992/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30992/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2663-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2663-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 31051

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2571-1	PH03	Total/NA	Solid	8015B NM	30992
890-2571-2	PH03A	Total/NA	Solid	8015B NM	30992
890-2571-3	PH03B	Total/NA	Solid	8015B NM	30992
MB 880-30992/1-A	Method Blank	Total/NA	Solid	8015B NM	30992

**Eurofins Carlsbad** 

Job ID: 890-2571-1

SDG: 03E1558015

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# **QC Association Summary**

Client: Ensolum Project/Site: PLU 15 TWR

# GC Semi VOA (Continued)

## Analysis Batch: 31051 (Continued)

Lab Sample ID LCS 880-30992/2-A	Client Sample ID Lab Control Sample	Prep Type Total/NA	Matrix Solid	Method 8015B NM	Prep Batch 30992
LCSD 880-30992/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30992
890-2663-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	30992
890-2663-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30992

# HPLC/IC

#### Leach Batch: 30059

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2571-1	PH03	Soluble	Solid	DI Leach	
890-2571-2	PH03A	Soluble	Solid	DI Leach	
890-2571-3	PH03B	Soluble	Solid	DI Leach	
MB 880-30059/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-30059/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-30059/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2569-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2569-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### Analysis Batch: 30226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2571-1	PH03	Soluble	Solid	300.0	30059
890-2571-2	PH03A	Soluble	Solid	300.0	30059
890-2571-3	PH03B	Soluble	Solid	300.0	30059
MB 880-30059/1-A	Method Blank	Soluble	Solid	300.0	30059
LCS 880-30059/2-A	Lab Control Sample	Soluble	Solid	300.0	30059
LCSD 880-30059/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30059
890-2569-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30059
890-2569-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30059

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Job ID: 890-2571-1 SDG: 03E1558015

Matrix: Solid

Lab Sample ID: 890-2571-1

# **Client Sample ID: PH03** Date Collected: 07/15/22 12:10 Date Received: 07/18/22 12:12

Project/Site: PLU 15 TWR

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			5.03 g	5 mL	30208	07/21/22 09:25	MR	XEN MID
Total/NA	Analysis	8021B		1			30191	07/21/22 13:49	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30439	07/22/22 16:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30256	07/21/22 12:58	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	30992	07/29/22 11:03	DM	XEN MID
Total/NA	Analysis	8015B NM		1			31051	07/30/22 18:25	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	30059	07/19/22 11:04	СН	XEN MID
Soluble	Analysis	300.0		1			30226	07/22/22 10:13	SMC	XEN MID

# Lab Sample ID: 890-2571-2 Matrix: Solid

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**Client Sample ID: PH03A** Date Collected: 07/15/22 12:15 Date Received: 07/18/22 12:12

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	30208	07/21/22 09:25	MR	XEN MID
Total/NA	Analysis	8021B		1			30191	07/21/22 14:15	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30439	07/22/22 16:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30256	07/21/22 12:58	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	30992	07/29/22 11:03	DM	XEN MID
Total/NA	Analysis	8015B NM		1			31051	07/30/22 18:46	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	30059	07/19/22 11:04	СН	XEN MID
Soluble	Analysis	300.0		1			30226	07/22/22 10:40	SMC	XEN MID

# **Client Sample ID: PH03B** Date Collected: 07/15/22 12:25 Date Received: 07/18/22 12:12

# Lab Sample ID: 890-2571-3 Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	30208	07/21/22 09:25	MR	XEN MID
Total/NA	Analysis	8021B		1			30191	07/21/22 14:41	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30439	07/22/22 16:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30256	07/21/22 12:58	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	30992	07/29/22 11:03	DM	XEN MID
Total/NA	Analysis	8015B NM		1			31051	07/30/22 19:08	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	30059	07/19/22 11:04	СН	XEN MID
Soluble	Analysis	300.0		1			30226	07/22/22 10:50	SMC	XEN MID

#### Laboratory References:

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

**Accreditation/Certification Summary** 

Client: Ensolum Project/Site: PLU 15 TWR Job ID: 890-2571-1 SDG: 03E1558015

# Laboratory: Eurofins Midland

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

Authority	Pro	ogram	Identification Number	Expiration Date
exas	NE	ELAP	T104704400-22-24	06-30-23
The following analyte:	s are included in this repo	rt, but the laboratory is r	not certified by the governing authority.	This list may include analytes for whic
the agency does not c	•	, <b>,</b>		····- ···
0,	•	Matrix	Analyte	·····
the agency does not o	offer certification.	•	, , , , , ,	

**Eurofins Carlsbad** 

# **Method Summary**

Client: Ensolum Project/Site: PLU 15 TWR Job ID: 890-2571-1 SDG: 03E1558015

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

#### **Protocol References:**

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions. SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates. TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

Sample Summary

Client: Ensolum Project/Site: PLU 15 TWR Page 142 of 255

Job ID: 890-2571-1
SDG: 03E1558015

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2571-1	PH03	Solid	07/15/22 12:10	07/18/22 12:12	0.5'
890-2571-2	PH03A	Solid	07/15/22 12:15	07/18/22 12:12	1'
890-2571-3	PH03B	Solid	07/15/22 12:25	07/18/22 12:12	3'

Project Manager: Ben Belill			Bill to: (if different)	) Garrett Green	Green			Work Or	Con
	Ċ		Company Name:		XTO Energy, Inc.		Program: U	ST/PST   PRP   E	Program: UST/PST 🗌 PRP 🗌 Brownfields 🗍 RRC 🗌 Superfund
	al parks Hwy		Address:		3104 E. Green Street		State of Project:	ject:	i
e ZIP:	M 88220		City, State ZIP:	Carlsba	Carlsbad, NM 88220		Reporting: L	evel II CLevel III	Reporting: Level II CLevel III PST/UST TRRP
		Emai	Email: bbelill@ensolum.com	m.com			Deliverables: EDD		ADaPT Other:
Name:	PLU 15 TWR	Tur	Turn Around	_		ANALYSIS REQUEST	REQUEST		Preservative Codes
5	03E1558015	Routine	🗌 Rush	Pres. Code					None: NO DI Water: H <sub>2</sub> O
Project Location: EDDY	EDDY COUNTY, NM	Due Date:							2
	Conner Shore	TAT starts t	he day received by				-		HCL: HC HNO3: HN
		the lab, if re	the lab, if received by 4:30pm	rs					H <sub>2</sub> S0 <sub>4</sub> : H <sub>2</sub> NaOH: Na
SAMPLE RECEIPT Tem	Temp Blank: Yes	Yes No Wet Ice:	(Yes No	nete .0)					H <sub>3</sub> PO <sub>4</sub> ; HP
Samples Received Intact: (Tes)	No	Thermometer ID:	12-00						NaHSO4: NABIS
Yes	PUN D	Correction Factor:	-0.0			890-2571 Chain			Na2S2O3: NaSO3
Sample Custody Seals: Yes	No N/A/ Temp	Temperature Reading:	6.0	S (E	1		and Custody		Zn Acetate+NaOH: Zn
Total Containers:	Corre	Corrected Temperature:	Do X	RIDE			_	-	NaOH+Ascorbic Acid: SAPC
Sample Identification	Matrix D	Date Time Sampled Sampled	Depth Grab/ Comp	Cont CHLO	TPH (8 BTEX (				Sample Comments
PH03	S 7/15	7/15/2022 2010	0.5 Grab/	1 X	X X				
PH03A	S 7/15		1 Grab/	1 X	××				
PH03B	_	7/15/2022 1235	3' Grab/	1 X	××				
PH03C			4' Grab/	1 ×	×				*HOLD Pending 3' sample
					-				Cost Center: 2027711001
									Incident Numbers:
X									nAPP2205638843 nAPP2207746719
Com			_						
Total 200.7 / 6010 200.8	200.8 / 6020:	BRCRA 13	TCID/SDID 6010 SRCRA		Ba Be B Cd	Ca Cr Co Cu Fe	Ni Se Aa	Nik Se A	.g SiO <sub>2</sub> Na Sr TI Sn U V Zn Ha: 1631/245.1/7470/7471
Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractor of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any loases or expenses incurred by the client if such loases of service.	linguishment of samp aly for the cost of samp	ples constitutes a valid mples and shall not ass	purchase order from o ume any responsibilit	client company to y for any losses c	Eurofins Xenco, or expenses incur	Its affiliates and subcontract red by the client if such loss	es are due to circums	s. It assigns standard terms and conditions are due to circumstances beyond the control are due to circumstances nearburght page 1	
Relinquished by: (Signature)		Received by: (Signature	ature)	Date/Time	Ime	ad by: (Signature) Received by: (Signature) Date/Time Relinquished by: (Signature) Received by: (Signat	gnature)	Received by: (Signature)	jnature) Date/Time
	A	wela 2	Aut	-2/18/22	eser c	٣			

Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 When EDE DAAD I white TX (806) 794-1296

seurofins .

Job Number: 890-2571-1 SDG Number: 03E1558015

List Source: Eurofins Carlsbad

# Login Sample Receipt Checklist

Client: Ensolum

<6mm (1/4").

#### Login Number: 2571 List Number: 1 Creator: Stutzman, Amanda

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	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	
Job Number: 890-2571-1 SDG Number: 03E1558015

List Source: Eurofins Midland

List Creation: 07/19/22 11:13 AM

#### Login Sample Receipt Checklist

Client: Ensolum

Login Number: 2571 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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Received by OCD: 8/10/2022 10:53:56 AM

LINKS

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# Environment Testing America

# **ANALYTICAL REPORT**

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

#### Laboratory Job ID: 890-2572-1

Laboratory Sample Delivery Group: 03E1558015 Client Project/Site: PLU 15 TWR

#### For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

RAMER

Authorized for release by: 7/25/2022 8:03:30 AM Jessica Kramer, Project Manager (432)704-5440 Jessica.Kramer@et.eurofinsus.com



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

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	Definitions/Glossary		
Client: Ensolum Project/Site: PL		Job ID: 890-2572-1 SDG: 03E1558015	
Qualifiers			
GC VOA			
Qualifier	Qualifier Description		
F1	MS and/or MSD recovery exceeds control limits.		
U	Indicates the analyte was analyzed for but not detected.		
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	Qualifier Description		
Qualifier U	Qualifier Description Indicates the analyte was analyzed for but not detected.		
0	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 Practical Quantitation Limit		
PQL			
PRES	Presumptive		
QC RER	Quality Control Relative Error Ratio (Radiochemistry)		
RL			
	Reporting Limit or Requested Limit (Radiochemistry) Relative Percent Difference, a measure of the relative difference between two points		
	inclauve reident Difference, a measure of the relative unlerence between two points		
	Toxicity Equivalent Eactor (Dioxin)		
RPD TEF TEQ	Toxicity Equivalent Factor (Dioxin) Toxicity Equivalent Quotient (Dioxin)		

Page 149 of 255

#### Job ID: 890-2572-1 SDG: 03E1558015

#### Job ID: 890-2572-1

#### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-2572-1

#### Receipt

The samples were received on 7/18/2022 12:12 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.8°C

#### GC VOA

Method 8021B: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 880-30208 and analytical batch 880-30191 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.

#### GC Semi VOA

Method 8015MOD\_NM: The surrogate recovery for the blank associated with preparation batch 880-30164 and analytical batch 880-30098 was outside the upper control limits.

Method 8015MOD\_NM: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 880-30164 and analytical batch 880-30098 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

Method 300\_ORGFM\_28D: PH04 (890-2572-1) The matrix spike duplicate (MSD) recoveries for preparation batch 880-30059 and analytical batch 880-30226 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.

Method: 8021B - Volatile Organic Compounds (GC)

Result Qualifier

<0.00201 U

<0.00201 U

<0.00201 U

<0.00402 U

<0.00201 U

RL

0.00201

0.00201

0.00201

0.00402

0.00201

Unit

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

D

Prepared

07/21/22 09:25

07/21/22 09:25

07/21/22 09:25

07/21/22 09:25

07/21/22 09:25

Job ID: 890-2572-1 SDG: 03E1558015

#### **Client Sample ID: PH04**

Project/Site: PLU 15 TWR

Date Collected: 07/15/22 12:35 Date Received: 07/18/22 12:12

Sample Depth: 0.5'

Client: Ensolum

Analyte

Benzene

Toluene

o-Xylene

Ethylbenzene

m-Xylene & p-Xylene

## Lab Sample ID: 890-2572-1

Analyzed

07/21/22 15:07

07/21/22 15:07

07/21/22 15:07

07/21/22 15:07

07/21/22 15:07

Matrix: Solid

Dil Fac

1

1

1

1

1

5

0-Aylono	-0.00201	0	0.00201	ing/itg		0112 1122 00.20	01/21/22 10.01	
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		07/21/22 09:25	07/21/22 15:07	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)		Quanner	70 - 130			07/21/22 09:25	07/21/22 15:07	1
1,4-Difluorobenzene (Surr)	101		70 - 130			07/21/22 09:25	07/21/22 15:07	1
Method: Total BTEX - Total BTEX	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			07/22/22 16:06	1
- Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			07/21/22 13:53	1
-								
Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		07/20/22 15:31	07/21/22 00:15	1
(GRO)-C6-C10 Diesel Range Organics (Over	<50.0		50.0	mg/Kg		07/20/22 15:31	07/21/22 00:15	1
C10-C28)	~50.0	0	50.0	iliy/Ny		01/20/22 10:31	07/21/22 00:15	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/20/22 15:31	07/21/22 00:15	1
0	0/ <b>D</b>	0	1			<b>D</b>	A	D# 5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	99		70 - 130			07/20/22 15:31	07/21/22 00:15	
o-Terphenyl	106		70 - 130			07/20/22 15:31	07/21/22 00:15	1
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.99	U	4.99	mg/Kg			07/22/22 10:59	1
Client Sample ID: PH04A						Lab Sar	nple ID: 890-	2572-2
Date Collected: 07/15/22 12:45						Lub oui		ix: Solid
Date Received: 07/18/22 12:12							Wath	x. Solia
Sample Depth: 2'								
Method: 8021B - Volatile Organic	Compounds	(GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:25	07/21/22 15:33	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:25	07/21/22 15:33	1
Ethylbonzono	<0.00200		0.00200	malka		07/21/22 00:25	07/21/22 15:22	1

4-Bromofluorobenzene (Surr)	112		70 - 130		07/21/22 09:25	07/21/22 15:33	1
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
Xylenes, Total	<0.00401 L	J	0.00401	mg/Kg	07/21/22 09:25	07/21/22 15:33	1
o-Xylene	<0.00200 l	J	0.00200	mg/Kg	07/21/22 09:25	07/21/22 15:33	1
m-Xylene & p-Xylene	<0.00401 L	J	0.00401	mg/Kg	07/21/22 09:25	07/21/22 15:33	1
Ethylbenzene	<0.00200 l	J	0.00200	mg/Kg	07/21/22 09:25	07/21/22 15:33	1
Toluene	<0.00200 l	J	0.00200	mg/Kg	07/21/22 09:25	07/21/22 15:33	1

**Eurofins Carlsbad** 

Released to Imaging: 11/22/2022 11:30:50 AM

#### **Client Sample Results**

Job ID: 890-2572-1 SDG: 03E1558015

# Lab Sample ID: 890-2572-2

Matrix: Solid

5

Date Collected: 07/15/22 12:45 Date Received: 07/18/22 12:12

**Client Sample ID: PH04A** 

Project/Site: PLU 15 TWR

Sample Depth: 2'

Client: Ensolum

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	94		70 - 130			07/21/22 09:25	07/21/22 15:33	1
Method: Total BTEX - Total BTEX	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			07/22/22 16:06	
Method: 8015 NM - Diesel Range	Organics (DR	0) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<49.9	U	49.9	mg/Kg			07/21/22 13:53	1
- Method: 8015B NM - Diesel Rang	e Organics (D	RO) (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		07/20/22 15:31	07/21/22 00:36	1
Diesel Range Organics (Over	<49.9	U	49.9	mg/Kg		07/20/22 15:31	07/21/22 00:36	1
C10-C28)				0.0				
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		07/20/22 15:31	07/21/22 00:36	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130			07/20/22 15:31	07/21/22 00:36	1
o-Terphenyl	109		70 - 130			07/20/22 15:31	07/21/22 00:36	1
Method: 300.0 - Anions, Ion Chro	matography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	29.0		5.04	mg/Kg			07/22/22 11:08	1
Client Sample ID: PH04B						Lab San	nple ID: 890-	2572-3
Date Collected: 07/15/22 12:50							Matri	ix: Solid
Date Received: 07/18/22 12:12								
ample Depth: 3'								

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	0.00200 mg/Kg		07/21/22 09:25	07/21/22 15:59	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:25	07/21/22 15:59	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:25	07/21/22 15:59	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		07/21/22 09:25	07/21/22 15:59	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:25	07/21/22 15:59	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg 07/21/22 09:25		07/21/22 15:59	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130			07/21/22 09:25	07/21/22 15:59	1
1,4-Difluorobenzene (Surr)	90		70 - 130			07/21/22 09:25	07/21/22 15:59	1
- Method: Total BTEX - Total B1	EX Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			07/22/22 16:06	1
- Method: 8015 NM - Diesel Rar	ige Organics (DR	0) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	11	49.9	mg/Kg			07/21/22 13:53	1

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

Method: 300.0 - Anions, Ion Chromatography - Soluble

Result Qualifier

<49.9 U

<49.9 U

<49.9 U

93

100

26.9

Result Qualifier

Qualifier

%Recovery

#### **Client Sample Results**

RL

49.9

49.9

49.9

RL

4.98

Limits

70 - 130

70 - 130

Unit

mg/Kg

mg/Kg

mg/Kg

Unit

mg/Kg

D

D

Prepared

07/20/22 15:31

07/20/22 15:31

07/20/22 15:31

Prepared

07/20/22 15:31

07/20/22 15:31

Prepared

Job ID: 890-2572-1 SDG: 03E1558015

#### **Client Sample ID: PH04B**

Project/Site: PLU 15 TWR

Client: Ensolum

Sample Depth: 3'

Gasoline Range Organics

Diesel Range Organics (Over

Oll Range Organics (Over C28-C36)

Analyte

C10-C28)

Surrogate 1-Chlorooctane

o-Terphenyl

Analyte

Chloride

(GRO)-C6-C10

Date Collected: 07/15/22 12:50 Date Received: 07/18/22 12:12

# Lab Sample ID: 890-2572-3

Analyzed

07/21/22 00:57

07/21/22 00:57

07/21/22 00:57

Analyzed

07/21/22 00:57

07/21/22 00:57

Analyzed

07/22/22 11:18

Matrix: Solid

Dil Fac

1

1

1

1

Dil Fac

Dil Fac

5	1		
	1		

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#### Job ID: 890-2572-1 SDG: 03E1558015

Prep Type: Total/NA

Prep Type: Total/NA

3

#### 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
890-2566-A-1-G MS	Matrix Spike	83	100		
890-2566-A-1-H MSD	Matrix Spike Duplicate	109	99		6
890-2572-1	PH04	115	101		
890-2572-2	PH04A	112	94		
890-2572-3	PH04B	107	90		
LCS 880-30208/1-A	Lab Control Sample	96	97		8
LCSD 880-30208/2-A	Lab Control Sample Dup	109	92		
MB 880-30208/5-A	Method Blank	79	95		0
					9
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)
880-17129-A-13-E MS	Matrix Spike	82	85
880-17129-A-13-F MSD	Matrix Spike Duplicate	81	85
890-2572-1	PH04	99	106
890-2572-2	PH04A	100	109
890-2572-3	PH04B	93	100
LCS 880-30164/2-A	Lab Control Sample	102	114
MB 880-30164/1-A	Method Blank	137 S1+	153 S1+

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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

=				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID			
LCSD 880-30164/3-A	Lab Control Sample Dup			
Surrogate Legend				
1CO = 1-Chlorooctane				

OTPH = o-Terphenyl

Prep Type: Total/NA

Lab Sample ID: MB 880-30208/5-A

#### **QC Sample Results**

Analysis Batch: 30191

Matrix: Solid

Analyte

Benzene

Toluene

o-Xylene

Surrogate

Matrix: Solid

Ethylbenzene

Xylenes, Total

m-Xylene & p-Xylene

4-Bromofluorobenzene (Surr)

Analysis Batch: 30191

Lab Sample ID: LCS 880-30208/1-A

1,4-Difluorobenzene (Surr)

MB MB

<0.00200 U

<0.00200 U

<0.00200 U

<0.00400 U

<0.00200 U

<0.00400 U

%Recovery

MB MB

79

95

Qualifier

Result Qualifier

#### **Client Sample ID: Method Blank** Prep Type: Total/NA Prep Batch: 30208 Dil Fac RL Unit D Prepared Analyzed 0.00200 mg/Kg 07/21/22 09:25 07/21/22 12:04 1 0.00200 mg/Kg 07/21/22 09:25 07/21/22 12:04 1 0.00200 mg/Kg 07/21/22 09:25 07/21/22 12:04 1 0.00400 mg/Kg 07/21/22 09:25 07/21/22 12:04 1 0.00200 07/21/22 09:25 07/21/22 12:04 mg/Kg 1 0.00400 07/21/22 09:25 07/21/22 12:04 mg/Kg 1 Prepared Dil Fac Analyzed 70 - 130 07/21/22 09:25 07/21/22 12:04 1 70 - 130 07/21/22 09:25 07/21/22 12:04 1 **Client Sample ID: Lab Control Sample** Prep Type: Total/NA Prep Batch: 30208

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09280		mg/Kg		93	70 - 130	
Toluene	0.100	0.09172		mg/Kg		92	70 - 130	
Ethylbenzene	0.100	0.09500		mg/Kg		95	70 - 130	
m-Xylene & p-Xylene	0.200	0.1827		mg/Kg		91	70 - 130	
o-Xylene	0.100	0.09784		mg/Kg		98	70 - 130	

Limits

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	96		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

#### Lab Sample ID: LCSD 880-30208/2-A

#### Matrix: Solid

Analysis Batch: 30191							Prep	Batch:	30208
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09320		mg/Kg		93	70 - 130	0	35
Toluene	0.100	0.09504		mg/Kg		95	70 - 130	4	35
Ethylbenzene	0.100	0.09691		mg/Kg		97	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.1873		mg/Kg		94	70 - 130	2	35
o-Xylene	0.100	0.1033		mg/Kg		103	70 - 130	5	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	109		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

#### Lab Sample ID: 890-2566-A-1-G MS

#### Matrix: Solid naluaia Patahi 20101

Analysis Batch: 30191									Pre	o Batch: 30208
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.0535		0.0998	0.07076	F1	mg/Kg		17	70 - 130	
Toluene	0.0607		0.0998	0.06762	F1	mg/Kg		7	70 - 130	

**Eurofins Carlsbad** 

Prep Type: Total/NA

**Client Sample ID: Matrix Spike** 

#### Released to Imaging: 11/22/2022 11:30:50 AM

Lab Sample ID: 890-2566-A-1-G MS

#### QC Sample Results

MS MS

0.07426 F1

0.1436 F1

0.07377 F1

**Result Qualifier** 

Unit

mg/Kg

mg/Kg

mg/Kg

Spike

Added

0.0998

0.200

0.0998

Limits

70 - 130

70 - 130

70 - 130

Client: Ensolum Project/Site: PLU 15 TWR

Analysis Batch: 30191

Matrix: Solid

Analyte

o-Xylene

Surrogate

Ethylbenzene

m-Xylene & p-Xylene

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

Sample Sample

MS MS

83

100

99

Qualifier

Qualifier

Result

0.191

0.0103

0.0397

%Recovery

Job ID: 890-2572-1 SDG: 03E1558015

Prep Type: Total/NA

Prep Batch: 30208

**Client Sample ID: Matrix Spike** 

%Rec

Limits

70 - 130

70 - 130

70 - 130

%Rec

-117

67

34

D

#### **Client Sample ID: Matrix Spike Duplicate** Prep Type: Total/NA

Matrix: Solid Analysis Batch: 30191

1,4-Difluorobenzene (Surr)

Lab Sample ID: 890-2566-A-1-H MSD

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

Analysis Batch: 30191									Prep	Batch:	30208	
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.0535		0.0994	0.08725	F1	mg/Kg		34	70 - 130	21	35	
Toluene	0.0607		0.0994	0.08422	F1	mg/Kg		24	70 - 130	22	35	
Ethylbenzene	0.191		0.0994	0.08803	F1	mg/Kg		-104	70 - 130	17	35	
m-Xylene & p-Xylene	0.0103		0.199	0.1708		mg/Kg		81	70 - 130	17	35	
o-Xylene	0.0397		0.0994	0.09152	F1	mg/Kg		52	70 - 130	21	35	
	MSD	MSD										
Surrogate	%Recovery	Qualifier	Limits									
4-Bromofluorobenzene (Surr)	109		70 - 130									

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

#### Lab Sample ID: MB 880-30164/1-A **Client Sample ID: Method Blank** Matrix: Solid Prep Type: Total/NA Analysis Batch: 30098 Prep Batch: 30164 MB MB Result Qualifier RL Unit D Prepared Analyzed Analyte 07/20/22 15:31 <50.0 U 50.0 07/20/22 20:42 Gasoline Range Organics mg/Kg (GRO)-C6-C10 07/20/22 15:31 07/20/22 20:42 Diesel Range Organics (Over <50.0 U 50.0 mg/Kg C10-C28) Oll Range Organics (Over C28-C36) <50.0 U 50.0 07/20/22 15:31 07/20/22 20:42 mg/Kg MB MB %Recovery Qualifier Limits Prepared Surrogate Analyzed 137 1-Chlorooctane S1+ 70 - 130 07/20/22 15:31 07/20/22 20:42 153 S1+ 70 - 130 07/20/22 15:31 07/20/22 20:42 o-Terphenyl Lab Sample ID: LCS 880-30164/2-A **Client Sample ID: Lab Control Sample** Matrix: Solid Prep Type: Total/NA

#### Analysis Batch: 30098

Analysis Batch: 30098							Prep	Batch: 30164
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	1206		mg/Kg		121	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	882.5		mg/Kg		88	70 - 130	
C10-C28)								

**Eurofins Carlsbad** 

Dil Fac

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Dil Fac

#### **QC Sample Results**

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

1												
Lab Sample ID: LCS 880-3016	64/2-A						Client	Sample	ID: Lab C			
Matrix: Solid										Type: To		
Analysis Batch: 30098									Pre	p Batch:	30164	
	LCS	LCS										
Surrogate	%Recovery	Qualifier	Limits									E
1-Chlorooctane	102		70 - 130									
o-Terphenyl	114		70 - 130									÷
Lab Sample ID: LCSD 880-301	164/3-A					Clier	nt San	nple ID: I	Lab Contro	ol Sampl	e Dup	
Matrix: Solid									Prep	Type: To	tal/NA	
Analysis Batch: 30098									Prej	p Batch:	30164	2
			Spike	LCSD	LCSD				%Rec		RPD	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics			1000	1236		mg/Kg						
(GRO)-C6-C10			1000	074.0		ma m //						
Diesel Range Organics (Over			1000	871.6		mg/Kg						
C10-C28)												
	LCSD	LCSD										
Surrogate	%Recovery	Qualifier	Limits									
1-Chlorooctane												
o-Terphenyl												
o respicingi												
								Olivert	0		Onilia	
Lab Sample ID: 880-17129-A-1	13-E MS							Client	Sample II			
Lab Sample ID: 880-17129-A-1 Matrix: Solid	13-E MS							Client	Prep	Type: To	tal/NA	
Lab Sample ID: 880-17129-A-1		Sampla	Spiles	ме	ме			Client	Prep Prej		tal/NA	
Lab Sample ID: 880-17129-A-1 Matrix: Solid Analysis Batch: 30098	Sample	Sample	Spike	MS	MS	Unit			Prep Prej %Rec	Type: To	tal/NA	
Lab Sample ID: 880-17129-A-1 Matrix: Solid Analysis Batch: 30098 Analyte	Sample Result	Qualifier	Added	Result	MS Qualifier	Unit	<u>D</u>	%Rec	Prep Prej %Rec Limits	Type: To	tal/NA	
Lab Sample ID: 880-17129-A-1         Matrix: Solid         Analysis Batch: 30098         Analyte         Gasoline Range Organics	Sample	Qualifier	-			_ <mark>Unit</mark> mg/Kg	<u>D</u>		Prep Prej %Rec	Type: To	tal/NA	
Lab Sample ID: 880-17129-A-1 Matrix: Solid Analysis Batch: 30098 Analyte Gasoline Range Organics (GRO)-C6-C10	Sample Result	Qualifier U F2	Added	Result		mg/Kg	<u>D</u>	%Rec	Prep Prej %Rec Limits	Type: To	tal/NA	
Lab Sample ID: 880-17129-A-1         Matrix: Solid         Analysis Batch: 30098         Analyte         Gasoline Range Organics	Sample Result <50.0	Qualifier U F2	Added	Result 1016			D	<b>%Rec</b>	Prep Prej %Rec Limits 70 - 130	Type: To	tal/NA	
Lab Sample ID: 880-17129-A-1 Matrix: Solid Analysis Batch: 30098 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Sample Result <50.0 <50.0	Qualifier U F2 U	Added	Result 1016		mg/Kg	<u>D</u>	<b>%Rec</b>	Prep Prej %Rec Limits 70 - 130	Type: To	tal/NA	
Lab Sample ID: 880-17129-A-1 Matrix: Solid Analysis Batch: 30098 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Sample <u>Result</u> <50.0 <50.0 <i>MS</i>	Qualifier U F2 U MS	Added	Result 1016		mg/Kg	<u> </u>	<b>%Rec</b>	Prep Prej %Rec Limits 70 - 130	Type: To	tal/NA	
Lab Sample ID: 880-17129-A-1 Matrix: Solid Analysis Batch: 30098 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	Sample Result <50.0 <50.0 MS %Recovery	Qualifier U F2 U MS	Added 1000 1000 <i>Limits</i>	Result 1016		mg/Kg	<u>D</u>	<b>%Rec</b>	Prep Prej %Rec Limits 70 - 130	Type: To	tal/NA	
Lab Sample ID: 880-17129-A-1 Matrix: Solid Analysis Batch: 30098 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane	Sample <u>Result</u> <50.0 <50.0 <i>MS</i> <i>%Recovery</i> <i>82</i>	Qualifier U F2 U MS	Added 1000 1000 <u>Limits</u> 70 - 130	Result 1016		mg/Kg	<u> </u>	<b>%Rec</b>	Prep Prej %Rec Limits 70 - 130	Type: To	tal/NA	
Lab Sample ID: 880-17129-A-1 Matrix: Solid Analysis Batch: 30098 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	Sample Result <50.0 <50.0 MS %Recovery	Qualifier U F2 U MS	Added 1000 1000 <i>Limits</i>	Result 1016		mg/Kg	<u> </u>	<b>%Rec</b>	Prep Prej %Rec Limits 70 - 130	Type: To	tal/NA	
Lab Sample ID: 880-17129-A-1 Matrix: Solid Analysis Batch: 30098 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl	Sample Result <50.0 <50.0 MS %Recovery 82 85	Qualifier U F2 U MS	Added 1000 1000 <u>Limits</u> 70 - 130	Result 1016		mg/Kg		%Rec 102 87	Prep           %Rec           Limits           70 - 130           70 - 130	Type: To p Batch:	tal/NA 30164	
Lab Sample ID: 880-17129-A-1         Matrix: Solid         Analysis Batch: 30098         Analyte         Gasoline Range Organics         (GRO)-C6-C10         Diesel Range Organics (Over         C10-C28)         Surrogate         1-Chlorooctane         o-Terphenyl         Lab Sample ID: 880-17129-A-1	Sample Result <50.0 <50.0 MS %Recovery 82 85	Qualifier U F2 U MS	Added 1000 1000 <u>Limits</u> 70 - 130	Result 1016		mg/Kg		%Rec 102 87	Prep Prej %Rec Limits 70 - 130 70 - 130 70 - 130	Type: To p Batch: 	tal/NA 30164	
Lab Sample ID: 880-17129-A-1         Matrix: Solid         Analysis Batch: 30098         Analyte         Gasoline Range Organics         (GRO)-C6-C10         Diesel Range Organics (Over         C10-C28)         Surrogate         1-Chlorooctane         o-Terphenyl         Lab Sample ID: 880-17129-A-1         Matrix: Solid	Sample Result <50.0 <50.0 MS %Recovery 82 85	Qualifier U F2 U MS	Added 1000 1000 <u>Limits</u> 70 - 130	Result 1016		mg/Kg		%Rec 102 87	Prep Prej %Rec Limits 70 - 130 70 - 130 70 - 130	Type: To p Batch:     Type: To	tal/NA 30164	
Lab Sample ID: 880-17129-A-1         Matrix: Solid         Analysis Batch: 30098         Analyte         Gasoline Range Organics         (GRO)-C6-C10         Diesel Range Organics (Over         C10-C28)         Surrogate         1-Chlorooctane         o-Terphenyl         Lab Sample ID: 880-17129-A-1	Sample <u>Result</u> <50.0 <50.0 MS %Recovery 82 85 13-F MSD	Qualifier U F2 U MS	Added 1000 1000 <u>Limits</u> 70 - 130	Result 1016 868.3		mg/Kg		%Rec 102 87	Prep Prej %Rec Limits 70 - 130 70 - 130 70 - 130	Type: To p Batch: 	tal/NA 30164	
Lab Sample ID: 880-17129-A-1         Matrix: Solid         Analysis Batch: 30098         Analyte         Gasoline Range Organics         (GRO)-C6-C10         Diesel Range Organics (Over         C10-C28)         Surrogate         1-Chlorooctane         o-Terphenyl         Lab Sample ID: 880-17129-A-1         Matrix: Solid	Sample <u>Result</u> <50.0 <50.0 MS %Recovery 82 85 13-F MSD Sample	Qualifier U F2 U MS Qualifier	Added 1000 1000 <u>Limits</u> 70 - 130 70 - 130	Result 1016 868.3 MSD	Qualifier	mg/Kg		%Rec 102 87	Prep Prej %Rec Limits 70 - 130 70 - 130 70 - 130 9: Matrix S Prep Prej	Type: To p Batch:     Type: To	blicate tal/NA 30164	
Lab Sample ID: 880-17129-A-1         Matrix: Solid         Analysis Batch: 30098         Analyte         Gasoline Range Organics         (GRO)-C6-C10         Diesel Range Organics (Over         C10-C28)         Surrogate         1-Chlorooctane         o-Terphenyl         Lab Sample ID: 880-17129-A-1         Matrix: Solid         Analysis Batch: 30098	Sample <u>Result</u> <50.0 <50.0 MS %Recovery 82 85 13-F MSD Sample	Qualifier U F2 U MS Qualifier Sample Qualifier	Added 1000 1000 <u>Limits</u> 70 - 130 70 - 130 Spike	Result 1016 868.3 MSD	Qualifier MSD Qualifier	mg/Kg mg/Kg Cli	ient S	<u>%Rec</u> 102 87	Prep Prey %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 9: Matrix S Prep Prey %Rec	Type: To p Batch:  pike Dup Type: To p Batch:	blicate tal/NA 30164	
Lab Sample ID: 880-17129-A-1         Matrix: Solid         Analysis Batch: 30098         Analyte         Gasoline Range Organics         (GRO)-C6-C10         Diesel Range Organics (Over         C10-C28)         Surrogate         1-Chlorooctane         o-Terphenyl         Lab Sample ID: 880-17129-A-1         Matrix: Solid         Analysis Batch: 30098         Analyte	Sample <u>Result</u> <50.0 <50.0 <i>MS</i> <i>%Recovery</i> <i>82</i> <i>85</i> 13-F MSD Sample Result	Qualifier U F2 U MS Qualifier Sample Qualifier	Added 1000 1000 <u>Limits</u> 70 - 130 70 - 130 70 - 130	Result 1016 868.3 MSD Result	Qualifier MSD Qualifier	mg/Kg mg/Kg Cli	ient S	<u>%Rec</u> 102 87 ample ID	Prep Prey %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 9: Matrix S Prep Prey %Rec Limits	Type: To p Batch:  Type: To p Batch:  	blicate tal/NA 30164	
Lab Sample ID: 880-17129-A-1         Matrix: Solid         Analysis Batch: 30098         Analyte         Gasoline Range Organics         (GRO)-C6-C10         Diesel Range Organics (Over         C10-C28)         Surrogate         1-Chlorooctane         o-Terphenyl         Lab Sample ID: 880-17129-A-1         Matrix: Solid         Analysis Batch: 30098         Analyte         Gasoline Range Organics	Sample <u>Result</u> <50.0 <50.0 <i>MS</i> <i>%Recovery</i> <i>82</i> <i>85</i> 13-F MSD Sample Result	Qualifier U F2 U MS Qualifier Qualifier U F2	Added 1000 1000 <u>Limits</u> 70 - 130 70 - 130 70 - 130	Result 1016 868.3 MSD Result	Qualifier MSD Qualifier	mg/Kg mg/Kg Cli	ient S	<u>%Rec</u> 102 87 ample ID	Prep Prey %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 9: Matrix S Prep Prey %Rec Limits	Type: To p Batch:  Type: To p Batch:  	blicate tal/NA 30164	

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	81		70 - 130
o-Terphenyl	85		70 - 130

SDG: 03E1558015

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Client: Ensolum

Project/Site: PLU 15 TWR

#### **QC Sample Results**

Job ID: 890-2572-1 SDG: 03E1558015

#### Method: 300.0 - Anions, Ion Chromatography

=			-										
Lab Sample ID: MB 880-30059/1-A										Client S	ample ID:	Method	Blank
Matrix: Solid											Prep	Type: S	oluble
Analysis Batch: 30226													
		MB MB											
Analyte	R	esult Qua	lifier	RL		Ur	nit	D	P	repared	Analy	zed	Dil Fac
Chloride	<	<5.00 U		5.00		m	g/Kg				07/22/22	08:50	1
Lab Sample ID: LCS 880-30059/2-A								Cli	ent	Sample	ID: Lab C	ontrol S	ample
Matrix: Solid											Prep	Type: S	oluble
Analysis Batch: 30226													
			Spik	e	LCS	LCS					%Rec		
Analyte			Adde	ł	Result	Qualifie	er Unit		D	%Rec	Limits		
Chloride			25	)	267.1		mg/Kg		_	107	90 - 110		
Lab Sample ID: LCSD 880-30059/3-	A						CI	ient S	Sam	ple ID:	Lab Contro	ol Sampl	le Dup
Matrix: Solid											Prep	Type: S	oluble
Analysis Batch: 30226													
			Spik	e	LCSD	LCSD					%Rec		RPD
Analyte			Adde	t	Result	Qualifie	r Unit		D	%Rec	Limits	RPD	Limit
Chloride			25	)	267.6		mg/Kg		_	107	90 _ 110	0	20
Lab Sample ID: 890-2569-A-1-B MS										Client	Sample ID	): Matrix	Spike
Matrix: Solid											Prep	Type: S	oluble
Analysis Batch: 30226													
	Sample	Sample	Spik	Ð	MS	MS					%Rec		
Analyte	Result	Qualifier	Adde	ł	Result	Qualifie	er Unit		D	%Rec	Limits		
Chloride	101		25	)	370.4		mg/Kg		_	108	90 _ 110		
Lab Sample ID: 890-2569-A-1-C MS	D							Clien	t Sa	ample IC	: Matrix S	pike Dur	olicate
Matrix: Solid										•		Type: S	
Analysis Batch: 30226													
-	Sample	Sample	Spik	e	MSD	MSD					%Rec		RPD
Auchida	Pocult	Qualifier	Adde	4	Pocult	Qualifie	r Unit		D	%Rec	Limits	RPD	Limit
Analyte	Result	quanner	71000		Result	Quanne	i onit			/01100	Linits		<b>_</b>

#### **QC Association Summary**

Client: Ensolum Project/Site: PLU 15 TWR

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#### Job ID: 890-2572-1 SDG: 03E1558015

GC VOA

#### Analysis Batch: 30191

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2572-1	PH04	Total/NA	Solid	8021B	30208
890-2572-2	PH04A	Total/NA	Solid	8021B	30208
890-2572-3	PH04B	Total/NA	Solid	8021B	30208
MB 880-30208/5-A	Method Blank	Total/NA	Solid	8021B	30208
LCS 880-30208/1-A	Lab Control Sample	Total/NA	Solid	8021B	30208
LCSD 880-30208/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30208
890-2566-A-1-G MS	Matrix Spike	Total/NA	Solid	8021B	30208
890-2566-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30208

#### Prep Batch: 30208

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2572-1	PH04	Total/NA	Solid	5035	
890-2572-2	PH04A	Total/NA	Solid	5035	
890-2572-3	PH04B	Total/NA	Solid	5035	
MB 880-30208/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30208/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30208/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2566-A-1-G MS	Matrix Spike	Total/NA	Solid	5035	
890-2566-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2572-1	PH04	Total/NA	Solid	Total BTEX	
890-2572-2	PH04A	Total/NA	Solid	Total BTEX	
890-2572-3	PH04B	Total/NA	Solid	Total BTEX	

#### GC Semi VOA

#### Analysis Batch: 30098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2572-1	PH04	Total/NA	Solid	8015B NM	30164
890-2572-2	PH04A	Total/NA	Solid	8015B NM	30164
890-2572-3	PH04B	Total/NA	Solid	8015B NM	30164
MB 880-30164/1-A	Method Blank	Total/NA	Solid	8015B NM	30164
LCS 880-30164/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30164
LCSD 880-30164/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30164
880-17129-A-13-E MS	Matrix Spike	Total/NA	Solid	8015B NM	30164
880-17129-A-13-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30164

#### Prep Batch: 30164

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2572-1	PH04	Total/NA	Solid	8015NM Prep	
890-2572-2	PH04A	Total/NA	Solid	8015NM Prep	
890-2572-3	PH04B	Total/NA	Solid	8015NM Prep	
MB 880-30164/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30164/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30164/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-17129-A-13-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-17129-A-13-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

#### Received by OCD: 8/10/2022 10:53:56 AM

**QC Association Summary** 

Client: Ensolum Project/Site: PLU 15 TWR

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Job ID: 890-2572-1 SDG: 03E1558015

# GC Semi VOA

Analysis	Batch:	30272
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Lab Sample ID 890-2572-1	Client Sample ID PH04	Prep Type Total/NA	Matrix Solid	Method 8015 NM	Prep Batch
890-2572-2	PH04A	Total/NA	Solid	8015 NM	
890-2572-3	PH04B	Total/NA	Solid	8015 NM	

#### HPLC/IC

#### Leach Batch: 30059

-						
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	8
890-2572-1	PH04	Soluble	Solid	DI Leach		
890-2572-2	PH04A	Soluble	Solid	DI Leach		0
890-2572-3	PH04B	Soluble	Solid	DI Leach		3
MB 880-30059/1-A	Method Blank	Soluble	Solid	DI Leach		
LCS 880-30059/2-A	Lab Control Sample	Soluble	Solid	DI Leach		
LCSD 880-30059/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach		
890-2569-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach		
890-2569-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach		
Analysis Batch: 30226						
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	
890-2572-1	PH04	Soluble	Solid	300.0	30059	

#### Analysis Batch: 30226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2572-1	PH04	Soluble	Solid	300.0	30059
890-2572-2	PH04A	Soluble	Solid	300.0	30059
890-2572-3	PH04B	Soluble	Solid	300.0	30059
MB 880-30059/1-A	Method Blank	Soluble	Solid	300.0	30059
LCS 880-30059/2-A	Lab Control Sample	Soluble	Solid	300.0	30059
LCSD 880-30059/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30059
890-2569-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30059
890-2569-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30059

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Job ID: 890-2572-1 SDG: 03E1558015

#### Lab Sample ID: 890-2572-1 Matrix: Solid

Lab Sample ID: 890-2572-2

Lab Sample ID: 890-2572-3

Matrix: Solid

Matrix: Solid

Date Collected: 07/15/22 12:35 Date Received: 07/18/22 12:12

**Client Sample ID: PH04** 

Project/Site: PLU 15 TWR

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			4.98 g	5 mL	30208	07/21/22 09:25	MR	XEN MID
Total/NA	Analysis	8021B		1			30191	07/21/22 15:07	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30440	07/22/22 16:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30272	07/21/22 13:53	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	30164	07/20/22 15:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30098	07/21/22 00:15	SM	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	30059	07/19/22 11:04	СН	XEN MID
Soluble	Analysis	300.0		1			30226	07/22/22 10:59	SMC	XEN MID

#### Client Sample ID: PH04A

#### Date Collected: 07/15/22 12:45 Date Received: 07/18/22 12:12

Date Received: 07/18/22 12:12

	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	30208	07/21/22 09:25	MR	XEN MID
Total/NA	Analysis	8021B		1			30191	07/21/22 15:33	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30440	07/22/22 16:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30272	07/21/22 13:53	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	30164	07/20/22 15:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30098	07/21/22 00:36	SM	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	30059	07/19/22 11:04	СН	XEN MID
Soluble	Analysis	300.0		1			30226	07/22/22 11:08	SMC	XEN MID

#### Client Sample ID: PH04B Date Collected: 07/15/22 12:50

#### Date Received: 07/18/22 12:12

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	30208	07/21/22 09:25	MR	XEN MID
Total/NA	Analysis	8021B		1			30191	07/21/22 15:59	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30440	07/22/22 16:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30272	07/21/22 13:53	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	30164	07/20/22 15:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30098	07/21/22 00:57	SM	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	30059	07/19/22 11:04	СН	XEN MID
Soluble	Analysis	300.0		1			30226	07/22/22 11:18	SMC	XEN MID

#### Laboratory References:

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

Client: Ensolum Project/Site: PLU 15 TWR

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
xas	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	ay include analytes fo
the agency does not o		Matrix	Analyte	
Analysis Method	fer certificationPrep Method	Matrix	Analyte	
6 ,		Matrix Solid	Analyte Total TPH	

10

Job ID: 890-2572-1

SDG: 03E1558015

#### **Method Summary**

Client: Ensolum Project/Site: PLU 15 TWR Job ID: 890-2572-1 SDG: 03E1558015

Method	Method Description	Protocol	Laboratory
3021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

#### Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions. SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

11 12 13

Client: Ensolum Project/Site: PLU 15 TWR

#### Job ID: 890-2572-1 SDG: 03E1558015

ab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth	
90-2572-1	PH04	Solid	07/15/22 12:35	07/18/22 12:12	0.5'	4
90-2572-2	PH04A	Solid	07/15/22 12:45	07/18/22 12:12	2'	
90-2572-3	PH04B	Solid	07/15/22 12:50	07/18/22 12:12	3'	5
						6
						8
						9
						12
						13

				10000					www.xenco.com	Page 1_of 1_
Project Manager:	Ben Belill			Bill to: (if different)	Garrett Green	en			Work Order Comments	mments
	Ensolum, LLC		0	Company Name:	XTO Energy, Inc	y, Inc.		Program: UST/P	ST PRP Brownfl	Program: UST/PST  PRP Brownfields RRC Superfund
	3122 National parks Hwy	irks Hwy	Þ	Address:	3104 E. Green Street	en Street		State of Project:		1
e ZIP:	Carlsbad, NM 88220	220	0	City, State ZIP:	Carlsbad, NM 88220	IM 88220		Reporting: Level	Reporting: Level II Level III PST/UST TRRP	
	9898540852		Email: b	Email: bbelill@ensolum.com	n.com			Deliverables: EDD		Other:
Namo:	DI II 1	DI 11 15 TWR	Turn Around	round			ANALYSIS RE	EQUEST		Preservative Codes
Project Number:	03E15	03E1558015	Routine		Pres.				Z	None: NO DI Water: H <sub>2</sub> O
Project Location:	EDDY CO	EDDY COUNTY, NM	Due Date:						0	Cool: Cool MeOH: Me
Sampler's Name:	Conne	Conner Shore	TAT starts the o	day received by			-	-		
PO #			the lab, if received by 4:30pm	ved by 4:30pm	ers				I	H <sub>2</sub> S0 <sub>4</sub> : H <sub>2</sub> NaOH: Na
SAMPLE RECEIPT	PT Temp Blank:	ink: Yes No	Wet ice:	No No	nete .0)				I	H <sub>3</sub> PO <sub>4</sub> ; HP
Samples Received Intact:		T	ter ID:	510					z	NaHSO4: NABIS
Cooler Custody Seals:	s: Yes No	MIA Correction Factor:	Factor:	6.0:			890-2572 Chain of Custoda		2	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub>
Sample Custody Seals:	Is: Yes No	N/A Temperatu	Temperature Reading:		-	1		or onatony		Zn Acetate+NaUH: Zn
Total Containers:		Corrected	Corrected Temperature:	1.2		802	_	_	-	NaUH+Ascorbic Acid: SAPC
Sample Identification		Matrix Date Sampled	Time Sampled	Depth Grab/ Comp	Cont of CHLOF TPH (8	BTEX (				Sample Comments
PH04	4 S	S 7/15/2022	2 1235	0.5 Grab/	1 X X	×				
PH04A	A S		1845	21 Grab/	1 × ×	×				
PH04B	S			Grab/	1 × ×	×				
PH04C	C S		2 035 4	Grab/	1 × ×	×				*HOLD Pending 3' sample
										Cost Center: 2027711001
										Incident Numbers
	Q					-+				nAPP2205638843,
	0									nAPP2207746719
	V									
Total 200.7 / 6010	10 200.8 / 6020:		BRCRA 13PPM	M Texas 11		Be B Cd Ca (	Sh As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn N Sh As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag		K Se Ag SiO <sub>2</sub> Na 3 Ha: 1631/24	g SiO <sub>2</sub> Na Sr TI Sn U V Zn Hg: 1631/245.1/7470/7471
Notice: Signature of this document and relinguishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions	for inicial(2) to be	thment of samples co	nstitutes a valid pur	tes a valid purchase order from client o	lient company to Eur	ofins Xenco, its affilia	ites and subcontractors	. It assigns standard te	rms and conditions	
or service. Eurofine 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 Eurofine Xenco. A minimum charge of \$5.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofine Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	o will be liable only for mum charge of \$85.00	the cost of samples a will be applied to eac	and shall not assume	e any responsibility ge of \$5 for each sa	/ for any losses or ex ample submitted to E	penses incurred by t urofins Xenco, but no	he client if such losses a ot analyzed. These terms	s are due to circumstances beyond the control ms will be enforced unless previously negotiat	s beyond the control s previously negotiated.	
Relinquished by: (Signature)	: (Signature)	Receiv	Received by: (Signature)	re)	Date/Time	9 Relinu	Relinquished by: (Signature)	ture) Rec	Received by: (Signature)	) Date/Time
8		Ana	Star R	et	2 clad	II P				
				1						

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12 13 14

eurofins

Environment Testing

Chain of Custody

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

Job Number: 890-2572-1 SDG Number: 03E1558015

List Source: Eurofins Carlsbad

#### Login Sample Receipt Checklist

Client: Ensolum

#### Login Number: 2572 List Number: 1 Creator: Stutzman, Amanda

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

14

14

Job Number: 890-2572-1 SDG Number: 03E1558015

List Source: Eurofins Midland

List Creation: 07/19/22 11:13 AM

#### Login Sample Receipt Checklist

Client: Ensolum

<6mm (1/4").

Login Number: 2572 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	

Received by OCD: 8/10/2022 10:53:56 AM

LINKS

Review your project results through

EOL

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Released to Imaging: 11/22/2022 11:30:50 AM

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Ask— The Expert

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# Environment Testing America

# **ANALYTICAL REPORT**

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

#### Laboratory Job ID: 890-2573-1

Laboratory Sample Delivery Group: 03E1558015 Client Project/Site: PLU 15 TWR

#### For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

RAMER

Authorized for release by: 7/25/2022 8:04:34 AM Jessica Kramer, Project Manager (432)704-5440 Jessica.Kramer@et.eurofinsus.com

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

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

2

Laboratory Job ID: 890-2573-1 SDG: 03E1558015

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	Definitions/Glossary	
Client: Ensolur	m Job ID: 890-2573-1	
Project/Site: P	SDG: 03E1558015	
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	۸	
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	
F1	MS and/or MSD recovery exceeds control limits.	9
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	

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)

MDLMethod Detection LimitMLMinimum Level (Dioxin)MPNMost Probable NumberMQLMethod Quantitation Limit

NC Not Calculated ND Not Detected at the report

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

4

5

#### Job ID: 890-2573-1 SDG: 03E1558015

#### Job ID: 890-2573-1

Project/Site: PLU 15 TWR

Client: Ensolum

#### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-2573-1

#### Receipt

The samples were received on 7/18/2022 12:12 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.8°C

#### GC VOA

Method 8021B: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 880-30208 and analytical batch 880-30191 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.

#### GC Semi VOA

Method 8015MOD\_NM: The surrogate recovery for the blank associated with preparation batch 880-30164 and analytical batch 880-30098 was outside the upper control limits.

Method 8015MOD\_NM: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 880-30164 and analytical batch 880-30098 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

Method 300\_ORGFM\_28D: PH05A (890-2573-2), PH05B (890-2573-3) and (890-2573-A-1-C MSD) The matrix spike duplicate (MSD) recoveries for preparation batch 880-30059 and analytical batch 880-30226 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.

Job ID: 890-2573-1 SDG: 03E1558015

#### **Client Sample ID: PH05**

Project/Site: PLU 15 TWR

Date Collected: 07/15/22 12:55 Date Received: 07/18/22 12:12

Client: Ensolum

Lab Sample ID: 890-2573-1

## Matrix: Solid

5

Sample Depth: 0.5'								
– Method: 8021B - Volatile Organio	c Compounds (	GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		07/21/22 09:25	07/21/22 16:25	1
Toluene	<0.00199	U	0.00199	mg/Kg		07/21/22 09:25	07/21/22 16:25	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		07/21/22 09:25	07/21/22 16:25	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		07/21/22 09:25	07/21/22 16:25	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		07/21/22 09:25	07/21/22 16:25	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		07/21/22 09:25	07/21/22 16:25	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			07/21/22 09:25	07/21/22 16:25	1
1,4-Difluorobenzene (Surr)	93		70 - 130			07/21/22 09:25	07/21/22 16:25	1
- Method: Total BTEX - Total BTEX	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			07/22/22 16:06	1
- Method: 8015 NM - Diesel Range	e Organics (DR	O) (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			07/21/22 13:53	1
_ Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9	U	49.9	mg/Kg		07/20/22 15:31	07/21/22 01:18	1
(GRO)-C6-C10				0 0				
Diesel Range Organics (Over	<49.9	U	49.9	mg/Kg		07/20/22 15:31	07/21/22 01:18	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		07/20/22 15:31	07/21/22 01:18	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130			07/20/22 15:31	07/21/22 01:18	1
o-Terphenyl	116		70 - 130			07/20/22 15:31	07/21/22 01:18	1
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.39	F1	4.97	mg/Kg			07/22/22 11:27	1
Client Sample ID: PH05A						Lab Sar	nple ID: 890-	2573-2
Date Collected: 07/15/22 13:05							Matri	ix: Solid
Date Received: 07/18/22 12:12								
Sample Depth: 2'								
Method: 8021B - Volatile Organio	c Compounds (	(GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		07/21/22 09:25	07/21/22 18:37	1
Toluene	<0.00199	U	0.00199	mg/Kg		07/21/22 09:25	07/21/22 18:37	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		07/21/22 09:25	07/21/22 18:37	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		07/21/22 09:25	07/21/22 18:37	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		07/21/22 09:25	07/21/22 18:37	1

Xylenes, Total <0.00398 U 0.00398 mg/Kg 07/21/22 09:25 07/21/22 18:37 Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 4-Bromofluorobenzene (Surr) 109 70 - 130 07/21/22 09:25 07/21/22 18:37

Eurofins Carlsbad

Released to Imaging: 11/22/2022 11:30:50 AM

7/25/2022

1

1

#### **Client Sample Results**

Job ID: 890-2573-1 SDG: 03E1558015

# Lab Sample ID: 890-2573-2

Matrix: Solid

5

Date Collected: 07/15/22 13:05 Date Received: 07/18/22 12:12

Project/Site: PLU 15 TWR

**Client Sample ID: PH05A** 

Sample Depth: 2'

Client: Ensolum

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1,4-Difluorobenzene (Surr)	94		70 - 130			07/21/22 09:25	07/21/22 18:37	
Method: Total BTEX - Total BTEX	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00398	U	0.00398	mg/Kg			07/22/22 16:06	
Method: 8015 NM - Diesel Range	Organics (DR	0) (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<49.9	U	49.9	mg/Kg			07/21/22 13:53	
Method: 8015B NM - Diesel Rang	e Organics (D	RO) (GC)						
Analyte	- · ·	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9	U	49.9	mg/Kg		07/20/22 15:31	07/21/22 01:39	
(GRO)-C6-C10								
Diesel Range Organics (Over	<49.9	U	49.9	mg/Kg		07/20/22 15:31	07/21/22 01:39	-
C10-C28)			40.0			07/00/00 45 04	07/04/00 04:00	
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		07/20/22 15:31	07/21/22 01:39	~
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	115		70 - 130			07/20/22 15:31	07/21/22 01:39	
o-Terphenyl	125		70 - 130			07/20/22 15:31	07/21/22 01:39	-
Method: 300.0 - Anions, Ion Chro	matography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	123		5.01	mg/Kg			07/22/22 11:54	
lient Sample ID: PH05B						Lab Sar	nple ID: 890-2	2573-3
ate Collected: 07/15/22 13:10							Matri	x: Solic
ate Received: 07/18/22 12:12								
ample Depth: 3'								

		· · · · · · · · · · · · · · · · · · ·			_			
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		07/21/22 09:25	07/21/22 19:03	1
Toluene	<0.00201	U	0.00201	mg/Kg		07/21/22 09:25	07/21/22 19:03	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		07/21/22 09:25	07/21/22 19:03	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		07/21/22 09:25	07/21/22 19:03	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		07/21/22 09:25	07/21/22 19:03	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		07/21/22 09:25	07/21/22 19:03	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 130			07/21/22 09:25	07/21/22 19:03	1
1,4-Difluorobenzene (Surr)	88		70 - 130			07/21/22 09:25	07/21/22 19:03	1
- Method: Total BTEX - Total B1	EX Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			07/22/22 16:06	1
- Method: 8015 NM - Diesel Rar	ge Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0		50.0	mg/Kg			07/21/22 13:53	

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

Method: 300.0 - Anions, Ion Chromatography - Soluble

Result Qualifier

<50.0 U

<50.0 U

<50.0 U

101

110

56.5

Result Qualifier

Qualifier

%Recovery

#### **Client Sample Results**

RL

50.0

50.0

50.0

RL

4.98

Limits

70 - 130

70 - 130

Unit

mg/Kg

mg/Kg

mg/Kg

Unit

mg/Kg

D

D

Prepared

07/20/22 15:31

07/20/22 15:31

07/20/22 15:31

Prepared

07/20/22 15:31

07/20/22 15:31

Prepared

Job ID: 890-2573-1 SDG: 03E1558015

#### **Client Sample ID: PH05B**

Project/Site: PLU 15 TWR

Client: Ensolum

Sample Depth: 3'

Gasoline Range Organics

Diesel Range Organics (Over

Oll Range Organics (Over C28-C36)

Analyte

C10-C28)

Surrogate 1-Chlorooctane

o-Terphenyl

Analyte

Chloride

(GRO)-C6-C10

Date Collected: 07/15/22 13:10 Date Received: 07/18/22 12:12

# Lab Sample ID: 890-2573-3

Analyzed

07/21/22 02:00

07/21/22 02:00

07/21/22 02:00

Analyzed

07/21/22 02:00

07/21/22 02:00

Analyzed

07/22/22 12:04

Matrix: Solid

Dil Fac

1

1

1

1

1

1

Dil Fac

Dil Fac

5

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#### Job ID: 890-2573-1 SDG: 03E1558015

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

3

#### 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
890-2566-A-1-G MS	Matrix Spike	83	100		
890-2566-A-1-H MSD	Matrix Spike Duplicate	109	99		6
890-2573-1	PH05	112	93		
890-2573-2	PH05A	109	94		
890-2573-3	PH05B	94	88		
LCS 880-30208/1-A	Lab Control Sample	96	97		8
LCSD 880-30208/2-A	Lab Control Sample Dup	109	92		U
MB 880-30208/5-A	Method Blank	79	95		0
					9
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)
880-17129-A-13-E MS	Matrix Spike	82	85
880-17129-A-13-F MSD	Matrix Spike Duplicate	81	85
890-2573-1	PH05	105	116
890-2573-2	PH05A	115	125
890-2573-3	PH05B	101	110
LCS 880-30164/2-A	Lab Control Sample	102	114
MB 880-30164/1-A	Method Blank	137 S1+	153 S1+

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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

=				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID			
LCSD 880-30164/3-A	Lab Control Sample Dup			
Surrogate Legend				
1CO = 1-Chlorooctane				

OTPH = o-Terphenyl

Lab Sample ID: MB 880-30208/5-A

#### **QC Sample Results**

Analysis Batch: 30191

Matrix: Solid

Analyte

Benzene

Toluene

o-Xylene

Surrogate

Ethylbenzene

Xylenes, Total

m-Xylene & p-Xylene

#### Method: 8021B - Volatile Organic Cor

c Compo	ounds (GC	;)						3
					Client Sa	mple ID: Metho Prep Type: 1	otal/NA	4
МВ	МВ					Prep Batch	n: 30208	5
	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
<0.00200	U	0.00200	mg/Kg		07/21/22 09:25	07/21/22 12:04	1	6
<0.00200	U	0.00200	mg/Kg		07/21/22 09:25	07/21/22 12:04	1	
<0.00200	U	0.00200	mg/Kg		07/21/22 09:25	07/21/22 12:04	1	7
<0.00400	U	0.00400	mg/Kg		07/21/22 09:25	07/21/22 12:04	1	
<0.00200	U	0.00200	mg/Kg		07/21/22 09:25	07/21/22 12:04	1	8
<0.00400	U	0.00400	mg/Kg		07/21/22 09:25	07/21/22 12:04	1	
МВ	МВ							9
%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
79		70 - 130			07/21/22 09:25	07/21/22 12:04	1	10
95		70 - 130			07/21/22 09:25	07/21/22 12:04	1	
				c	lient Sample I	D: Lab Control	Sample	11
						Prep Type: 1	otal/NA	12

#### Matrix: Solid Analysis Batch: 30191

Lab Sample ID: LCS 880-30208/1-A

4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr)

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09280		mg/Kg		93	70 - 130	
Toluene	0.100	0.09172		mg/Kg		92	70 - 130	
Ethylbenzene	0.100	0.09500		mg/Kg		95	70 - 130	
m-Xylene & p-Xylene	0.200	0.1827		mg/Kg		91	70 - 130	
o-Xylene	0.100	0.09784		mg/Kg		98	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	96		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

#### Lab Sample ID: LCSD 880-30208/2-A

#### Matrix: Solid

						Prep	Batch:	30208
Spike	LCSD	LCSD				%Rec		RPD
Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
0.100	0.09320		mg/Kg		93	70 - 130	0	35
0.100	0.09504		mg/Kg		95	70 - 130	4	35
0.100	0.09691		mg/Kg		97	70 - 130	2	35
0.200	0.1873		mg/Kg		94	70 - 130	2	35
0.100	0.1033		mg/Kg		103	70 - 130	5	35
	Added 0.100 0.100 0.100 0.200	Added         Result           0.100         0.09320           0.100         0.09504           0.100         0.09691           0.200         0.1873	Added         Result         Qualifier           0.100         0.09320	Added         Result         Qualifier         Unit           0.100         0.09320         mg/Kg           0.100         0.09504         mg/Kg           0.100         0.09691         mg/Kg           0.200         0.1873         mg/Kg	Added         Result         Qualifier         Unit         D           0.100         0.09320         mg/Kg           0.100         0.09504         mg/Kg           0.100         0.09691         mg/Kg           0.200         0.1873         mg/Kg	Added         Result         Qualifier         Unit         D         %Rec           0.100         0.09320         mg/Kg         93           0.100         0.09504         mg/Kg         95           0.100         0.09691         mg/Kg         97           0.200         0.1873         mg/Kg         94	Spike         LCSD         LCSD         %Rec           Added         Result         Qualifier         Unit         D         %Rec         Limits           0.100         0.09320         mg/Kg         93         70 - 130           0.100         0.09504         mg/Kg         95         70 - 130           0.100         0.09691         mg/Kg         97         70 - 130           0.200         0.1873         mg/Kg         94         70 - 130	Added         Result         Qualifier         Unit         D         %Rec         Limits         RPD           0.100         0.09320         mg/Kg         93         70 - 130         0           0.100         0.09504         mg/Kg         95         70 - 130         4           0.100         0.09691         mg/Kg         97         70 - 130         2           0.200         0.1873         mg/Kg         94         70 - 130         2

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	109		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

#### Lab Sample ID: 890-2566-A-1-G MS

#### Matrix: Solid Analysia Pataby 20101

Analysis Batch: 30191									Prep	Batch: 30208
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.0535		0.0998	0.07076	F1	mg/Kg		17	70 - 130	
Toluene	0.0607		0.0998	0.06762	F1	mg/Kg		7	70 - 130	

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Prep Type: Total/NA

**Client Sample ID: Matrix Spike** 

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Prep Batch: 30208

Prep Type: Total/NA

Client Sample ID: Lab Control Sample Dup

#### Released to Imaging: 11/22/2022 11:30:50 AM

Lab Sample ID: 890-2566-A-1-G MS

#### **QC Sample Results**

MS MS

0.07426 F1

0.1436 F1

0.07377 F1

**Result Qualifier** 

Unit

mg/Kg

mg/Kg

mg/Kg

Spike

Added

0.0998

0.200

0.0998

Limits 70 - 130

70 - 130

70 - 130

Client: Ensolum Project/Site: PLU 15 TWR

Analysis Batch: 30191

Matrix: Solid

Analyte

o-Xylene

Surrogate

Ethylbenzene

m-Xylene & p-Xylene

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

Sample Sample

MS MS

83

100

99

Qualifier

Qualifier

Result

0.191

0.0103

0.0397

%Recovery

Job ID: 890-2573-1 SDG: 03E1558015

Prep Type: Total/NA

Prep Batch: 30208

**Client Sample ID: Matrix Spike** 

%Rec

Limits

70 - 130

70 - 130

70 - 130

%Rec

-117

67

34

D

# 7

#### **Client Sample ID: Matrix Spike Duplicate** Prep Type: Total/NA

Matrix: Solid Analysis Batch: 30191

1,4-Difluorobenzene (Surr)

Lab Sample ID: 890-2566-A-1-H MSD

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

Analysis Batch: 30191									Prep	Batch:	30208
-	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.0535		0.0994	0.08725	F1	mg/Kg		34	70 - 130	21	35
Toluene	0.0607		0.0994	0.08422	F1	mg/Kg		24	70 - 130	22	35
Ethylbenzene	0.191		0.0994	0.08803	F1	mg/Kg		-104	70 - 130	17	35
m-Xylene & p-Xylene	0.0103		0.199	0.1708		mg/Kg		81	70 - 130	17	35
o-Xylene	0.0397		0.0994	0.09152	F1	mg/Kg		52	70 - 130	21	35
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	109		70 - 130								

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

Lab Sample ID: MB 880-30164/1-A Matrix: Solid Analysis Batch: 30098						Client Sa	mple ID: Metho Prep Type: ⊺ Prep Batch	Total/NA
	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		07/20/22 15:31	07/20/22 20:42	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		07/20/22 15:31	07/20/22 20:42	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/20/22 15:31	07/20/22 20:42	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	137	S1+	70 - 130			07/20/22 15:31	07/20/22 20:42	1
o-Terphenyl	153	S1+	70 - 130			07/20/22 15:31	07/20/22 20:42	1
					c	lient Sample I	D: Lab Control	Sample
Matrix: Solid							Prep Type: 1	

#### Matrix: Solid Analysis Batch: 30098

Analysis Batch: 30098							Prep	Batch: 30164
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	1206		mg/Kg		121	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	882.5		mg/Kg		88	70 - 130	
C10-C28)								

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#### **QC Sample Results**

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

Lab Sample ID: LCS 880-3016							Client	Sample	ID: Lab C	ontrol S	ample	
Matrix: Solid	04/2-A						Chem	Sample		Type: To		
Analysis Batch: 30098										Batch:		
Analysis Batch. 30030									LICH	Datch.	30104	
	LCS	LCS										
Surrogate	%Recovery	Qualifier	Limits									
1-Chlorooctane	102		70 - 130									
o-Terphenyl	114		70 - 130									Ē
Γ											_	
Lab Sample ID: LCSD 880-307	164/3-A					Clier	nt San	iple ID: I	Lab Contro			ī
Matrix: Solid										Type: To		
Analysis Batch: 30098										Batch:		ī
			Spike	LCSD			_	~ -	%Rec		RPD	
Analyte			Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics (GRO)-C6-C10			1000	1236		mg/Kg						
Diesel Range Organics (Over			1000	871.6		mg/Kg						
C10-C28)			1000	071.0		mg/rtg						
,												
		LCSD										
Surrogate	%Recovery	Qualifier	Limits									
1-Chlorooctane												
o-Terphenyl												
Lab Sample ID: 880-17129-A-	13-E MS							Client	Sample ID	: Matrix	Spike	
Lab Sample ID: 880-17129-A- Matrix: Solid	13-E MS							Client		: Matrix Type: To		
	13-E MS							Client	Prep		tal/NA	
Matrix: Solid		Sample	Spike	MS	MS			Client	Prep	Type: To	tal/NA	
Matrix: Solid	Sample	Sample Qualifier	Spike Added		MS Qualifier	Unit	D	Client %Rec	Prep Prep	Type: To	tal/NA	
Matrix: Solid Analysis Batch: 30098 Analyte Gasoline Range Organics	Sample	Qualifier	-			- <mark>Unit</mark> mg/Kg	<u>D</u>		Prep Prep %Rec	Type: To	tal/NA	
Matrix: Solid Analysis Batch: 30098 Analyte Gasoline Range Organics (GRO)-C6-C10	Sample Result <50.0	Qualifier U F2	Added	Result 1016		mg/Kg	D	<b>%Rec</b>	Prep Prep %Rec Limits 70 - 130	Type: To	tal/NA	
Matrix: Solid Analysis Batch: 30098 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Sample Result	Qualifier U F2	Added	Result			D	%Rec	Prep Prep %Rec Limits	Type: To	tal/NA	
Matrix: Solid Analysis Batch: 30098 Analyte Gasoline Range Organics (GRO)-C6-C10	Sample Result <50.0	Qualifier U F2	Added	Result 1016		mg/Kg	<u>D</u>	<b>%Rec</b>	Prep Prep %Rec Limits 70 - 130	Type: To	tal/NA	
Matrix: Solid Analysis Batch: 30098 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Sample <u>Result</u> <50.0 <50.0	Qualifier U F2	Added	Result 1016		mg/Kg	<u>D</u>	<b>%Rec</b>	Prep Prep %Rec Limits 70 - 130	Type: To	tal/NA	
Matrix: Solid Analysis Batch: 30098 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Sample <u>Result</u> <50.0 <50.0	Qualifier U F2 U	Added	Result 1016		mg/Kg	<u> </u>	<b>%Rec</b>	Prep Prep %Rec Limits 70 - 130	Type: To	tal/NA	
Matrix: Solid Analysis Batch: 30098 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Sample Result <50.0 <50.0 <i>MS</i>	Qualifier U F2 U	Added	Result 1016		mg/Kg	<u>D</u>	<b>%Rec</b>	Prep Prep %Rec Limits 70 - 130	Type: To	tal/NA	
Matrix: Solid Analysis Batch: 30098 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	Sample Result <50.0 <50.0 MS %Recovery	Qualifier U F2 U	Added 1000 1000 <i>Limits</i>	Result 1016		mg/Kg	<u>D</u>	<b>%Rec</b>	Prep Prep %Rec Limits 70 - 130	Type: To	tal/NA	
Matrix: Solid Analysis Batch: 30098 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl	Sample Result <50.0 <50.0 MS %Recovery 82 85	Qualifier U F2 U	Added 1000 1000 <u>Limits</u> 70 - 130	Result 1016		mg/Kg		%Rec 102 87	Prep %Rec Limits 70 - 130 70 - 130	Type: To Batch: 	tal/NA 30164	
Matrix: Solid Analysis Batch: 30098 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-17129-A-	Sample Result <50.0 <50.0 MS %Recovery 82 85	Qualifier U F2 U	Added 1000 1000 <u>Limits</u> 70 - 130	Result 1016		mg/Kg		%Rec 102 87	Prep %Rec Limits 70 - 130 70 - 130	Type: To Batch: 	tal/NA 30164	
Matrix: Solid Analysis Batch: 30098 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-17129-A- Matrix: Solid	Sample Result <50.0 <50.0 MS %Recovery 82 85	Qualifier U F2 U	Added 1000 1000 <u>Limits</u> 70 - 130	Result 1016		mg/Kg		%Rec 102 87	Prep %Rec Limits 70 - 130 70 - 130 70 - 130	Type: To Batch:  pike Dup Type: To	tal/NA 30164	
Matrix: Solid Analysis Batch: 30098 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-17129-A-	Sample <u>Result</u> <50.0 <50.0 <i>MS</i> <i>%Recovery</i> 82 85 13-F MSD	Qualifier U F2 U MS Qualifier	Added 1000 1000 <u>Limits</u> 70 - 130 70 - 130	Result 1016 868.3	Qualifier	mg/Kg		%Rec 102 87	Prep %Rec Limits 70 - 130 70 - 130 70 - 130 9: Matrix S Prep Prep	Type: To Batch: 	blicate tal/NA 30164	
Matrix: Solid Analysis Batch: 30098 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-17129-A- Matrix: Solid Analysis Batch: 30098	Sample <u>Result</u> <50.0 <50.0 MS %Recovery 82 85 13-F MSD Sample	Qualifier U F2 U MS Qualifier Sample	Added 1000 1000 <u>Limits</u> 70 - 130 70 - 130 5pike	Result 1016 868.3 MSD	Qualifier	mg/Kg mg/Kg Cli	ent S	%Rec 102 87	Prep Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 9. Matrix S Prep Prep %Rec	Type: To Batch:  Type: To Batch:	blicate tal/NA 30164 solicate tal/NA 30164 RPD	
Matrix: Solid Analysis Batch: 30098 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-17129-A- Matrix: Solid Analysis Batch: 30098 Analyte	Sample <u>Result</u> <50.0 <50.0 MS %Recovery 82 85 13-F MSD Sample Result	Qualifier U F2 U MS Qualifier Sample Qualifier	Added 1000 1000 <i>Limits</i> 70 - 130 70 - 130 70 - 130	Result 1016 868.3 MSD Result	Qualifier MSD Qualifier	mg/Kg mg/Kg Cli		<u>%Rec</u> 102 87 ample IC	Prep Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 9: Matrix S Prep %Rec Limits	Type: To Batch:  Type: To Batch:  RPD	blicate tal/NA 30164 tal/NA 30164 RPD Limit	
Matrix: Solid Analysis Batch: 30098 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-17129-A- Matrix: Solid Analysis Batch: 30098 Analyte Gasoline Range Organics	Sample <u>Result</u> <50.0 <50.0 MS %Recovery 82 85 13-F MSD Sample	Qualifier U F2 U MS Qualifier Sample Qualifier	Added 1000 1000 <u>Limits</u> 70 - 130 70 - 130 5pike	Result 1016 868.3 MSD	Qualifier MSD Qualifier	mg/Kg mg/Kg Cli	ent S	%Rec 102 87	Prep Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 9. Matrix S Prep Prep %Rec	Type: To Batch:  Type: To Batch:	blicate tal/NA 30164 solicate tal/NA 30164 RPD	
Matrix: Solid Analysis Batch: 30098 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-17129-A- Matrix: Solid Analysis Batch: 30098 Analyte Gasoline Range Organics (GRO)-C6-C10	Sample <u>Result</u> <50.0 <50.0 <i>MS</i> <i>%Recovery</i> <i>82</i> <i>85</i> <b>13-F MSD</b> Sample <u>Result</u> <50.0	Qualifier U F2 U MS Qualifier Qualifier U F2	Added 1000 1000 <i>Limits</i> 70 - 130 70 - 130 70 - 130 999	Result           1016           868.3           MSD           Result           1285	Qualifier MSD Qualifier	mg/Kg mg/Kg Cli mg/Kg	ent S	%Rec           102           87	Prep %Rec Limits 70 - 130 70 - 130 70 - 130 0: Matrix S Prep %Rec Limits 70 - 130	pike Dup Type: Tor Batch: Type: Tor Batch: <u>RPD</u> 23	blicate tal/NA 30164 clicate tal/NA 30164 RPD Limit 20	
Matrix: Solid Analysis Batch: 30098 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-17129-A- Matrix: Solid Analysis Batch: 30098 Analyte Gasoline Range Organics	Sample <u>Result</u> <50.0 <50.0 MS %Recovery 82 85 13-F MSD Sample Result	Qualifier U F2 U MS Qualifier Qualifier U F2	Added 1000 1000 <u>Limits</u> 70 - 130 70 - 130 70 - 130	Result 1016 868.3 MSD Result	Qualifier MSD Qualifier	mg/Kg mg/Kg Cli	ent S	<u>%Rec</u> 102 87 ample IC	Prep Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 9: Matrix S Prep %Rec Limits	Type: To Batch:  Type: To Batch:  RPD	blicate tal/NA 30164 tal/NA 30164 RPD Limit	

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	81		70 - 130
o-Terphenyl	85		70 - 130

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Job ID: 890-2573-1

Client: Ensolum

Project/Site: PLU 15 TWR

#### **QC Sample Results**

Job ID: 890-2573-1 SDG: 03E1558015

#### Method: 300.0 - Anions, Ion Chromatography

Chloride     <5.00	Lab Sample ID: MB 880-30059/1-A Matrix: Solid											enone	Sample ID: Prep	Type: S	
AnalyteResultQualifierRLUnitDPreparedAnalyzedDitChioride<5.00U5.00mg/KgClient Sample ID: Lab Control Sam Prep Type: SoluLab Sample ID: LCS 880-30059/2-A Matrix: SolidSpikeLCSLCSSimeSimeClient Sample ID: Lab Control Sam Prep Type: SoluAnalyteAddedResultQualifierUnitD9 %RecLimitsSime	Analysis Batch: 30226														
Chloride     <5.00															
Lab Sample ID: LCS 880-30059/2-A Matrix: Solid     Client Sample ID: Lab Control Sam Prep Type: Solu       Analysis Batch: 30226     Spike     LCS     LCS     %Rec       Analyte     Added     Result     Qualifier     Unit     D     %Rec       Chioride     250     267.1     mg/Kg     107     90.110       Lab Sample ID: LCSD 880-30059/3-A Matrix: Solid     Client Sample ID: Lab Control Sample D     Prep Type: Solu       Analyte     Added     Result     Qualifier     Unit     D     %Rec     F       Analyte     Added     Result     Qualifier     Unit     D     %Rec     F       Analyte     Added     Result     Qualifier     Unit     D     %Rec     F       Chioride     250     267.6     mg/Kg     107     90.110     0       Lab Sample ID: 890-2573-1 MS     Client Sample ID: PH     Prep Type: Solu     N     F       Analyte     Result     Qualifier     MS     MS     %Rec     F       Chioride     5.39     F1     249     277.7     mg/Kg     110     90.110       Lab Sample ID: 890-2573-1 MSD     Kel     MS     Kel     Client Sample ID: PH     Prep Type: Solu       Analytis Batch: 30226     Sample     Spike     <	Analyte	R	esult (	Qualifier				U	nit	D	Р	repared	Analy	zed	Dil Fa
Matrix: Solid       Prep Type: Solu         Analysis Batch: 30226       Spike       LCS       LCS       Vinit       D       %Rec       Limits       Added         Analyte       250       267.1       mg/Kg       107       90.110       Prep Type: Solu         Lab Sample ID: LCSD 880-30059/3-A       Matrix: Solid       Client Sample ID: Lab Control Sample D       Prep Type: Solu         Analyte       Spike       LCSD       LCSD       LCSD       LCSD       LCSD       LCSD       Lab Control Sample D       Prep Type: Solu         Analyte       Added       Result       Qualifier       Unit       D       %Rec       Frep Type: Solu         Analyte       Added       Result       Qualifier       Unit       D       %Rec       Frep Type: Solu         Analyte       Added       Result       Qualifier       Unit       D       %Rec       Frep Type: Solu         Analyte       Solid       Songle       Spike       MS       MS       Spike       Client Sample ID: PH         Matrix: Solid       Gualifier       Added       Result       Qualifier       Unit       D       %Rec       Limits         Choride       5.39       F1       249       277.7 <td< td=""><td>Chloride</td><td>&lt;</td><td>&lt;5.00 l</td><td>U</td><td></td><td>5.00</td><td></td><td>n</td><td>ng/Kg</td><td></td><td></td><td></td><td>07/22/22</td><td>08:50</td><td></td></td<>	Chloride	<	<5.00 l	U		5.00		n	ng/Kg				07/22/22	08:50	
Analysis Batch: 30226SpikeLCSLCSLCSMarcAnalyteAddedResultQualifierUnitD%RecLimitsChioride250267.1mg/Kg10790.110Lab Sample ID: LCSD 880-30059/3-AMatrix: SolidClient Sample ID: Lab Control Sample DMatrix: SolidAnalysis Batch: 30226SpikeLCSDLCSDLCSDAnalyteAddedResultQualifierUnitD%RecFChloride250267.6mg/Kg10790.1100Lab Sample ID: 890-2573-1 MSClient SampleSpikeMSMSClient Sample ID: PHMatrix: SolidSampleSpikeMSMS%RecFAnalyteResultQualifierAddedResultQualifierUnitD%RecChioride5.39F1249277.7mg/KgD%RecLimitsLab Sample ID: 890-2573-1 MSDKarpetClient Sample ID: PHPrep Type: SoluAnalyteResultQualifierAddedResultQualifierUnitD%RecLab Sample ID: 890-2573-1 MSDKarpet249277.7mg/Kg11090.110-Lab Sample ID: 890-2573-1 MSDKarpetClient Sample ID: PHPrep Type: SoluPrep Type: SoluAnalysis Batch: 30226Sample SampleSpikeMSD%RecFMatrix: SolidSample SampleSpikeMSD%RecFAnal	Lab Sample ID: LCS 880-30059/2-A									CI	ient	Sample	e ID: Lab C	ontrol S	ample
AnalyteAddedLCSLCSMRcAnalyteAddedResultQualifierUnitD%RecLimitsChloride250267.1mg/Kg10790.11090.110Lab Sample ID: LCSD 880-30059/3-AMatrix: SolidClient Sample ID: Lab Control Sample DPrep Type: SoluAnalyteSpikeLCSDLCSDLCSDWRecFAnalyteAddedResultQualifierUnitD%RecFChloride250267.6UnitD%RecFAnalyteAddedResultQualifierUnitD%RecFChloride250267.6WriteD%RecFLab Sample ID: 890-2573-1 MSSampleSpikeMSKsClient Sample ID: PH Prep Type: SoluAnalyteResultQualifierAddedResultQualifierUnitD%RecChloride5.39F1249277.7mg/Kg11090.110TLab Sample ID: 890-2573-1 MSD Matrix: SolidSampleSpikeMSMSClient Sample ID: PH Prep Type: SoluAnalysis Batch: 30226SampleSpikeMSDMSDKRecLimitsMatrix: SolidAnalysis Batch: 30226SampleSpikeMSDKRecFSample SpikeSpikeMSDSpikeKSDKRecF	Matrix: Solid												Prep	Type: S	olubl
Analyte ChlorideAdded 250Result 267.1Qualifier mg/KgUnit mg/KgD %Rec 107Limits 90.110Lab Sample ID: LCSD 880-30059/3-A Matrix: Solid Analysis Batch: 30226Client Sample ID: Lab Control Sample D Prep Type: SoluAnalyte ChlorideSpike 250LCSD 267.6LCSD mg/KgUnit mg/KgD %Rec 107%Rec 	Analysis Batch: 30226														
Chloride250267.1mg/Kg10790.110Lab Sample ID: LCSD 880-30059/3-A Matrix: Solid Analysis Batch: 30226Client Sample ID: Lab Control Sample D Prep Type: SoluAnalyte ChlorideSpikeLCSDLCSD%RecF %RecAnalyte ChlorideAdded 250267.6Unit mg/KgD %Rec%RecF LimitsLab Sample ID: 890-2573-1 MS Matrix: Solid Analysis Batch: 30226Sample SampleSpike AddedMS MSMS MSClient Sample ID: PH Prep Type: SoluLab Sample ID: 890-2573-1 MS Matrix: Solid ChlorideSample 5.39Spike F1MS 249MS 277.7MS mg/Kg%Rec 110Limits 90 - 110Lab Sample ID: 890-2573-1 MSD Matrix: Solid Analysis Batch: 30226Result 249Qualifier 277.7MS mg/KgMS Prep Type: SoluLab Sample ID: 890-2573-1 MSD Matrix: Solid Analysis Batch: 30226Sample SampleSpike SpikeMS MS MSD%Rec Kec					Spike		LCS	LCS					%Rec		
Lab Sample ID: LCSD 880-30059/3-A       Client Sample ID: Lab Control Sample D         Matrix: Solid       Analysis Batch: 30226         Analyte       Added         Chloride       250         250       267.6         Watrix: Solid       North         Analyte       Added         Chloride       250         250       267.6         267.6       mg/Kg         Watrix: Solid       Natrix: Solid         Analyte       Result         Qualifier       Unit         Matrix: Solid       Sample         Analyte       Result         Chloride       5.39         F1       249         277.7       mg/Kg         Matrix: Solid       Client Sample ID: Prep Type: Solut         Lab Sample ID: 890-2573-1 MSD       Client Sample         Matrix: Solid       F1       249         Analysis Batch: 30226       Client Sample ID: Prep Type: Solut         Lab Sample ID: 890-2573-1 MSD       Client Sample ID: Prep Type: Solut         Matrix: Solid       Analysis Batch: 30226       Client Sample ID: Prep Type: Solut         Matrix: Solid       Sample Sample Spike MSD MSD       %Rec F								Qualifi			D				
Matrix: Solid Analysis Batch: 30226       Spike       LCSD       LCSD       Water       Frep Type: Solution         Analyte       Added       Result       Qualifier       Unit       D       %Rec       F         Chloride       250       267.6       With       D       %Rec       F         Lab Sample ID: 890-2573-1 MS       Client Sample ID: Prep Type: Solution       Client Sample ID: Prep Type: Solution       Prep Type: Solution         Analyte       Sample Sample       Spike       MS       MS       %Rec       Limits	Chloride				250		267.1		mg/Kg			107	90 - 110		
Analysis Batch: 30226SpikeLCSDLCSD%RecFAnalyteAddedResultQualifierUnitD%RecLimitsRPDLChloride250267.6267.6mg/KgD10790.11000Lab Sample ID: 890-2573-1 MS Matrix: Solid Analysis Batch: 30226SampleSpikeMSMSClient Sample ID: PH- Prep Type: SoluAnalyteResult 	Lab Sample ID: LCSD 880-30059/3-4	4							CI	ient	Sam	ple ID:	Lab Contro	ol Sampl	le Du
AnalyteAddedResultQualifierUnitD%RecFChloride250267.6267.610790 - 1100Lab Sample ID: 890-2573-1 MS Matrix: Solid Analysis Batch: 30226SampleSampleSpikeMSMSClient Sample ID: PH- Prep Type: SoluAnalyteResultQualifierAddedResultQualifierUnitD%RecMSAnalyteResultQualifierAddedResultQualifierUnitD%RecMSChloride5.39F1249277.7mg/Kg11090 - 1100Lab Sample ID: 890-2573-1 MSD Matrix: Solid Analysis Batch: 30226SampleSpikeMSDMSDClient Sample ID: PH- Prep Type: SoluLab Sample ID: 890-2573-1 MSD Matrix: Solid Analysis Batch: 30226SampleSpikeMSDMSD%RecESampleSpikeMSDMSDMSD%RecF	Matrix: Solid												Prep	Type: S	olubl
Analyte ChlorideAdded 250Result 267.6Qualifier mg/KgUnit mg/KgD%Rec mg/KgLimits mitsRPD 0L LLab Sample ID: 890-2573-1 MS Matrix: Solid Analysis Batch: 30226Sample SampleSample F1Spike 249MS 277.7MS mg/KgClient Sample ID: PH Prep Type: SoluLab Sample ID: 890-2573-1 MSD Matrix: Solid ChlorideResult QualifierQualifier AddedMS Result QualifierMS MSMS MS%Rec mg/KgLimits D MatrixRec MatrixLab Sample ID: 890-2573-1 MSD Matrix: Solid Analysis Batch: 30226Sample SampleSpikeMSDMSDClient Sample ID: PH Prep Type: SoluLab Sample ID: 890-2573-1 MSD Matrix: Solid Analysis Batch: 30226SampleSpikeMSDMSD%RecF	Analysis Batch: 30226														
Chloride250267.6mg/Kg10790 - 1100Lab Sample ID: 890-2573-1 MS Matrix: Solid Analysis Batch: 30226SampleSpikeMSClient Sample ID: PH Prep Type: SoluAnalyteResultQualifierAddedResultQualifierUnitD%RecChloride5.39F1249277.7mg/Kg11090 - 1100Lab Sample ID: 890-2573-1 MSD Matrix: Solid Analysis Batch: 30226SampleSpikeMSD%RecLimits Prep Type: SoluSample SampleSpikeMSDMSD%RecF					Spike		LCSD	LCSD					%Rec		RPI
Lab Sample ID: 890-2573-1 MS Matrix: SolidClient Sample ID: PH Prep Type: SoluAnalysis Batch: 30226SampleSampleSpikeMSMSAnalyteResult QualifierQualifier F1AddedResult QualifierQualifier QualifierUnit mg/KgD%Rec 110Limits 90 - 110Lab Sample ID: 890-2573-1 MSD Matrix: Solid Analysis Batch: 30226Sample SampleSpikeMSDMSD%RecSample SampleSpikeMSDMSD%RecF	Analyte							Qualifi	er Unit		D	%Rec	Limits	RPD	Lim
Matrix: Solid Analysis Batch: 30226       Sample       Sample       Spike       MS       MS       %Rec         Analyte       Result       Qualifier       Added       Result       Qualifier       Unit       D       %Rec       Limits	Chloride				250		267.6		mg/Kg			107	90 - 110	0	20
Analysis Batch: 30226       Sample       Sample       Spike       MS       MS       %Rec         Analyte       Result       Qualifier       Added       Result       Qualifier       Unit       D       %Rec       Limits	Lab Sample ID: 890-2573-1 MS												Client Sa	mple ID:	: PH0
SampleSampleSampleSpikeMSMS%RecAnalyteResultQualifierAddedResultQualifierUnitD%RecLimitsChloride5.39F1249277.7mg/KgD%RecLimits-Lab Sample ID: 890-2573-1 MSDF1249277.7Client Sample ID: PhotometricPrep Type: Solution-Matrix: SolidAnalysis Batch: 30226SampleSpikeMSDMSD%RecF	Matrix: Solid												Prep	Type: S	olubl
AnalyteResultQualifierAddedResultQualifierUnitD%RecLimitsChloride5.39F1249277.7mg/Kg11090.110Lab Sample ID: 890-2573-1 MSD Matrix: Solid Analysis Batch: 30226Client SampleClient Sample ID: PH Prep Type: SoluSampleSampleSpikeMSD%RecF	Analysis Batch: 30226														
Chloride     5.39     F1     249     277.7     mg/Kg     110     90 - 110       Lab Sample ID: 890-2573-1 MSD     Client Sample ID: PH       Matrix: Solid     Prep Type: Solu       Analysis Batch: 30226     Sample Sample     Spike     MSD     %Rec     F		Sample	Samp	le	Spike		MS	MS					%Rec		
Lab Sample ID: 890-2573-1 MSD Client Sample ID: PF Matrix: Solid Prep Type: Solu Analysis Batch: 30226 Sample Sample Spike MSD MSD %Rec F	Analyte	Result	Qualif	fier	Added		Result	Qualifi	er Unit		D	%Rec	Limits		
Matrix: Solid     Prep Type: Solu       Analysis Batch: 30226     Sample Sample       Sample Sample     Spike	Chloride	5.39	F1		249		277.7		mg/Kg			110	90 - 110		
Matrix: Solid     Prep Type: Solu       Analysis Batch: 30226     Sample Sample       Sample Sample     Spike	Lab Sample ID: 890-2573-1 MSD												Client Sa	mple ID:	: PHO
Analysis Batch: 30226 Sample Sample Spike MSD MSD %Rec F														-	
Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits RPD L	Analysis Batch: 30226				<b>.</b>		Men	мер					%Pec		RPI
	-	Sample	Samp	le	Spike		WISD	MOD					/01100		NF1

Eurofins Carlsbad

Released to Imaging: 11/22/2022 11:30:50 AM

#### **QC Association Summary**

Client: Ensolum Project/Site: PLU 15 TWR

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#### Job ID: 890-2573-1 SDG: 03E1558015

GC VOA

#### Analysis Batch: 30191

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2573-1	PH05	Total/NA	Solid	8021B	30208
890-2573-2	PH05A	Total/NA	Solid	8021B	30208
890-2573-3	PH05B	Total/NA	Solid	8021B	30208
MB 880-30208/5-A	Method Blank	Total/NA	Solid	8021B	30208
LCS 880-30208/1-A	Lab Control Sample	Total/NA	Solid	8021B	30208
LCSD 880-30208/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30208
890-2566-A-1-G MS	Matrix Spike	Total/NA	Solid	8021B	30208
890-2566-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30208

#### Prep Batch: 30208

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2573-1	PH05	Total/NA	Solid	5035	
890-2573-2	PH05A	Total/NA	Solid	5035	
890-2573-3	PH05B	Total/NA	Solid	5035	
MB 880-30208/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30208/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30208/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2566-A-1-G MS	Matrix Spike	Total/NA	Solid	5035	
890-2566-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2573-1	PH05	Total/NA	Solid	Total BTEX	
890-2573-2	PH05A	Total/NA	Solid	Total BTEX	
890-2573-3	PH05B	Total/NA	Solid	Total BTEX	

#### GC Semi VOA

#### Analysis Batch: 30098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2573-1	PH05	Total/NA	Solid	8015B NM	30164
890-2573-2	PH05A	Total/NA	Solid	8015B NM	30164
890-2573-3	PH05B	Total/NA	Solid	8015B NM	30164
MB 880-30164/1-A	Method Blank	Total/NA	Solid	8015B NM	30164
LCS 880-30164/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30164
LCSD 880-30164/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30164
880-17129-A-13-E MS	Matrix Spike	Total/NA	Solid	8015B NM	30164
880-17129-A-13-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30164

#### Prep Batch: 30164

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2573-1	PH05	Total/NA	Solid	8015NM Prep	
890-2573-2	PH05A	Total/NA	Solid	8015NM Prep	
890-2573-3	PH05B	Total/NA	Solid	8015NM Prep	
MB 880-30164/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30164/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30164/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-17129-A-13-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-17129-A-13-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

#### Received by OCD: 8/10/2022 10:53:56 AM

**QC Association Summary** 

Client: Ensolum Project/Site: PLU 15 TWR

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Job ID: 890-2573-1 SDG: 03E1558015

## GC Semi VOA

#### Analysis Batch: 30273

Lab Sample ID 890-2573-1	Client Sample ID PH05	Prep Type Total/NA	Matrix Solid	Method 8015 NM	Prep Batch
890-2573-2	PH05A	Total/NA	Solid	8015 NM	
890-2573-3	PH05B	Total/NA	Solid	8015 NM	

#### HPLC/IC

#### Leach Batch: 30059

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	8
890-2573-1	PH05	Soluble	Solid	DI Leach		
890-2573-2	PH05A	Soluble	Solid	DI Leach		0
890-2573-3	PH05B	Soluble	Solid	DI Leach		3
MB 880-30059/1-A	Method Blank	Soluble	Solid	DI Leach		
LCS 880-30059/2-A	Lab Control Sample	Soluble	Solid	DI Leach		
LCSD 880-30059/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach		
890-2573-1 MS	PH05	Soluble	Solid	DI Leach		
890-2573-1 MSD	PH05	Soluble	Solid	DI Leach		
Analysis Batch: 30226						
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	13
890-2573-1	PH05	Soluble	Solid	300.0	30059	

#### Analysis Batch: 30226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2573-1	PH05	Soluble	Solid	300.0	30059
890-2573-2	PH05A	Soluble	Solid	300.0	30059
890-2573-3	PH05B	Soluble	Solid	300.0	30059
MB 880-30059/1-A	Method Blank	Soluble	Solid	300.0	30059
LCS 880-30059/2-A	Lab Control Sample	Soluble	Solid	300.0	30059
LCSD 880-30059/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30059
890-2573-1 MS	PH05	Soluble	Solid	300.0	30059
890-2573-1 MSD	PH05	Soluble	Solid	300.0	30059
Job ID: 890-2573-1 SDG: 03E1558015

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## Lab Sample ID: 890-2573-1 Matrix: Solid

Lab Sample ID: 890-2573-2

Matrix: Solid

Date Collected: 07/15/22 12:55 Date Received: 07/18/22 12:12

**Client Sample ID: PH05** 

Project/Site: PLU 15 TWR

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			5.02 g	5 mL	30208	07/21/22 09:25	MR	XEN MID
Total/NA	Analysis	8021B		1			30191	07/21/22 16:25	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30441	07/22/22 16:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30273	07/21/22 13:53	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	30164	07/20/22 15:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30098	07/21/22 01:18	SM	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	30059	07/19/22 11:04	СН	XEN MID
Soluble	Analysis	300.0		1			30226	07/22/22 11:27	SMC	XEN MID

# Client Sample ID: PH05A

# Date Collected: 07/15/22 13:05

Date Received: 07/18/22 12:12

	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	30208	07/21/22 09:25	MR	XEN MID
Total/NA	Analysis	8021B		1			30191	07/21/22 18:37	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30441	07/22/22 16:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30273	07/21/22 13:53	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	30164	07/20/22 15:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30098	07/21/22 01:39	SM	XEN MID
Soluble	Leach	DI Leach			4.99 g	50 mL	30059	07/19/22 11:04	СН	XEN MID
Soluble	Analysis	300.0		1			30226	07/22/22 11:54	SMC	XEN MID

# Client Sample ID: PH05B Date Collected: 07/15/22 13:10

### Date Received: 07/18/22 12:12

	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	30208	07/21/22 09:25	MR	XEN MID
Total/NA	Analysis	8021B		1			30191	07/21/22 19:03	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30441	07/22/22 16:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30273	07/21/22 13:53	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	30164	07/20/22 15:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30098	07/21/22 02:00	SM	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	30059	07/19/22 11:04	СН	XEN MID
Soluble	Analysis	300.0		1			30226	07/22/22 12:04	SMC	XEN MID

#### Laboratory References:

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

7/19/22 11:04 CH XEN MID 7/22/22 11:54 SMC XEN MID Lab Sample ID: 890-2573-3 Matrix: Solid

\_\_\_\_\_

Client: Ensolum Project/Site: PLU 15 TWR

Laboratory: Eurofins Midland

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

hority		rogram	Identification Number	Expiration Date
as	N	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 v
the agency does not o	fer certification.			
• •	• •	Matrix	Analyte	
the agency does not o	fer certification.	Matrix Solid	Analyte Total TPH	

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10

Job ID: 890-2573-1

SDG: 03E1558015

# **Method Summary**

Client: Ensolum Project/Site: PLU 15 TWR Job ID: 890-2573-1 SDG: 03E1558015

Nethod	Method Description	Protocol	Laboratory
3021B	Volatile Organic Compounds (GC)	SW846	XEN MID
lotal BTEX	Total BTEX Calculation	TAL SOP	XEN MID
3015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
3015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
00.0	Anions, Ion Chromatography	MCAWW	XEN MID
6035	Closed System Purge and Trap	SW846	XEN MID
3015NM Prep	Microextraction	SW846	XEN MID
Ol Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

#### Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions. SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

Client: Ensolum Project/Site: PLU 15 TWR

#### Job ID: 890-2573-1 SDG: 03E1558015

ab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth	
90-2573-1	PH05	Solid	07/15/22 12:55	07/18/22 12:12	0.5'	
90-2573-2	PH05A	Solid	07/15/22 13:05	07/18/22 12:12	2'	
90-2573-3	PH05B	Solid	07/15/22 13:10	07/18/22 12:12	3'	

									ALAO 10010010011		
Project Manager: Bo	Ben Belill			Bill to: (if different)		Garrett Green			Work On	Son	
	Ensolum 11 C			Company Name:		XTO Energy. Inc.		Program: UST		Program: UST/PST   PRP Brownfields RRC Superfund	Superfund
	3122 National parks Hwy	rks Hwv		Address:		3104 E. Green Street	łet	State of Project:	ŝ		
e ZIP:	Carlsbad, NM 88220	220		City, State ZIP:	Carls	Carlsbad, NM 88220	20	Reporting: Lev		Reporting: Level II CLevel III PST/UST TRRP	
	9898540852		Email:	Email: bbelill@ensolum.com	im.com			Deliverables: EDD		ADaPT Other:	
Name:	PI 11 15 TWR	TWR	Turn	Turn Around			ANALYSIS REQUEST	EQUEST		Preservative Codes	Codes
Project Number:	03E1558015	58015	Routine	Rush	Pres. Code					None: NO DI	DI Water: H <sub>2</sub> O
Project Location:	EDDY COUNTY, NM	JNTY, NM	Due Date:							Cool: Cool M	MeOH: Me
Sampler's Name:	Conner Shore	Shore	TAT starts the	day received by				_		HCL: HC H	HNO3: HN
PO #			the lab, if rece	the lab, if received by 4:30pm	rs					H2SO4: H2 Na	NaOH: Na
SAMPLE RECEIPT	Temp Blank:	nk: Res No	Wet Ice:	Yes No	nete .0)					H <sub>3</sub> PO <sub>4</sub> : HP	
Samples Received Intact:	ct: CYee No	o Thermometer ID:	ster ID:	Inn DO						NaHSO4: NABIS	
Cooler Custody Seals:	Yes No	MA Correction Factor:	Factor:	-0.2						Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub>	
Sample Custody Seals:	Yes No	N/A Temperatu	Temperature Reading:	6.0	S (E	1	890-2573 Chain c	of Custody		Zn Acetate+NaUH: Zn	20
Total Containers:		Corrected	Corrected Temperature:	5.8	RIDE	_	_	-	-	NaCH+Ascorbic Acid: SAPC	IC: SAPC
Sample Identification		Matrix Date Sampled	Time Sampled	Depth Comp	Cont of CHLOR	TPH (8 BTEX (				Sample Comments	nments
PH05	S		12 1255	0.5 Grab/	1 X						
PH05A			2 1305	2 Grab/	1 X	× ×					
PH05B			1:310	3' Grab/	1 ×	×					
PH05C	s		1215	4' Grab/	1 ×	××				*HOLD Pending 3' sample	3' sample
										Cost Center: 2027711001	27711001
	$\int$										
	0									Incident Numbers:	mbers:
N									+	nAPP2207746719	46719
0				-							
Total 200.7 / 6010	200.8 / 6020:		8RCRA 13PPM	PM Texas 11	AI Sb As	Ba Be B	Cd Ca Cr Co Cu Fe F	Pb Mg Mn Mo N	Ni K Se Ag SiO2	0₂ Na Sr TI Sn U V 2	Zn
Circle Method(s) and Metal(s) to be analyzed	Metal(s) to be a	analyzed	TCLP / SI	TCLP / SPLP 6010: 8RCRA	EU	As Ba Be (	Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U	to Ni Se Ag TI		Hg: 1631 / 245.1 / 7470 / 7471	11
vice: Signature of this dox service. Eurofins Xenco v Eurofine Xenco A minimu	sument and relinquist will be fiable only for :	hment of samples co the cost of samples will be applied to ear	onstitutes a valid pu and shall not assur	irchase order from ne any responsibilit arce of \$5 for each :	client company by for any lossues ample submit	y to Eurofins Xer ss or expenses ir ted 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 for functions. A minimum charge of \$55 to reach as a standard of \$55 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	yrs. It assigns standard s are due to circumstar ms will be enforced unit	I terms and condition nees beyond the contr less previously negot	ns rol lated.	
Relinquished by: (Signature)	Signature)	Receiv	Received by: (Signature	ure)	Date	Date/Time	Relinquished by: (Signature)	nature) F	Received by: (Signature)	ure)	Date/Time
2	0	D	X	0 0	1 2 3	リリーゴ	2				

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

Job Number: 890-2573-1 SDG Number: 03E1558015

List Source: Eurofins Carlsbad

# Login Sample Receipt Checklist

Client: Ensolum

#### Login Number: 2573 List Number: 1 Creator: Stutzman, Amanda

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

14

14

Job Number: 890-2573-1 SDG Number: 03E1558015

List Source: Eurofins Midland

List Creation: 07/19/22 11:13 AM

# Login Sample Receipt Checklist

Client: Ensolum

<6mm (1/4").

Login Number: 2573 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	

Received by OCD: 8/10/2022 10:53:56 AM

LINKS

Review your project results through

EOL

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Released to Imaging: 11/22/2022 11:30:50 AM

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Ask— The Expert

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# Environment Testing America

# **ANALYTICAL REPORT**

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

# Laboratory Job ID: 890-2574-1

Laboratory Sample Delivery Group: 03E1558015 Client Project/Site: PLU 15 TWR

# For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

RAMER

Authorized for release by: 7/25/2022 8:04:33 AM Jessica Kramer, Project Manager (432)704-5440 Jessica.Kramer@et.eurofinsus.com

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

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

Laboratory Job ID: 890-2574-1 SDG: 03E1558015

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DLC

EDL

LOD

LOQ MCL

MDA

MDC

MDL

ML MPN

MQL NC

ND

NEG

POS

PQL PRES

QC

RER

RL RPD

TEF TEQ

TNTC

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	Definitions/Glossary	
Client: Ensolum		
Project/Site: PL	SDG. 03E1538015	4
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	
F1	MS and/or MSD recovery exceeds control limits.	9
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	

Furatina	Carlahad
Euronns	Carlsbad

Decision Level Concentration (Radiochemistry)

EPA recommended "Maximum Contaminant Level"

Minimum Detectable Concentration (Radiochemistry)

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

Minimum Detectable Activity (Radiochemistry)

Estimated Detection Limit (Dioxin)

Limit of Detection (DoD/DOE) Limit of Quantitation (DoD/DOE)

Method Detection Limit Minimum Level (Dioxin)

Most Probable Number Method Quantitation Limit

Not Calculated

Negative / Absent

Positive / Present Practical Quantitation Limit

Presumptive

Quality Control

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Reporting Limit or Requested Limit (Radiochemistry)

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

4

5

#### Job ID: 890-2574-1 SDG: 03E1558015

#### Job ID: 890-2574-1

Project/Site: PLU 15 TWR

Client: Ensolum

#### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-2574-1

#### Receipt

The samples were received on 7/18/2022 12:12 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.8°C

#### GC VOA

Method 8021B: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 880-30208 and analytical batch 880-30191 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.

#### GC Semi VOA

Method 8015MOD\_NM: The surrogate recovery for the blank associated with preparation batch 880-30164 and analytical batch 880-30098 was outside the upper control limits.

Method 8015MOD\_NM: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 880-30164 and analytical batch 880-30098 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

Method 300\_ORGFM\_28D: PH06 (890-2574-1), PH06A (890-2574-2), PH06B (890-2574-3) and (890-2573-A-1-C MSD) The matrix spike duplicate (MSD) recoveries for preparation batch 880-30059 and 880-30059 and analytical batch 880-30226 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.

Method: 8021B - Volatile Organic Compounds (GC)

Method: Total BTEX - Total BTEX Calculation

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

RL

0.00200

0.00200

0.00200

0.00401

0.00200

0.00401

Limits

70 - 130 70 - 130

RL

RL

50.0

0.00401

Unit

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

Unit

Unit

mg/Kg

mg/Kg

D

D

D

Prepared

07/21/22 09:25

07/21/22 09:25

07/21/22 09:25

07/21/22 09:25

07/21/22 09:25

07/21/22 09:25

Prepared

07/21/22 09:25

07/21/22 09:25

Prepared

Prepared

Job ID: 890-2574-1 SDG: 03E1558015

# **Client Sample ID: PH06**

Project/Site: PLU 15 TWR

Date Collected: 07/15/22 13:30 Date Received: 07/18/22 12:12

Sample Depth: 0.5'

Client: Ensolum

Analyte

Benzene

Toluene

o-Xylene

Surrogate

Analyte

Analyte

Total TPH

Total BTEX

Ethylbenzene

Xylenes, Total

m-Xylene & p-Xylene

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

# Lab Sample ID: 890-2574-1

Analyzed

07/21/22 19:29

07/21/22 19:29

07/21/22 19:29

07/21/22 19:29

07/21/22 19:29

07/21/22 19:29

Analyzed

07/21/22 19:29

07/21/22 19:29

Analyzed

07/22/22 16:06

Analyzed

07/21/22 13:53

Matrix: Solid

Dil Fac

1

1

1

1

1

1

Dil Fac

Dil Fac

Dil Fac

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		07/20/22 15:31 07/21/22 02:21		1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		07/20/22 15:31	07/21/22 02:21	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/20/22 15:31	07/21/22 02:21	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	102		70 - 130			07/20/22 15:31	07/21/22 02:21	1
o-Terphenyl	112		70 - 130			07/20/22 15:31	07/21/22 02:21	1
Analyte Chloride	35.8	Qualifier	<b>RL</b> 4.95	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 07/22/22 12:40	Dil Fac
- Client Sample ID: PH06A						Lab Sar	nple ID: 890-	2574-2
						Lab Sar	nple ID: 890- Matri	2 <b>574-2</b> x: Solid
Date Collected: 07/15/22 13:35						Lab Sar		
Client Sample ID: PH06A Date Collected: 07/15/22 13:35 Date Received: 07/18/22 12:12 Sample Depth: 1'						Lab Sar		
Date Collected: 07/15/22 13:35 Date Received: 07/18/22 12:12	: Compounds (	GC)				Lab Sar		
Date Collected: 07/15/22 13:35 Date Received: 07/18/22 12:12 Sample Depth: 1'		( <mark>GC)</mark> Qualifier	RL	Unit	D	Lab Sar		
Date Collected: 07/15/22 13:35 Date Received: 07/18/22 12:12 Sample Depth: 1' Method: 8021B - Volatile Organic		Qualifier	<b>RL</b> 0.00200	<u>Unit</u>	<u>D</u>		Matri	x: Solid
Date Collected: 07/15/22 13:35 Date Received: 07/18/22 12:12 Sample Depth: 1' Method: 8021B - Volatile Organic Analyte	Result	Qualifier			D	Prepared	Analyzed	x: Solid

Ethylbenzene <0.00200 U 0.00200 mg/Kg 07/21/22 09:25 07/21/22 19:55 m-Xylene & p-Xylene < 0.00399 U 0.00399 07/21/22 09:25 07/21/22 19:55 mg/Kg 1 07/21/22 09:25 <0.00200 U 0.00200 07/21/22 19:55 o-Xylene mg/Kg 1 <0.00399 U 0.00399 07/21/22 09:25 07/21/22 19:55 Xylenes, Total mg/Kg 1 Limits Surrogate %Recovery Qualifier Prepared Analyzed Dil Fac 4-Bromofluorobenzene (Surr) 70 - 130 07/21/22 09:25 07/21/22 19:55 114

**Eurofins Carlsbad** 

Result Qualifier

U

Qualifier

Qualifier

U

Result Qualifier

<50.0 U

<0.00200 U

<0.00200 U

<0.00200 U

<0.00200 U

<0.00401 U

122

99

Result

< 0.00401

%Recovery

<0.00401

Released to Imaging: 11/22/2022 11:30:50 AM

7/25/2022

# **Client Sample Results**

Job ID: 890-2574-1 SDG: 03E1558015

# Lab Sample ID: 890-2574-2

Matrix: Solid

Date Collected: 07/15/22 13:35 Date Received: 07/18/22 12:12

Project/Site: PLU 15 TWR

**Client Sample ID: PH06A** 

Sample Depth: 1'

Client: Ensolum

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1,4-Difluorobenzene (Surr)	92		70 - 130			07/21/22 09:25	07/21/22 19:55	
Method: Total BTEX - Total BTEX	<b>X</b> Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00399	U	0.00399	mg/Kg			07/22/22 16:06	
Method: 8015 NM - Diesel Range	Organics (DR	0) (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Fotal TPH	<49.9	U	49.9	mg/Kg			07/21/22 13:53	
Method: 8015B NM - Diesel Ran	ne Organics (D							
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics	<49.9	U	49.9	mg/Kg		07/20/22 15:31	07/21/22 03:02	
GRO)-C6-C10								
Diesel Range Organics (Over	<49.9	U	49.9	mg/Kg		07/20/22 15:31	07/21/22 03:02	
C10-C28)	-10.0		49.9	malla		07/00/00 15:04	07/04/00 00.00	
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		07/20/22 15:31	07/21/22 03:02	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane			70 - 130			07/20/22 15:31	07/21/22 03:02	
p-Terphenyl	128		70 - 130			07/20/22 15:31	07/21/22 03:02	
Method: 300.0 - Anions, Ion Chr	omatography -	Soluble						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	24.9		5.04	mg/Kg			07/22/22 13:36	
lient Sample ID: PH06B						l ah San	nple ID: 890-	2574-'
ate Collected: 07/15/22 13:55								x: Soli

#### Sample Depth: 3'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000398	U	0.000398	mg/Kg		07/21/22 09:25	07/21/22 20:21	1
Toluene	<0.000398	U	0.000398	mg/Kg		07/21/22 09:25	07/21/22 20:21	1
Ethylbenzene	<0.000398	U	0.000398	mg/Kg		07/21/22 09:25	07/21/22 20:21	1
m-Xylene & p-Xylene	<0.000795	U	0.000795	mg/Kg		07/21/22 09:25	07/21/22 20:21	1
o-Xylene	<0.000398	U	0.000398	mg/Kg		07/21/22 09:25	07/21/22 20:21	1
Xylenes, Total	<0.000795	U	0.000795	mg/Kg		07/21/22 09:25	07/21/22 20:21	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	121		70 - 130			07/21/22 09:25	07/21/22 20:21	1
1,4-Difluorobenzene (Surr)	105		70 - 130			07/21/22 09:25	07/21/22 20:21	1
- Method: Total BTEX - Total B	<b>FEX Calculation</b>							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.000795	U	0.000795	mg/Kg			07/22/22 16:06	1
- Method: 8015 NM - Diesel Rar	nge Organics (DR	O) (GC)						
Analyte	• • •	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			07/21/22 13:53	1

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5

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

Method: 300.0 - Anions, Ion Chromatography - Soluble

Result Qualifier

<49.9 U

<49.9 U

<49.9 U

%Recovery Qualifier

102

113

34.8

Result Qualifier

## **Client Sample Results**

RL

49.9

49.9

49.9

RL

4.95

Limits

70 - 130

70 - 130

Unit

mg/Kg

mg/Kg

mg/Kg

Unit

mg/Kg

D

D

Prepared

07/20/22 15:31

07/20/22 15:31

07/20/22 15:31

Prepared

07/20/22 15:31

07/20/22 15:31

Prepared

Job ID: 890-2574-1 SDG: 03E1558015

# Client Sample ID: PH06B

Project/Site: PLU 15 TWR

Client: Ensolum

Sample Depth: 3'

Gasoline Range Organics

Diesel Range Organics (Over

Oll Range Organics (Over C28-C36)

Analyte

C10-C28)

Surrogate 1-Chlorooctane

o-Terphenyl

Analyte

Chloride

(GRO)-C6-C10

Date Collected: 07/15/22 13:55 Date Received: 07/18/22 12:12

#### Lab Sample ID: 890-2574-3 Matrix: Solid

Analyzed

07/21/22 03:23

07/21/22 03:23

07/21/22 03:23

Analyzed

07/21/22 03:23

07/21/22 03:23

Analyzed

07/22/22 12:50

Matrix: Solid

Dil Fac

1

1

1

1

1

Dil Fac

Dil Fac

8	
9	

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#### Job ID: 890-2574-1 SDG: 03E1558015

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

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# 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
890-2566-A-1-G MS	Matrix Spike	83	100		
890-2566-A-1-H MSD	Matrix Spike Duplicate	109	99		6
890-2574-1	PH06	122	99		
890-2574-2	PH06A	114	92		
890-2574-3	PH06B	121	105		
LCS 880-30208/1-A	Lab Control Sample	96	97		8
LCSD 880-30208/2-A	Lab Control Sample Dup	109	92		U
MB 880-30208/5-A	Method Blank	79	95		0
					9
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)
880-17129-A-13-E MS	Matrix Spike	82	85
880-17129-A-13-F MSD	Matrix Spike Duplicate	81	85
890-2574-1	PH06	102	112
890-2574-2	PH06A	117	128
890-2574-3	PH06B	102	113
LCS 880-30164/2-A	Lab Control Sample	102	114
MB 880-30164/1-A	Method Blank	137 S1+	153 S1+

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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

=				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID			
LCSD 880-30164/3-A	Lab Control Sample Dup			
Surrogate Legend				
1CO = 1-Chlorooctane				

OTPH = o-Terphenyl

# **QC Sample Results**

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

Prep Batch: 30208

**Client Sample ID: Method Blank** 

Client Sample ID: Lab Control Sample

Client Sample ID: Lab Control Sample Dup

# Lab Sample ID: MB 880-30208/5-A

Matrix: Solid alveis Batch: 30101

Analysis Batch: 30191							Prep Batch	n: <b>30208</b>
	MB	МВ						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:25	07/21/22 12:04	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:25	07/21/22 12:04	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:25	07/21/22 12:04	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/21/22 09:25	07/21/22 12:04	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:25	07/21/22 12:04	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/21/22 09:25	07/21/22 12:04	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	79		70 - 130			07/21/22 09:25	07/21/22 12:04	1
1,4-Difluorobenzene (Surr)	95		70 - 130			07/21/22 09:25	07/21/22 12:04	1

#### Lab Sample ID: LCS 880-30208/1-A Matrix: Solid

#### Analysis Batch: 30191

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09280		mg/Kg		93	70 - 130	
Toluene	0.100	0.09172		mg/Kg		92	70 - 130	
Ethylbenzene	0.100	0.09500		mg/Kg		95	70 - 130	
m-Xylene & p-Xylene	0.200	0.1827		mg/Kg		91	70 - 130	
o-Xylene	0.100	0.09784		mg/Kg		98	70 - 130	

	LCS LC	cs	
Surrogate	%Recovery Q	ualifier	Limits
4-Bromofluorobenzene (Surr)	96		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

#### Lab Sample ID: LCSD 880-30208/2-A

#### Matrix: Solid Junio Potol

Analysis Batch: 30191							Prep	Batch:	30208
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09320		mg/Kg		93	70 - 130	0	35
Toluene	0.100	0.09504		mg/Kg		95	70 - 130	4	35
Ethylbenzene	0.100	0.09691		mg/Kg		97	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.1873		mg/Kg		94	70 - 130	2	35
o-Xylene	0.100	0.1033		mg/Kg		103	70 - 130	5	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	109		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

#### Lab Sample ID: 890-2566-A-1-G MS Matrix: Solid

#### alucia Rotabi 20101

Analysis Batch: 30191									Pre	Batch: 30208
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.0535		0.0998	0.07076	F1	mg/Kg		17	70 - 130	
Toluene	0.0607		0.0998	0.06762	F1	mg/Kg		7	70 - 130	

**Eurofins Carlsbad** 

Prep Type: Total/NA

**Client Sample ID: Matrix Spike** 

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# Released to Imaging: 11/22/2022 11:30:50 AM

Lab Sample ID: 890-2566-A-1-G MS

# QC Sample Results

MS MS

0.07426 F1

0.1436 F1

0.07377 F1

**Result Qualifier** 

Unit

mg/Kg

mg/Kg

mg/Kg

Spike

Added

0.0998

0.200

0.0998

Limits

70 - 130

70 - 130

70 - 130

Client: Ensolum Project/Site: PLU 15 TWR

Analysis Batch: 30191

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

Matrix: Solid

Analyte

o-Xylene

Surrogate

Ethylbenzene

m-Xylene & p-Xylene

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

Sample Sample

MS MS

83

100

99

Qualifier

Qualifier

Result

0.191

0.0103

0.0397

%Recovery

Job ID: 890-2574-1 SDG: 03E1558015

# **Client Sample ID: Matrix Spike** Prep Type: Total/NA Prep Batch: 30208 7 17 35

70 - 130		
70 - 130		
Matrix Sp	iko Dun	licato
Dron I	ype: Tot	
	Batch:	
Prep		30208
Prep %Rec	Batch:	30208 RPD
Prep %Rec Limits	Batch:	30208 RPD Limit
Prep %Rec Limits 70 - 130 70 - 130 70 - 130	Batch: 21 21 22 17	30208 RPD Limit 35

Client Sample ID: Matrix Spike Duplica
Prep Type: Total/
Duran Databa 200

%Rec

Limits

70 - 130

%Rec

-117

67

34

D

#### Lab Sample ID: 890-2566-A-1-H MSD Matrix: Solid

Analysis Batch: 30191 Sample Sample Spike MSD MSD %Rec Result Qualifier Result Qualifier Analyte Added %Rec Limits Unit D Benzene 0.0535 0.0994 0.08725 F1 mg/Kg 34 70 - 13 70 - 13 Toluene 0.0607 0.0994 0.08422 F1 mg/Kg 24 Ethylbenzene 0.0994 0.08803 F1 -104 70 - 13 0.191 mg/Kg m-Xylene & p-Xylene 0.0103 0.199 0.1708 mg/Kg 81 70 - 130 0.09152 F1 0.0994 70 - 130 21 35 o-Xylene 0.0397 mg/Kg 52 MSD MSD Surrogate Qualifier Limits %Recovery 70 - 130 4-Bromofluorobenzene (Surr) 109

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

Lab Sample ID: MB 880-30164/1-A Matrix: Solid Analysis Batch: 30098						Client Sa	mple ID: Metho Prep Type: 1 Prep Batch	otal/NA
	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		07/20/22 15:31	07/20/22 20:42	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		07/20/22 15:31	07/20/22 20:42	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/20/22 15:31	07/20/22 20:42	1
	MB	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	137	S1+	70 - 130			07/20/22 15:31	07/20/22 20:42	1
o-Terphenyl	153	S1+	70 - 130			07/20/22 15:31	07/20/22 20:42	1
Lab Sample ID: LCS 880-30164/2-A					c	lient Sample I	D: Lab Control	Sample
Matrix: Solid						· · · · ·	Prep Type: 1	Total/NA

#### Matrix: Solid Analysis Batch: 30098

Analysis Batch: 30098							Prep	Batch: 30164
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	1206		mg/Kg		121	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	882.5		mg/Kg		88	70 - 130	
C10-C28)								

# **QC Sample Results**

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

		<u> </u>	,,,,,,				<u></u>	• •			
Lab Sample ID: LCS 880-301	64/2-A						Client	Sample	ID: Lab C		
Matrix: Solid										Type: To	
Analysis Batch: 30098									Prep	Batch:	30164
	LCS	LCS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	102		70 - 130								
o-Terphenyl	114		70 - 130								
											_
Lab Sample ID: LCSD 880-30	164/3-A					Clier	nt San	ple ID: I	ab Contro		
Matrix: Solid										Type: To	
Analysis Batch: 30098			• •							Batch:	
			Spike		LCSD		_	~-	%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1236		mg/Kg					
Diesel Range Organics (Over			1000	871.6		mg/Kg					
C10-C28)				0.110							
	1.050	LCSD									
Summamoto			Lingita								
Surrogate 1-Chlorooctane	%Recovery	Quaimer	Limits								
o-Terphenyl											
Lab Sample ID: 880-17129-A-	-13-E MS							Client	Sample ID	: Matrix	Spike
Matrix: Solid									Prep	Type: To	tal/NA
Analysis Batch: 30098									Prep	Batch:	30164
		0									
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	-	Qualifier	Added	MS Result		Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics	-	Qualifier	-			_ <mark>Unit</mark> mg/Kg	<u>D</u>	% <b>Rec</b>			
Gasoline Range Organics (GRO)-C6-C10	Result <50.0	Qualifier U F2	Added	Result 1016		mg/Kg	<u>D</u>	102	Limits 70 - 130		
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result	Qualifier U F2	Added	Result			D		Limits		
Gasoline Range Organics (GRO)-C6-C10	Result <50.0	Qualifier U F2	Added	Result 1016		mg/Kg	<u>D</u>	102	Limits 70 - 130		
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result <50.0 <50.0	Qualifier U F2 U	Added	Result 1016		mg/Kg	<u>D</u>	102	Limits 70 - 130		
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	Result           <50.0	Qualifier U F2 U	Added 1000 1000 <i>Limits</i>	Result 1016		mg/Kg	<u>D</u>	102	Limits 70 - 130		
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane	Result           <50.0	Qualifier U F2 U	Added 1000 1000 <u>Limits</u> 70 - 130	Result 1016		mg/Kg	<u> </u>	102	Limits 70 - 130		
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	Result           <50.0	Qualifier U F2 U	Added 1000 1000 <i>Limits</i>	Result 1016		mg/Kg	<u>D</u>	102	Limits 70 - 130		
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl	Result           <50.0	Qualifier U F2 U	Added 1000 1000 <u>Limits</u> 70 - 130	Result 1016		mg/Kg		87	Limits 70 - 130 70 - 130		
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-17129-A-	Result           <50.0	Qualifier U F2 U	Added 1000 1000 <u>Limits</u> 70 - 130	Result 1016		mg/Kg		87	Limits 70 - 130 70 - 130		
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-17129-A- Matrix: Solid	Result           <50.0	Qualifier U F2 U	Added 1000 1000 <u>Limits</u> 70 - 130	Result 1016		mg/Kg		87	Limits 70 - 130 70 - 130 : Matrix S Prep	Туре: То	tal/NA
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-17129-A-	Result <50.0 <50.0 MS %Recovery 82 85 -13-F MSD	Qualifier U F2 U MS Qualifier	Added 1000 1000 <u>Limits</u> 70 - 130 70 - 130	Result 1016 868.3	Qualifier	mg/Kg		87	Limits 70 - 130 70 - 130 *: Matrix S Prep Prep		tal/NA 30164
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-17129-A- Matrix: Solid Analysis Batch: 30098	Result <50.0 <50.0 <i>MS</i> %Recovery 82 85 -13-F MSD Sample	Qualifier U F2 U MS Qualifier Sample	Added 1000 1000 <u>Limits</u> 70 - 130 70 - 130 Spike	Result 1016 868.3 MSD	Qualifier	mg/Kg mg/Kg Cli	ient S	ample ID	Limits 70 - 130 70 - 130 *: Matrix S Prep Prep %Rec	Type: To Batch:	tal/NA 30164 RPD
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-17129-A- Matrix: Solid Analysis Batch: 30098 Analyte	Result           <50.0	Qualifier U F2 U MS Qualifier Sample Qualifier	Added 1000 1000 <u>Limits</u> 70 - 130 70 - 130 70 - 130 Spike Added	Result 1016 868.3 MSD Result	Qualifier MSD Qualifier	mg/Kg mg/Kg Cli		102 87 ample ID	Limits 70 - 130 70 - 130 2: Matrix S Prep Prep %Rec Limits	Type: To Batch: 	tal/NA 30164 RPD Limit
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-17129-A- Matrix: Solid Analysis Batch: 30098 Analyte Gasoline Range Organics	Result <50.0 <50.0 <i>MS</i> %Recovery 82 85 -13-F MSD Sample	Qualifier U F2 U MS Qualifier Sample Qualifier	Added 1000 1000 <u>Limits</u> 70 - 130 70 - 130 Spike	Result 1016 868.3 MSD	Qualifier MSD Qualifier	mg/Kg mg/Kg Cli	ient S	ample ID	Limits 70 - 130 70 - 130 *: Matrix S Prep Prep %Rec	Type: To Batch:	tal/NA 30164 RPD
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-17129-A- Matrix: Solid Analysis Batch: 30098 Analyte	Result           <50.0	Qualifier U F2 U MS Qualifier Qualifier U F2	Added 1000 1000 <u>Limits</u> 70 - 130 70 - 130 70 - 130 Spike Added	Result 1016 868.3 MSD Result	Qualifier MSD Qualifier	mg/Kg mg/Kg Cli	ient S	102 87 ample ID	Limits 70 - 130 70 - 130 2: Matrix S Prep Prep %Rec Limits	Type: To Batch: 	tal/NA 30164 RPD Limit

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	81		70 - 130
o-Terphenyl	85		70 - 130

4 5 6

#### Job ID: 890-2574-1 SDG: 03E1558015

Client: Ensolum

Project/Site: PLU 15 TWR

# **QC Sample Results**

Job ID: 890-2574-1 SDG: 03E1558015

# Method: 300.0 - Anions, Ion Chromatography

_														
Lab Sample ID: MB 880-30059/1-A											<b>Client S</b>	ample ID:	Method	Blank
Matrix: Solid												Prep	Type: S	oluble
Analysis Batch: 30226														
		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				07/22/22	08:50	1
 Lab Sample ID: LCS 880-30059/2-A									Cli	ent	Sample	ID: Lab C	ontrol S	ample
Matrix: Solid												Prep	Type: S	oluble
Analysis Batch: 30226														
				Spike		LCS	LCS					%Rec		
Analyte				Added		Result	Qualifie	er Unit		D	%Rec	Limits		
Chloride				250		267.1		mg/Kg		_	107	90 _ 110		
- Lab Sample ID: LCSD 880-30059/3-	A							CI	ient S	Sam	ple ID: I	_ab Contro	ol Sampl	le Dup
Matrix: Solid											-		Type: S	
Analysis Batch: 30226														
-				Spike		LCSD	LCSD					%Rec		RPD
Analyte				Added		Result	Qualifie	er Unit		D	%Rec	Limits	RPD	Limit
Chloride				250		267.6		mg/Kg		_	107	90 - 110	0	20
- Lab Sample ID: 890-2573-A-1-B MS											Client	Sample ID	): Matrix	Spike
Matrix: Solid												Prep	Type: S	oluble
Analysis Batch: 30226														
-	Sample	Sample	le	Spike		MS	MS					%Rec		
Analyte	Result	Qualifi	ier	Added		Result	Qualifie	er Unit		D	%Rec	Limits		
Chloride	5.39	F1		249		277.7		mg/Kg		_	110	90 _ 110		
- Lab Sample ID: 890-2573-A-1-C MS	D								Clien	t Sa	ample ID	: Matrix S	pike Dur	olicate
Matrix: Solid											•		Type: S	
Analysis Batch: 30226														
-	Sample	Sample	le	Spike		MSD	MSD					%Rec		RPD
Analyte	Result	Qualifi	ier	Added		Result	Qualifie	er Unit		D	%Rec	Limits	RPD	Limit
Analyte	Roount					nooun				-	/ • • • • •			

# **QC Association Summary**

Client: Ensolum Project/Site: PLU 15 TWR

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Job ID: 890-2574-1 SDG: 03E1558015

### GC VOA

#### Analysis Batch: 30191

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2574-1	PH06	Total/NA	Solid	8021B	30208
890-2574-2	PH06A	Total/NA	Solid	8021B	30208
890-2574-3	PH06B	Total/NA	Solid	8021B	30208
MB 880-30208/5-A	Method Blank	Total/NA	Solid	8021B	30208
LCS 880-30208/1-A	Lab Control Sample	Total/NA	Solid	8021B	30208
LCSD 880-30208/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30208
890-2566-A-1-G MS	Matrix Spike	Total/NA	Solid	8021B	30208
890-2566-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30208

#### Prep Batch: 30208

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2574-1	PH06	Total/NA	Solid	5035	
890-2574-2	PH06A	Total/NA	Solid	5035	
890-2574-3	PH06B	Total/NA	Solid	5035	
MB 880-30208/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30208/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30208/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2566-A-1-G MS	Matrix Spike	Total/NA	Solid	5035	
890-2566-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2574-1	PH06	Total/NA	Solid	Total BTEX	
890-2574-2	PH06A	Total/NA	Solid	Total BTEX	
890-2574-3	PH06B	Total/NA	Solid	Total BTEX	

### GC Semi VOA

#### Analysis Batch: 30098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2574-1	PH06	Total/NA	Solid	8015B NM	30164
890-2574-2	PH06A	Total/NA	Solid	8015B NM	30164
890-2574-3	PH06B	Total/NA	Solid	8015B NM	30164
MB 880-30164/1-A	Method Blank	Total/NA	Solid	8015B NM	30164
LCS 880-30164/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30164
LCSD 880-30164/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30164
880-17129-A-13-E MS	Matrix Spike	Total/NA	Solid	8015B NM	30164
880-17129-A-13-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30164

#### Prep Batch: 30164

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2574-1	PH06	Total/NA	Solid	8015NM Prep	
890-2574-2	PH06A	Total/NA	Solid	8015NM Prep	
890-2574-3	PH06B	Total/NA	Solid	8015NM Prep	
MB 880-30164/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30164/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30164/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-17129-A-13-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-17129-A-13-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

#### Received by OCD: 8/10/2022 10:53:56 AM

**QC Association Summary** 

Client: Ensolum Project/Site: PLU 15 TWR

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Job ID: 890-2574-1 SDG: 03E1558015

# GC Semi VOA

## Analysis Batch: 30274

Lab Sample ID 890-2574-1	Client Sample ID PH06	Prep Type Total/NA	Matrix Solid	Method 8015 NM	Prep Batch
890-2574-2	PH06A	Total/NA	Solid	8015 NM	
890-2574-3	PH06B	Total/NA	Solid	8015 NM	

## HPLC/IC

#### Leach Batch: 30059

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	8
890-2574-1	PH06	Soluble	Solid	DI Leach		
890-2574-2	PH06A	Soluble	Solid	DI Leach		0
890-2574-3	PH06B	Soluble	Solid	DI Leach		3
MB 880-30059/1-A	Method Blank	Soluble	Solid	DI Leach		
LCS 880-30059/2-A	Lab Control Sample	Soluble	Solid	DI Leach		
LCSD 880-30059/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach		
890-2573-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach		
890-2573-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach		
Analysis Batch: 30226						
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	13
890-2574-1	PH06	Soluble	Solid	300.0	30059	

#### Analysis Batch: 30226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2574-1	PH06	Soluble	Solid	300.0	30059
890-2574-2	PH06A	Soluble	Solid	300.0	30059
890-2574-3	PH06B	Soluble	Solid	300.0	30059
MB 880-30059/1-A	Method Blank	Soluble	Solid	300.0	30059
LCS 880-30059/2-A	Lab Control Sample	Soluble	Solid	300.0	30059
LCSD 880-30059/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30059
890-2573-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30059
890-2573-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30059

5

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Job ID: 890-2574-1 SDG: 03E1558015

# Lab Sample ID: 890-2574-1 Matrix: Solid

Lab Sample ID: 890-2574-2

Lab Sample ID: 890-2574-3

Matrix: Solid

Matrix: Solid

Date Collected: 07/15/22 13:30 Date Received: 07/18/22 12:12

**Client Sample ID: PH06** 

Project/Site: PLU 15 TWR

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			4.99 g	5 mL	30208	07/21/22 09:25	MR	XEN MID
Total/NA	Analysis	8021B		1			30191	07/21/22 19:29	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30442	07/22/22 16:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30274	07/21/22 13:53	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	30164	07/20/22 15:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30098	07/21/22 02:21	SM	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	30059	07/19/22 11:04	СН	XEN MID
Soluble	Analysis	300.0		1			30226	07/22/22 12:40	SMC	XEN MID

# Client Sample ID: PH06A

# Date Collected: 07/15/22 13:35

Date Received: 07/18/22 12:12

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	30208	07/21/22 09:25	MR	XEN MID
Total/NA	Analysis	8021B		1			30191	07/21/22 19:55	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30442	07/22/22 16:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30274	07/21/22 13:53	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	30164	07/20/22 15:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30098	07/21/22 03:02	SM	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	30059	07/19/22 11:04	СН	XEN MID
Soluble	Analysis	300.0		1			30226	07/22/22 13:36	SMC	XEN MID

# Client Sample ID: PH06B Date Collected: 07/15/22 13:55

#### Date Received: 07/18/22 12:12

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	30208	07/21/22 09:25	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	1.0 mL	30191	07/21/22 20:21	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30442	07/22/22 16:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30274	07/21/22 13:53	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	30164	07/20/22 15:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30098	07/21/22 03:23	SM	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	30059	07/19/22 11:04	СН	XEN MID
Soluble	Analysis	300.0		1			30226	07/22/22 12:50	SMC	XEN MID

#### Laboratory References:

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

Client: Ensolum Project/Site: PLU 15 TWR

Laboratory: Eurofins Midland

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

hority		rogram	Identification Number	Expiration Date
as	N	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 v
the agency does not o	fer certification.			
• •	• •	Matrix	Analyte	
the agency does not o	fer certification.	Matrix Solid	Analyte Total TPH	

10

Job ID: 890-2574-1

SDG: 03E1558015

# **Method Summary**

Client: Ensolum Project/Site: PLU 15 TWR Job ID: 890-2574-1 SDG: 03E1558015

Method	Method Description	Protocol	Laboratory
3021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

#### Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions. SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

Client: Ensolum Project/Site: PLU 15 TWR

#### Job ID: 890-2574-1 SDG: 03E1558015

ab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth	
90-2574-1	PH06	Solid	07/15/22 13:30	07/18/22 12:12	0.5'	4
90-2574-2	PH06A	Solid	07/15/22 13:35	07/18/22 12:12	1'	
90-2574-3	PH06B	Solid	07/15/22 13:55	07/18/22 12:12	3'	5
						8
						9
						12
						1:

	Environment Testing Xenco	rt Testing	Midland, TX ( EL Paso, TX Hobbs, NM I	idland, TX (432) 704-5440, San Antonio, TX (210) 509-333 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	Work	Work Order No:	
Project Manager: Ben Belill	elill	8	Bill to: (if different)	Garrett Green		WWW	Work Order Comments	of
	Ensolum, LLC	0	Company Name:	XTO Energy, Inc.		Program: UST/PST	Program: UST/PST 🔲 PRP 🗌 Brownfields 🗌 RRC 🔲 Superfund 🗌	Superfund
	3122 National parks Hwy	Ac	Address:	3104 E. Green Street	reet	State of Project:		
e ZIP:	Carlsbad, NM 88220	0	City, State ZIP:	Carlsbad, NM 88220	20	Reporting: Level II Lev	Reporting: Level II  Level II  PST/UST  TRRP	
	40852	Email: bt	Email: bbelill@ensolum.com	Ä		Deliverables: EDD	ADaPT  Other:	
Project Name:	PLU 15 TWR	Turn Around	round		ANALYSIS REQUEST	QUEST	Preservative Codes	Codes
Project Number:	03E1558015	✓ Routine [	Rush Code				None: NO	DI Water: H <sub>2</sub> O
Project Location:	EDDY COUNTY, NM	Due Date:					Cool: Cool N	MeOH: Me
	Conner Shore	TAT starts the day received by	ay received by					HNO3: HN
PO #:		the lab, if received by 4:30pm	l				H <sub>2</sub> S0 <sub>4</sub> : H <sub>2</sub> N	NaOH: Na
SAMPLE RECEIPT	Temp Blank: Yes	Yes No Wet Ice: (	Yes No nete	.0)			H <sub>3</sub> PO <sub>4</sub> : HP	
Samples Received Intact:		Thermometer ID:		300			NaHSO4: NABIS	
-	ANA		P.P.P.	PA:			Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub>	
Sample Custody Seals:	Yes No' WA Temp	Temperature Reading:	0.0		890-2574 Chain of Custody	stody	Zn Acetate+NaUH: Zn	2n
		Date Time	_	801		-		
			Giaci	ILO H (8			Sample Lor	nments
PH06		d Sampled		CHLO TPH (8 BTEX			Sample Cor	nments
PH06A	0 1710	Sampled	Comp Grab/	× Сніо × трн (8			sample cor	nments
PH06B		Sampled 1360 1335	Comp Grab/ Grab/	× × Chlo × × Tph (8			Sample cor	nments
PH06C		Sampled 1360 1355 1355	0.5 Grab/ 1 Grab/ Grab/ Grab/	$\frac{1}{2} \times \frac{1}{2} \times \frac{1}$			Sample cor	nments
		Sampled 1320 1325 1355 1355 1400 1400	Pepth         Comp           0.5         Grab/           1'         Grab/           Grab/         Grab/	× × × × CHLO			HOLD Pending	3' sample
		Sampled 1320 1325 1355 1400 1400	Appth Comp 0.5 Grab/ 1 Grab/ Grab/ Grab/	×     ×     ×     CHLO       ×     ×     ×     ×			*HOLD Pending Cost Center: 20	nments 3' sample 27711001
		Sampled 1320 1325 1355 1355 1400 1400	bepth Comp 0.5 Grab/ 1 Grab/ Grab/ Grab/	×         ×         ×         ×         CHLO           ×         ×         ×         ×         ×         ×         reprint			HOLD Pending Cost Center: 20	nments 3' sample )27711001 mbers:
6		Sampled 1320 1320 1325 1355 1355 1400	Appth Comp 0.5 Grab/ 1 ' Grab/ Grab/ Grab/	×         ×         ×         ×         CHLO           ×         ×         ×         ×         ×         TPH (integration of the integration of the integrated of the integrated of the integrated of the inte			*HOLD Pending Cost Center: 20 Incident Nu nAPP22056	nments
		Sampled 1320 1320 1325 1355 1400 1400	0.5 Grab/ 1 Grab/ Grab/ Grab/				*HOLD Pending *HOLD Pending Cost Center: 20 Incident Nu nAPP22077	nments 3' sample )27711001 mbers: 38843, 38843,
Circle Method(s) and Metal(s) to be analyzed		Sampled 1320 1320 1325 1355 1400 1400	Taxas 11 Al					nments 3' sample 327711001 927711001 927711001 92771301 92771301
Notice: Signature of this document	S 7/15 S	RO DO DO DO DO DO	Jepth         Comp         Comp         Comp           0.5         Grab/         1         1         Grab/         1           Grab/         1         1         Grab/         1         1           Grab/         1	Sb As Ba Be B Be B Sb As	Cd Ca Cr Co Cu Fe Pt		Ag SiO <sub>2</sub> Na Sr TI Sn U V Zn Hg: 1631 / 245.1 / 7470	mments 3 'sample 027711001 027711001 038843, 038843, 746719 746719
	S 7/15 S	appled         Sampled           5/2022         /3.6           5/2022         /3.5           5/2022         /3.5           5/2022         /3.5           5/2022         /3.5           5/2022         /3.5           5/2022         /4.0           6/2022         /4.0           6/2022         /4.0           4         4           5/2022         1.40           4         4           5/2022         1.40           4         4           5/2022         1.40           4         4           5/2023         4           5/2024         4           5/2025         3           5/2022         1.40           4         4           5/2023         4           5/2024         4           5/2025         4           5/2024         4           5/2025         4           5/2024         4           5/2025         4           5/2024         4           5/2025         4           5/2024         4           5/2024	ampled Depth Comp Cont 3360 0.5 Grab/ 1 3555 3' Grab/ 1 3555 3' Grab/ 1 360 4' Grab/ 1 100 4' Gr	Sb As Ba Be B Sb As Ba Be B Sb As Ba Be C Sb As Ba Be C	Sample Identification       Matrix       Date Sampled       Time Sampled       Depth Sampled       Grap Comp	Mg Mn Mo Ni K Se Ag SiO     Ni Se Ag TI U     Hg: 16     Ni Se ag TI U     Hg: 16		nments 3' sample 127711001 127711001 127711001 127711001 12771 10771 1
of Eurofins Xenco. A minimum chi Relinquished hv: (Sign:	3         7/15           S         7/15	spiled         Sampled           5/2022         /3.6           5/2022         /3.6           5/2022         /3.6           5/2022         /3.6           5/2022         /3.6           5/2022         /3.6           5/2022         /3.6           5/2022         /3.6           5/2022         /3.6           5/2022         /3.6           5/2022         /3.6           5/2022         /3.6           5/2022         /3.6           5/2022         /3.6           5/2022         /3.6           5/2022         /4.0           6         4           6         5           7         5           7         5           7         4           6         5           7         5           7         5           8         7           9         5           9         5           9         5           9         5           9         5           9         5           9         5           9 </td <td>Jepth     Comp     Comp       0.5     Grab/     1       1'     Grab/     1       Grab/     1     1       Grab/     1     1       Grab/     1     1       Brab/     1     1       Grab/     1     1       Hono     R     1       Hono     R     1       Hono     R     1       Grab     1     1       Hono     1     1   <!--</td--><td>Sb As Ba Be B Sb As Ba Be B Sb As Ba Be B Sb As Ba Be C Sb As Ba Ba Be C Sb As Ba Ba</td><td></td><td>Mg Mn Mo Ni K Se / Ni Se Ag Ti U Ni Se Ag Ti U s will be enforced unless previous s will be enforced unless previous</td><td></td><td>nments 3' sample 27711001 mbers: 38843, 38843, 46719 Zn 71 2n 71</td></td>	Jepth     Comp     Comp       0.5     Grab/     1       1'     Grab/     1       Grab/     1     1       Grab/     1     1       Grab/     1     1       Brab/     1     1       Grab/     1     1       Hono     R     1       Hono     R     1       Hono     R     1       Grab     1     1       Hono     1     1 </td <td>Sb As Ba Be B Sb As Ba Be B Sb As Ba Be B Sb As Ba Be C Sb As Ba Ba Be C Sb As Ba Ba</td> <td></td> <td>Mg Mn Mo Ni K Se / Ni Se Ag Ti U Ni Se Ag Ti U s will be enforced unless previous s will be enforced unless previous</td> <td></td> <td>nments 3' sample 27711001 mbers: 38843, 38843, 46719 Zn 71 2n 71</td>	Sb As Ba Be B Sb As Ba Be B Sb As Ba Be B Sb As Ba Be C Sb As Ba Ba Be C Sb As Ba		Mg Mn Mo Ni K Se / Ni Se Ag Ti U Ni Se Ag Ti U s will be enforced unless previous s will be enforced unless previous		nments 3' sample 27711001 mbers: 38843, 38843, 46719 Zn 71 2n 71
Relinquished by: (Signature)	S 7/16 S	ampled     Sampled       15/2022     /3.6 o       15/2022     /3.5 S       15/2022     /3.5 S       15/2022     /3.6 S       15/2022     /40.0 4'       15/2022     /40.0 4'       15/2022     /40.0 4'       15/2022     140.0 4'       16/2024     150.0 4'       16/2024     150.0 4'       17/2024     140.0 4'       16/2024     160.0 4'       16/2024 </td <td>Jepth     Comp     Comp       0.5     Grab/     1       1'     Grab/     1       Grab/     1     1&lt;</td> <td>Sb As Ba Be B Sb As Ba Be B Sb As Ba Be C Sb As Ba Ba</td> <td>Cd Ca Cr Co Cu Fe Pb Mg Cd Ca Cr Co Cu Fe Pb Mg Cd Cr Co Cu Pb Mn Ni C Cd Cr Co Cu Pb Mn Ni Ni C Cd Cr Co Cu Pb Mn Ni Ni C Cd Cr Co Cu Pb Mn Ni C Cr Co Cu Pb Mn Ni C Cd Cr Co Cu Pb Mn Ni Ch Ch Cu Pb Mn Ni C Cd Cr Co Cu Pb Mn Ni Ch Ch Ch</td> <td>Mg Mn Mo Ni K Se / Ni Se Ag Tl U Ni Se Ag Tl U s will be enforced unless previous s will be enforced unless previous</td> <td></td> <td>Comments ling 3' sample :: 2027711001 V Zn 07746719 07746719 Date/Time</td>	Jepth     Comp     Comp       0.5     Grab/     1       1'     Grab/     1       Grab/     1     1<	Sb As Ba Be B Sb As Ba Be B Sb As Ba Be C Sb As Ba	Cd Ca Cr Co Cu Fe Pb Mg Cd Ca Cr Co Cu Fe Pb Mg Cd Cr Co Cu Pb Mn Ni C Cd Cr Co Cu Pb Mn Ni Ni C Cd Cr Co Cu Pb Mn Ni Ni C Cd Cr Co Cu Pb Mn Ni C Cr Co Cu Pb Mn Ni C Cd Cr Co Cu Pb Mn Ni Ch Ch Cu Pb Mn Ni C Cd Cr Co Cu Pb Mn Ni Ch Ch	Mg Mn Mo Ni K Se / Ni Se Ag Tl U Ni Se Ag Tl U s will be enforced unless previous s will be enforced unless previous		Comments ling 3' sample :: 2027711001 V Zn 07746719 07746719 Date/Time
II-s munder Veran A minimum chi	S 7/15 S	npled         Sampled           5/2022         /3.6           5/2022         /3.5           5/2022         /3.5           5/2022         /3.5           5/2022         /3.5           5/2022         /3.5           5/2022         /4.0           6/2022         /4.0           6/2022         /4.0           6/2022         /4.0           6/2022         /4.0           6/2022         /4.0           6/2022         /4.0           6/2022         /4.0           6/2022         /4.0           6/2022         /4.0           6/2022         /4.0           6/2023         4           7/2024         4           7/2024         4           7/2024         4           7/2024         4           7/2024         4           7/2024         4           7/2024         4           7/2024         4           7/2024         4           7/2024         4           7/2024         4           7/2024         4           7/2024         4	Depth     Comp     Comp       0.5     Grab/     1       1     Grab/     1       Grab/     1     1       Grab/     1     1       Hase order from offent channel     1	Sb As Ba Be B Sb As Ba Be B Sb As Ba Be C Sb As Ba Be C	Cd Ca Cr Co Cu Pb Mn Mo	Mg Mn Mo Ni K Se A Ni Se Ag TI U		Sample Comments *HOLD Pending 3' sample Cost Center: 2027711001 Incident Numbers: nAPP2205638643, nAPP2207746719 Sr TI Sn U V Zn 45.1/7470 /7471

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eurofins

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

Job Number: 890-2574-1 SDG Number: 03E1558015

List Source: Eurofins Carlsbad

# Login Sample Receipt Checklist

Client: Ensolum

#### Login Number: 2574 List Number: 1 Creator: Stutzman, Amanda

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

14

Job Number: 890-2574-1 SDG Number: 03E1558015

List Source: Eurofins Midland

List Creation: 07/19/22 11:13 AM

# Login Sample Receipt Checklist

Client: Ensolum

Login Number: 2574 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").

14

Received by OCD: 8/10/2022 10:53:56 AM

LINKS

Review your project results through

EOL

Have a Question?

www.eurofinsus.com/Env

Released to Imaging: 11/22/2022 11:30:50 AM

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Ask— The Expert

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# Environment Testing America

# **ANALYTICAL REPORT**

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

# Laboratory Job ID: 890-2575-1

Laboratory Sample Delivery Group: 03E1558015 Client Project/Site: PLU 15 TWR

# For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

RAMER

Authorized for release by: 7/25/2022 8:04:33 AM Jessica Kramer, Project Manager (432)704-5440 Jessica.Kramer@et.eurofinsus.com

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

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

Laboratory Job ID: 890-2575-1 SDG: 03E1558015

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QC Sample Results	9
QC Association Summary	13
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	Definitions/Glossary						
Client: Ensolur	····						
Project/Site: P	2LU 15 TWR SDG: 03E1558015						
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	N Contraction of the second						
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						
F1	MS and/or MSD recovery exceeds control limits.	9					
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	14					
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 report

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

NEGNegative / AbsentPOSPositive / 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

4

5

#### Job ID: 890-2575-1 SDG: 03E1558015

#### Job ID: 890-2575-1

Project/Site: PLU 15 TWR

Client: Ensolum

#### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-2575-1

#### Receipt

The samples were received on 7/18/2022 12:12 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.8°C

#### GC VOA

Method 8021B: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 880-30208 and analytical batch 880-30191 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.

#### GC Semi VOA

Method 8015MOD\_NM: The surrogate recovery for the blank associated with preparation batch 880-30164 and analytical batch 880-30098 was outside the upper control limits.

Method 8015MOD\_NM: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 880-30164 and analytical batch 880-30098 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

Method 300\_ORGFM\_28D: PH07 (890-2575-1), PH07A (890-2575-2), PH07B (890-2575-3) and (890-2573-A-1-C MSD) The matrix spike duplicate (MSD) recoveries for preparation batch 880-30059 and 880-30059 and analytical batch 880-30226 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.

Method: 8021B - Volatile Organic Compounds (GC)

Result Qualifier

<0.00202 U

<0.00202 U

RL

0.00202

0.00202

Unit

mg/Kg

mg/Kg

D

Prepared

07/21/22 09:25

07/21/22 09:25

Job ID: 890-2575-1 SDG: 03E1558015

# Client Sample ID: PH07

Project/Site: PLU 15 TWR

Date Collected: 07/15/22 14:40 Date Received: 07/18/22 12:12

Sample Depth: 0.5'

Client: Ensolum

Analyte

Benzene

Toluene

SDG: 03E155801

# Lab Sample ID: 890-2575-1

Analyzed

07/21/22 20:47

07/21/22 20:47

Matrix: Solid

Dil Fac

1

1

Toldene	-0.00202	0	0.00202	ing/itg		0112 1122 00.20	01/21/22 20.47	
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		07/21/22 09:25	07/21/22 20:47	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		07/21/22 09:25	07/21/22 20:47	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		07/21/22 09:25	07/21/22 20:47	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		07/21/22 09:25	07/21/22 20:47	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	122		70 - 130			07/21/22 09:25	07/21/22 20:47	1
1,4-Difluorobenzene (Surr)	96		70 - 130			07/21/22 09:25	07/21/22 20:47	1
Method: Total BTEX - Total BTEX	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			07/22/22 16:06	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			07/21/22 13:53	1
Method: 8015B NM - Diesel Rang	e Organics (D							
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics GRO)-C6-C10	<49.9	U	49.9	mg/Kg		07/20/22 15:31	07/21/22 03:44	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		07/20/22 15:31	07/21/22 03:44	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		07/20/22 15:31	07/21/22 03:44	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	102		70 - 130			07/20/22 15:31	07/21/22 03:44	1
p-Terphenyl	112		70 - 130			07/20/22 15:31	07/21/22 03:44	1
Method: 300.0 - Anions, Ion Chro	matography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24.3		5.00	mg/Kg			07/22/22 12:59	1
lient Sample ID: PH07A						Lab Sar	nple ID: 890-	2575-2
ate Collected: 07/15/22 14:45								x: Solid
ate Received: 07/18/22 12:12								
ample Depth: 1'								
<u> </u>								
Method: 8021B - Volatile Organic Analyte		( <mark>GC)</mark> Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	- Kesun <0.00201		0.00201	mg/Kg		07/21/22 09:25	07/21/22 21:12	1
Toluene	<0.00201		0.00201			07/21/22 09:25	07/21/22 21:12	1
				mg/Kg				
Ethylbenzene	<0.00201		0.00201	mg/Kg		07/21/22 09:25	07/21/22 21:12	1
m-Yulana & n-Yulana	<0.00/02	11	0.00402	ma/Ka		07/21/22 00.25	07/21/22 21.12	1

#### m-Xylene & p-Xylene <0.00402 U 0.00402 07/21/22 09:25 07/21/22 21:12 mg/Kg 1 0.00201 o-Xylene <0.00201 U 07/21/22 09:25 07/21/22 21:12 mg/Kg 1 Xylenes, Total <0.00402 U 0.00402 mg/Kg 07/21/22 09:25 07/21/22 21:12 1 %Recovery Qualifier Limits Prepared Dil Fac Surrogate Analyzed 4-Bromofluorobenzene (Surr) 118 70 - 130 07/21/22 09:25 07/21/22 21:12 1

# **Client Sample Results**

Job ID: 890-2575-1 SDG: 03E1558015

# Lab Sample ID: 890-2575-2

Matrix: Solid

5

Date Collected: 07/15/22 14:45 Date Received: 07/18/22 12:12

**Client Sample ID: PH07A** 

Project/Site: PLU 15 TWR

Sample Depth: 1'

Client: Ensolum

Total BTEX<0.00402	Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
AnalyteResultQualifierRLUnitDPreparedAnalyzedDil FTotal BTEX<0.00402U0.00402mg/KgDPreparedAnalyzedDil FMethod: 8015 NM - Diesel Range Organics (DRO) (GC)AnalyteResultQualifierRLUnitDPreparedAnalyzedDil FTotal TPH<49.9U49.9mg/Kg07/21/22 15.3107/21/22 13.53Dil FMethod: 8015B NM - Diesel Range Organics (DRO) (GC)AnalyteResultQualifierRLUnitDPreparedAnalyzedDil FGasoline Range Organics (Over<49.9U49.9mg/Kg07/20/22 15.3107/21/22 04:05Dil F(GRO)-C6-C10mg/Kg07/20/22 15.3107/21/22 04:05Dil FDiesel Range Organics (Over<49.9U49.9mg/Kg07/20/22 15.3107/21/22 04:05(GRO)-C6-C10 </th <th>1,4-Difluorobenzene (Surr)</th> <th>94</th> <th></th> <th>70 - 130</th> <th></th> <th></th> <th>07/21/22 09:25</th> <th>07/21/22 21:12</th> <th></th>	1,4-Difluorobenzene (Surr)	94		70 - 130			07/21/22 09:25	07/21/22 21:12	
Total BTEX<0.00402U0.00402mg/Kg07/22/22 16:06Method: 8015 NM - Diesel Range Organics (DRO) (GC) AnalyteResult QualifierQualifierRLUnitDPreparedAnalyzed 07/21/22 13:53Dil FMethod: 8015B NM - Diesel Range Organics (DRO) (GC) AnalyteResult QualifierQualifierRLUnitDPreparedAnalyzed 07/21/22 13:53Dil FMethod: 8015B NM - Diesel Range Organics (DRO) (GC) AnalyteResult QualifierRLUnitDPrepared 07/20/22 15:31Analyzed 07/21/22 04:05Dil FGasoline Range Organics (Over<49.9	Method: Total BTEX - Total BTEX	Calculation							
Method: 8015 NM - Diesel Range Organics (DRO) (GC) AnalyteResultQualifierRLUnitDPreparedAnalyzedDil FTotal TPH<49.9	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
AnalyteResultQualifierRLUnitDPreparedAnalyzedDil FTotal TPH<49.9	Total BTEX	<0.00402	U	0.00402	mg/Kg			07/22/22 16:06	
Total TPH         <49.9         U         49.9         mg/Kg         07/21/22 13:53           Method: 8015B NM - Diesel Range Organics (DRO) (GC)         Analyte         Result         Qualifier         RL         Unit         D         Prepared         Analyzed         Dil F           Gasoline Range Organics         <49.9	Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Method:8015B NM - Diesel Range Organics (DRO) (GC)AnalyteResultQualifierRLUnitDPreparedAnalyzedDil FGasoline Range Organics<49.9	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
AnalyteResultQualifierRLUnitDPreparedAnalyzedDil FGasoline Range Organics<49.9	Total TPH	<49.9	U	49.9	mg/Kg			07/21/22 13:53	
AnalyteResultQualifierRLUnitDPreparedAnalyzedDil FGasoline Range Organics<49.9	Method: 8015B NM - Diesel Rand	e Organics (D	RO) (GC)						
CRR0)-C6-C10       Diesel Range Organics (Over       <49.9				RL	Unit	D	Prepared	Analyzed	Dil Fa
Diesel Range Organics (Over       <49.9       U       49.9       mg/Kg       07/20/22 15:31       07/21/22 04:05         C10-C28)       OII Range Organics (Over C28-C36)       <49.9	Gasoline Range Organics	<49.9	U	49.9	mg/Kg		07/20/22 15:31	07/21/22 04:05	
C10-C28)       OII Range Organics (Over C28-C36)       <49.9	(GRO)-C6-C10								
Oll Range Organics (Over C28-C36)       <49.9       U       49.9       mg/Kg       07/20/22 15:31       07/21/22 04:05         Surrogate       %Recovery       Qualifier       Limits       Prepared       Analyzed       Dil F         1-Chlorooctane       98       70 - 130       07/20/22 15:31       07/21/22 04:05       Dil F         o-Terphenyl       107       70 - 130       07/20/22 15:31       07/21/22 04:05       Dil F         Method: 300.0 - Anions, lon Chromatography - Soluble       Malyte       Result       Qualifier       RL       Unit       D       Prepared       Analyzed       Dil F         Chloride       131       5.00       mg/Kg       D       Prepared       Analyzed       Dil F         Chloride       131       5.00       mg/Kg       D       Prepared       Analyzed       Dil F         Chloride       131       5.00       mg/Kg       D       Prepared       Analyzed       Dil F         Chloride       131       5.00       mg/Kg       D       Prepared       Analyzed       Dil F         Chloride       131       5.00       mg/Kg       D       Prepared       Analyzed       Dil F         Chloride       131       5.00		<49.9	U	49.9	mg/Kg		07/20/22 15:31	07/21/22 04:05	
Surrogate%RecoveryQualifierLimitsPreparedAnalyzedDil F1-Chlorooctane9870 - 13007/20/22 15:3107/21/22 04:05Dil Fo-Terphenyl10770 - 13007/20/22 15:3107/21/22 04:05Dil FMethod: 300.0 - Anions, lon Chromatography - SolubleAnalyteResultQualifierRLUnitDPreparedAnalyzedDil FChloride1315.00mg/KgDPreparedAnalyzedDil FCilient Sample ID: PH07BLab Sample ID: 890-2575	,								
1-Chlorooctane         98         70 - 130         07/20/22 15:31         07/21/22 04:05           o-Terphenyl         107         70 - 130         07/20/22 15:31         07/21/22 04:05           Method: 300.0 - Anions, Ion Chromatography - Soluble         07/20/22 15:31         07/21/22 04:05         07/20/22 15:31         07/21/22 04:05           Analyte         Result         Qualifier         RL         Unit         D         Prepared         Analyzed         Dil F           Chloride         131         5.00         mg/Kg         07/22/22 13:08         Dil F           Client Sample ID: PH07B         Lab Sample ID: 890-2575         Chioride         Dit R         Chioride         Dit R	Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		07/20/22 15:31	07/21/22 04:05	
o-Terphenyl       107       70 - 130       07/20/22 15:31       07/21/22 04:05         Method: 300.0 - Anions, Ion Chromatography - Soluble         Analyte       Result       Qualifier       RL       Unit       D       Prepared       Analyzed       Dil F         Chloride       131       5.00       mg/Kg       D       Prepared       Analyzed       Dil F         Chloride       131       5.00       mg/Kg       D       Prepared       Analyzed       Dil F         Chloride       131       5.00       mg/Kg       D       Prepared       Analyzed       Dil F	Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
Method: 300.0 - Anions, Ion Chromatography - Soluble         Analyte       Result       Qualifier       RL       Unit       D       Prepared       Analyzed       Dil F         Chloride       131       5.00       mg/Kg       07/22/22 13:08       Dil F         Client Sample ID: PH07B       Lab Sample ID: 890-2575-	1-Chlorooctane	98		70 - 130			07/20/22 15:31	07/21/22 04:05	
Chloride         131         5.00         mg/Kg         07/22/22 13:08           Client Sample ID: PH07B         Lab Sample ID: 890-2575	o-Terphenyl	107		70 - 130			07/20/22 15:31	07/21/22 04:05	
Chloride         131         5.00         mg/Kg         07/22/22 13:08           Client Sample ID: PH07B         Lab Sample ID: 890-2575	Method: 300.0 - Anions, Ion Chro	omatography -	Soluble						
Lab Sample ID: PH07B Lab Sample ID: 890-2575	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
	Chloride	131		5.00	mg/Kg			07/22/22 13:08	
ate Collected: 07/15/22 14:55 Matrix: Sol	lient Sample ID: PH07B						Lab San	nple ID: 890-	2575-3
	ate Collected: 07/15/22 14:55							-	
	ample Depth: 3'								

Method: 8021B - Volatile Orga	nic Compounds (	GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:25	07/21/22 21:38	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:25	07/21/22 21:38	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:25	07/21/22 21:38	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		07/21/22 09:25	07/21/22 21:38	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:25	07/21/22 21:38	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		07/21/22 09:25	07/21/22 21:38	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	124		70 - 130			07/21/22 09:25	07/21/22 21:38	1
1,4-Difluorobenzene (Surr)	93		70 - 130			07/21/22 09:25	07/21/22 21:38	1
- Method: Total BTEX - Total BT	EX Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			07/22/22 16:06	1
- Method: 8015 NM - Diesel Ran	ge Organics (DR	0) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			07/21/22 13:53	1

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Released to Imaging: 11/22/2022 11:30:50 AM

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

Method: 300.0 - Anions, Ion Chromatography - Soluble

Result Qualifier

<50.0 U

<50.0 U

<50.0 U

97

105

112

Result Qualifier

Qualifier

%Recovery

## **Client Sample Results**

RL

50.0

50.0

50.0

RL

5.05

Limits

70 - 130

70 - 130

Unit

mg/Kg

mg/Kg

mg/Kg

Unit

mg/Kg

D

D

Prepared

07/20/22 15:31

07/20/22 15:31

07/20/22 15:31

Prepared

07/20/22 15:31

07/20/22 15:31

Prepared

Job ID: 890-2575-1 SDG: 03E1558015

# Client Sample ID: PH07B

Project/Site: PLU 15 TWR

Client: Ensolum

Sample Depth: 3'

Gasoline Range Organics

Diesel Range Organics (Over

Oll Range Organics (Over C28-C36)

Analyte

C10-C28)

Surrogate 1-Chlorooctane

o-Terphenyl

Analyte

Chloride

(GRO)-C6-C10

Date Collected: 07/15/22 14:55 Date Received: 07/18/22 12:12

#### Lab Sample ID: 890-2575-3 Matrix: Solid

Analyzed

07/21/22 04:26

07/21/22 04:26

07/21/22 04:26

Analyzed

07/21/22 04:26

07/21/22 04:26

Analyzed

07/22/22 13:18

Matrix: Solid

Dil Fac

1

1

1

1

Dil Fac

# 4 5 7 8 9

1 Dil Fac 1

Page 216 of 255

#### Job ID: 890-2575-1 SDG: 03E1558015

Prep Type: Total/NA

Prep Type: Total/NA

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
890-2566-A-1-G MS	Matrix Spike	83	100		
890-2566-A-1-H MSD	Matrix Spike Duplicate	109	99		6
890-2575-1	PH07	122	96		
890-2575-2	PH07A	118	94		
890-2575-3	PH07B	124	93		
LCS 880-30208/1-A	Lab Control Sample	96	97		8
LCSD 880-30208/2-A	Lab Control Sample Dup	109	92		
MB 880-30208/5-A	Method Blank	79	95		0
Our sector is a second					3
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)
880-17129-A-13-E MS	Matrix Spike	82	85
880-17129-A-13-F MSD	Matrix Spike Duplicate	81	85
890-2575-1	PH07	102	112
890-2575-2	PH07A	98	107
890-2575-3	PH07B	97	105
LCS 880-30164/2-A	Lab Control Sample	102	114
MB 880-30164/1-A	Method Blank	137 S1+	153 S1+

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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

_				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID			
LCSD 880-30164/3-A	Lab Control Sample Dup			
Surrogate Legend				
1CO = 1-Chlorooctane				

OTPH = o-Terphenyl

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- --go #10 vj #

3
# Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-30208 Matrix: Solid Analysis Batch: 30191						Cheft Sa	mple ID: Metho Prep Type: 1 Prep Batch	Fotal/NA
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:25	07/21/22 12:04	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:25	07/21/22 12:04	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:25	07/21/22 12:04	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/21/22 09:25	07/21/22 12:04	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:25	07/21/22 12:04	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/21/22 09:25	07/21/22 12:04	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	79		70 - 130			07/21/22 09:25	07/21/22 12:04	1
1,4-Difluorobenzene (Surr)	95		70 - 130			07/21/22 09:25	07/21/22 12:04	1

#### Lab Sample ID: LCS 880-30208/1-A Matrix: Solid

#### Analysis Batch: 30191

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09280		mg/Kg		93	70 - 130	
Toluene	0.100	0.09172		mg/Kg		92	70 - 130	
Ethylbenzene	0.100	0.09500		mg/Kg		95	70 - 130	
m-Xylene & p-Xylene	0.200	0.1827		mg/Kg		91	70 - 130	
o-Xylene	0.100	0.09784		mg/Kg		98	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	96		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

### Lab Sample ID: LCSD 880-30208/2-A

#### Matrix: Solid

Analysis Batch: 30191							Prep	Batch:	30208
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09320		mg/Kg		93	70 - 130	0	35
Toluene	0.100	0.09504		mg/Kg		95	70 - 130	4	35
Ethylbenzene	0.100	0.09691		mg/Kg		97	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.1873		mg/Kg		94	70 - 130	2	35
o-Xylene	0.100	0.1033		mg/Kg		103	70 - 130	5	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	109		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

# Lab Sample ID: 890-2566-A-1-G MS

#### Matrix: Solid Analysia Pataby 20101

Analysis Batch: 30191									Prep	Batch: 30208
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.0535		0.0998	0.07076	F1	mg/Kg		17	70 - 130	
Toluene	0.0607		0.0998	0.06762	F1	mg/Kg		7	70 - 130	

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Job ID: 890-2575-1 SDG: 03E1558015

Prep Batch: 30208

Prep Type: Total/NA

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

**Client Sample ID: Matrix Spike** 

Client: Ensolum Project/Site: PLU 15 TWR

.... Met

Lab Sample ID: 890-2566-A-	-1-G MS							Client	Sample ID:	: Matrix	Spike
Matrix: Solid									Prep T	Type: Tot	tal/NA
Analysis Batch: 30191									Prep	Batch:	30208
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Ethylbenzene	0.191		0.0998	0.07426	F1	mg/Kg		-117	70 - 130		
m-Xylene & p-Xylene	0.0103		0.200	0.1436	F1	mg/Kg		67	70 - 130		
o-Xylene	0.0397		0.0998	0.07377	F1	mg/Kg		34	70 - 130		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	83		70 - 130								
1,4-Difluorobenzene (Surr)	100		70 - 130								
			70 - 150			Cli	ient Sa	ample ID	: Matrix Sp	oike Dup	licate
Lab Sample ID: 890-2566-A- Matrix: Solid			70 - 730			Cli	ient Sa	ample ID		Type: Tot	tal/NA
Lab Sample ID: 890-2566-A- Matrix: Solid	-1-H MSD	Sample		MSD	MSD	Cli	ient Sa	ample ID	Prep T		tal/NA
Lab Sample ID: 890-2566-A- Matrix: Solid Analysis Batch: 30191	-1-H MSD Sample	Sample Qualifier	Spike Added		MSD Qualifier	Cli	ient Sa D	ample ID %Rec	Prep T Prep	Type: Tot	tal/NA 30208
Lab Sample ID: 890-2566-A- Matrix: Solid Analysis Batch: 30191 Analyte	-1-H MSD Sample		Spike		Qualifier				Prep T Prep %Rec	Satch:	tal/NA 30208 RPD
Lab Sample ID: 890-2566-A- Matrix: Solid Analysis Batch: 30191 Analyte Benzene	-1-H MSD Sample Result		Spike Added	Result	Qualifier F1	Unit		%Rec	Prep T Prep %Rec Limits	Batch:	tal/NA 30208 RPD Limit
Lab Sample ID: 890-2566-A- Matrix: Solid Analysis Batch: 30191 Analyte Benzene Toluene	-1-H MSD Sample Result 0.0535		Spike Added 0.0994	<b>Result</b> 0.08725	Qualifier F1 F1	- <mark>Unit</mark> mg/Kg		%Rec 34	Prep T Prep %Rec Limits 70 - 130	RPD     21	tal/NA 30208 RPD Limit 35
Lab Sample ID: 890-2566-A- Matrix: Solid Analysis Batch: 30191 Analyte Benzene Toluene Ethylbenzene	-1-H MSD Sample Result 0.0535 0.0607		Spike Added 0.0994 0.0994	<b>Result</b> 0.08725 0.08422	Qualifier F1 F1	- <mark>Unit</mark> mg/Kg mg/Kg		<b>%Rec</b> 34 24	Prep T Prep %Rec Limits 70 - 130 70 - 130	RPD 21 22	tal/NA 30208 RPD Limit 35 35
Lab Sample ID: 890-2566-A- Matrix: Solid Analysis Batch: 30191 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	-1-H MSD Sample Result 0.0535 0.0607 0.191		Spike Added 0.0994 0.0994 0.0994	Result 0.08725 0.08422 0.08803	Qualifier F1 F1 F1	- <mark>Unit</mark> mg/Kg mg/Kg mg/Kg		%Rec 34 24 -104	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130	RPD           21           22           17	tal/NA 30208 RPD Limit 35 35 35
Lab Sample ID: 890-2566-A- Matrix: Solid Analysis Batch: 30191 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene	-1-H MSD Sample Result 0.0535 0.0607 0.191 0.0103 0.0397		Spike Added 0.0994 0.0994 0.0994 0.199	Result 0.08725 0.08422 0.08803 0.1708	Qualifier F1 F1 F1	Unit mg/Kg mg/Kg mg/Kg mg/Kg		%Rec 34 24 -104 81	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130	RPD           21           22           17	tal/NA 30208 RPD Limit 35 35 35 35
Lab Sample ID: 890-2566-A- Matrix: Solid Analysis Batch: 30191 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	-1-H MSD Sample Result 0.0535 0.0607 0.191 0.0103 0.0397	Qualifier	Spike Added 0.0994 0.0994 0.0994 0.199	Result 0.08725 0.08422 0.08803 0.1708	Qualifier F1 F1 F1	Unit mg/Kg mg/Kg mg/Kg mg/Kg		%Rec 34 24 -104 81	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130	RPD           21           22           17	tal/NA 30208 RPD Limit 35 35 35 35
Lab Sample ID: 890-2566-A- Matrix: Solid Analysis Batch: 30191 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene	-1-H MSD Sample Result 0.0535 0.0607 0.191 0.0103 0.0397 MSD	Qualifier	Spike           Added           0.0994           0.0994           0.0994           0.0994           0.0994           0.0994           0.0994	Result 0.08725 0.08422 0.08803 0.1708	Qualifier F1 F1 F1	Unit mg/Kg mg/Kg mg/Kg mg/Kg		%Rec 34 24 -104 81	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130	RPD           21           22           17	tal/NA 30208 RPD Limit 35 35 35 35

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

Lab Sample ID: MB 880-30164/1- Matrix: Solid Analysis Batch: 30098	Α					Client Sa	mple ID: Metho Prep Type: 1 Prep Batch	fotal/NA
	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		07/20/22 15:31	07/20/22 20:42	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		07/20/22 15:31	07/20/22 20:42	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/20/22 15:31	07/20/22 20:42	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	137	S1+	70 - 130			07/20/22 15:31	07/20/22 20:42	1
o-Terphenyl	153	S1+	70 - 130			07/20/22 15:31	07/20/22 20:42	1
Lab Sample ID: LCS 880-30164/2 Matrix: Solid	2- <b>A</b>				C	Client Sample I	D: Lab Control Prep Type: 1	

#### Analysis Batch: 30098

Analysis Batch: 30098							Prep	Batch: 30164
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	1206		mg/Kg		121	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	882.5		mg/Kg		88	70 - 130	
C10-C28)								

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

	ge e.	3									
Lab Sample ID: LCS 880-301	64/2-A						Client	t Sample	ID: Lab Co	ontrol Sa	ample
Matrix: Solid									Prep 1	ype: To	tal/NA
Analysis Batch: 30098									Prep	Batch:	30164
	1.05	LCS									
Surrogata	%Recovery		Limits								
Surrogate 1-Chlorooctane		Quanner	70 - 130								
	114		70 - 130 70 - 130								
o-Terphenyl	114		70 - 730								
Lab Sample ID: LCSD 880-30	)164/3-A					Clier	nt San	nole ID: I	_ab Contro	Sampl	e Dup
Matrix: Solid										ype: To	
Analysis Batch: 30098										Batch:	
,			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics			1000	1236		mg/Kg					
(GRO)-C6-C10						0 0					
Diesel Range Organics (Over			1000	871.6		mg/Kg					
C10-C28)											
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane											
o-Terphenyl											
_											
Lab Sample ID: 880-17129-A	-13-E MS							Client	Sample ID	: Matrix	Spike
Matrix: Solid									Prep 1	ype: To	tal/NA
Analysis Batch: 30098									Prep	Batch:	30164
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics	<50.0	U F2	1000	1016		mg/Kg		102	70 - 130		
(GRO)-C6-C10	.50.0		1000	000.0		117		07	70 400		
Diesel Range Organics (Over	<50.0	U	1000	868.3		mg/Kg		87	70 - 130		
C10-C28)											
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	82		70 - 130								
o-Terphenyl	85		70 - 130								
						0			. Mateira Or		Banka
Lab Sample ID: 880-17129-A Matrix: Solid	-13-F WSD					U	ient S	ample ID	: Matrix Sp		
										ype: To	
Analysis Batch: 30098	Sample	Sample	Spika	Men	MSD				%Rec	Batch:	30164 RPD
Analyte		Sample Qualifier	Spike Added		MSD Qualifier	Unit	D	%Pag	%Rec Limits	RPD	Limit
Analyte Gasoline Range Organics	- <u>Result</u> <50.0		999	1285		_ Unit  mg/Kg		%Rec 129	70 - 130	23	20
(GRO)-C6-C10	<b>~</b> 50.0	012	555	1203	12	myrxy		129	10 - 130	20	20
Diesel Range Organics (Over	<50.0	U	999	876.5		mg/Kg		88	70 - 130	1	20
C10-C28)											
	MSD	MSD									

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	81		70 - 130
o-Terphenyl	85		70 - 130

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Job ID: 890-2575-1

SDG: 03E1558015

Client: Ensolum

Project/Site: PLU 15 TWR

# **QC Sample Results**

Job ID: 890-2575-1 SDG: 03E1558015

# Method: 300.0 - Anions, Ion Chromatography

 Lab Sample ID: MB 880-30059/1-A											Client S	ample ID:	Method	Blank
Matrix: Solid													Type: S	
Analysis Batch: 30226														
-		MB I	мв											
Analyte	R	esult (	Qualifier		RL		U	nit	D	P	repared	Analy	zed	Dil Fac
Chloride	<	<5.00 (	U		5.00		m	g/Kg				07/22/22	08:50	1
									Cli	ient	Sample	ID: Lab C	ontrol S	ample
Matrix: Solid												Prep	Type: S	oluble
Analysis Batch: 30226														
				Spike		LCS	LCS					%Rec		
Analyte				Added		Result	Qualifie	er Unit		D	%Rec	Limits		
Chloride				250		267.1		mg/Kg			107	90 - 110		
Lab Sample ID: LCSD 880-30059/3-	A							CI	ient S	Sam	ple ID: I	_ab Contro	ol Sampl	le Dup
Matrix: Solid												Prep	Type: S	oluble
Analysis Batch: 30226														
				Spike		LCSD	LCSD					%Rec		RPD
Analyte				Added		Result	Qualifie	er Unit		D	%Rec	Limits	RPD	Limit
Chloride				250		267.6		mg/Kg			107	90 - 110	0	20
Lab Sample ID: 890-2573-A-1-B MS	5										Client	Sample ID	): Matrix	Spike
Matrix: Solid												Prep	Type: S	oluble
Analysis Batch: 30226														
	Sample	Samp	le	Spike		MS	MS					%Rec		
Analyte	Result	Qualif	fier	Added		Result	Qualifie	er Unit		D	%Rec	Limits		
Chloride	5.39	F1		249		277.7		mg/Kg			110	90 - 110		
- Lab Sample ID: 890-2573-A-1-C MS	D								Clien	t Sa	mple ID	: Matrix S	pike Du	plicate
Matrix: Solid											-		Type: S	
Analysis Batch: 30226														
	Sample	Samp	le	Spike		MSD	MSD					%Rec		RPD
Analyte	Result	Qualif	fier	Added		Result	Qualifie	er Unit		D	%Rec	Limits	RPD	Limit
Chloride	5.39	F1		249		280.4	F1	mg/Kg		_	111	90 - 110	1	20

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Released to Imaging: 11/22/2022 11:30:50 AM

# **QC Association Summary**

Client: Ensolum Project/Site: PLU 15 TWR

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Job ID: 890-2575-1 SDG: 03E1558015

# GC VOA

### Analysis Batch: 30191

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2575-1	PH07	Total/NA	Solid	8021B	30208
890-2575-2	PH07A	Total/NA	Solid	8021B	30208
890-2575-3	PH07B	Total/NA	Solid	8021B	30208
MB 880-30208/5-A	Method Blank	Total/NA	Solid	8021B	30208
LCS 880-30208/1-A	Lab Control Sample	Total/NA	Solid	8021B	30208
LCSD 880-30208/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30208
890-2566-A-1-G MS	Matrix Spike	Total/NA	Solid	8021B	30208
890-2566-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30208

#### Prep Batch: 30208

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
890-2575-1	PH07	Total/NA	Solid	5035	
890-2575-2	PH07A	Total/NA	Solid	5035	
890-2575-3	PH07B	Total/NA	Solid	5035	
MB 880-30208/5-A	Method Blank	Total/NA	Solid	5035	
_CS 880-30208/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30208/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2566-A-1-G MS	Matrix Spike	Total/NA	Solid	5035	
890-2566-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2575-1	PH07	Total/NA	Solid	Total BTEX	
890-2575-2	PH07A	Total/NA	Solid	Total BTEX	
890-2575-3	PH07B	Total/NA	Solid	Total BTEX	

# GC Semi VOA

#### Analysis Batch: 30098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2575-1	PH07	Total/NA	Solid	8015B NM	30164
890-2575-2	PH07A	Total/NA	Solid	8015B NM	30164
890-2575-3	PH07B	Total/NA	Solid	8015B NM	30164
MB 880-30164/1-A	Method Blank	Total/NA	Solid	8015B NM	30164
LCS 880-30164/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30164
LCSD 880-30164/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30164
880-17129-A-13-E MS	Matrix Spike	Total/NA	Solid	8015B NM	30164
880-17129-A-13-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30164

### Prep Batch: 30164

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2575-1	PH07	Total/NA	Solid	8015NM Prep	
890-2575-2	PH07A	Total/NA	Solid	8015NM Prep	
890-2575-3	PH07B	Total/NA	Solid	8015NM Prep	
MB 880-30164/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30164/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30164/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-17129-A-13-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-17129-A-13-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

### Received by OCD: 8/10/2022 10:53:56 AM

**QC Association Summary** 

Client: Ensolum Project/Site: PLU 15 TWR

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Job ID: 890-2575-1 SDG: 03E1558015

# GC Semi VOA

# Analysis Batch: 30275

Client Sample ID	Prep Type	Matrix	Method	Prep Batch
PH07	Total/NA	Solid	8015 NM	
PH07A	Total/NA	Solid	8015 NM	
PH07B	Total/NA	Solid	8015 NM	
	PH07 PH07A	PH07 Total/NA PH07A Total/NA	PH07     Total/NA     Solid       PH07A     Total/NA     Solid	PH07         Total/NA         Solid         8015 NM           PH07A         Total/NA         Solid         8015 NM

# HPLC/IC

### Leach Batch: 30059

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	8
890-2575-1	PH07	Soluble	Solid	DI Leach		
890-2575-2	PH07A	Soluble	Solid	DI Leach		Q
890-2575-3	PH07B	Soluble	Solid	DI Leach		3
MB 880-30059/1-A	Method Blank	Soluble	Solid	DI Leach		
LCS 880-30059/2-A	Lab Control Sample	Soluble	Solid	DI Leach		
LCSD 880-30059/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach		
890-2573-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach		
890-2573-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach		
Analysis Batch: 30226						
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	13
890-2575-1	PH07	Soluble	Solid	300.0	30059	

#### Analysis Batch: 30226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2575-1	PH07	Soluble	Solid	300.0	30059
890-2575-2	PH07A	Soluble	Solid	300.0	30059
890-2575-3	PH07B	Soluble	Solid	300.0	30059
MB 880-30059/1-A	Method Blank	Soluble	Solid	300.0	30059
LCS 880-30059/2-A	Lab Control Sample	Soluble	Solid	300.0	30059
LCSD 880-30059/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30059
890-2573-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30059
890-2573-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30059

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Job ID: 890-2575-1 SDG: 03E1558015

# Lab Sample ID: 890-2575-1 Matrix: Solid

Lab Sample ID: 890-2575-2

Date Collected: 07/15/22 14:40 Date Received: 07/18/22 12:12

**Client Sample ID: PH07** 

Project/Site: PLU 15 TWR

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			4.95 g	5 mL	30208	07/21/22 09:25	MR	XEN MID
Total/NA	Analysis	8021B		1			30191	07/21/22 20:47	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30443	07/22/22 16:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30275	07/21/22 13:53	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	30164	07/20/22 15:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30098	07/21/22 03:44	SM	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	30059	07/19/22 11:04	СН	XEN MID
Soluble	Analysis	300.0		1			30226	07/22/22 12:59	SMC	XEN MID

# Client Sample ID: PH07A

# Date Collected: 07/15/22 14:45

Date Received: 07/18/22 12:12

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	30208	07/21/22 09:25	MR	XEN MID
Total/NA	Analysis	8021B		1			30191	07/21/22 21:12	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30443	07/22/22 16:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30275	07/21/22 13:53	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	30164	07/20/22 15:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30098	07/21/22 04:05	SM	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	30059	07/19/22 11:04	СН	XEN MID
Soluble	Analysis	300.0		1			30226	07/22/22 13:08	SMC	XEN MID

#### Client Sample ID: PH07B Date Collected: 07/15/22 14:55 Date Received: 07/18/22 12:12

# Lab Sample ID: 890-2575-3

#### Matrix: Solid

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	30208	07/21/22 09:25	MR	XEN MID
Total/NA	Analysis	8021B		1			30191	07/21/22 21:38	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30443	07/22/22 16:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30275	07/21/22 13:53	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	30164	07/20/22 15:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30098	07/21/22 04:26	SM	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	30059	07/19/22 11:04	СН	XEN MID
Soluble	Analysis	300.0		1			30226	07/22/22 13:18	SMC	XEN MID

#### Laboratory References:

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

Client: Ensolum Project/Site: PLU 15 TWR

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	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 v
the agency does not o	fer certification.			
• •	• •	Matrix	Analyte	
the agency does not o	fer certification.	Matrix Solid	Analyte Total TPH	

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Job ID: 890-2575-1

SDG: 03E1558015

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# **Method Summary**

Client: Ensolum Project/Site: PLU 15 TWR Job ID: 890-2575-1 SDG: 03E1558015

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

#### Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions. SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

Client: Ensolum Project/Site: PLU 15 TWR

#### Job ID: 890-2575-1 SDG: 03E1558015

Depth	Received	Collected	Matrix	Client Sample ID	Lab Sample ID
 0.5'	07/18/22 12:12	07/15/22 14:40	Solid	PH07	890-2575-1
1'	07/18/22 12:12	07/15/22 14:45	Solid	PH07A	890-2575-2
3'	07/18/22 12:12	07/15/22 14:55	Solid	PH07B	890-2575-3

			4							
		Ψ	Ð	Felsili	tit-	ast	Jonand	R		(m.S
e) Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	D	re)	Received by: (Signature)	Received	ıre)	/: (Signatu	Relinquished by: (Signature)
	tors. It assigns standard terms and contunous as are due to circumstances beyond the control arms will be enforced unless previously negotiated.	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, Its affiliates and subcontractors. It assigns standard terms and communits 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	any to Eurofins Xenco, ises or expenses incu nitted to Eurofins Xenc	client comp ty for any lo sample sub	chase order from e any responsibili ge of \$5 for each	titutes a valid puid shall not assum project and a char	of samples cons st of samples and applied to each p	nd relinquishment ple only for the cos e of \$85.00 will be	document ar co will be liat rimum charg	tice: Signature of this service. Eurofins Xen Eurofins Xenco. A mir
Hg: 1631 / 245.1 / 7470 / 7471	Ag TI U Hg: 1631 / 2	TCLP/SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag TI U	As Ba Be Cd	CRA St	LP 6010: 8F	TCLP / SF	zed	s) to be analy;	nd Metal(	Circle Method(s) and Metal(s) to be analyzed
Sr TI Sn U V Zn	K Se	Ca Cr Co Cu Fe Pb Mg	As Ba Be B Cd	AI Sb As	M Texas 11	8RCRA 13PPM	18	200.8 / 6020:		Total 200.7 / 6010
										K
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nAPP2205638843,								/	N	
Incident Numbers:				_						
					1					
Cost Center: 2027711001				_				ſ	_ I	
*HOLD Pending 3' sample			×	-		0.351	7/15/2022		HUHC 3	
			× ×		3' Grab/	1455	7/15/2022	S Elt	ELOHD BODHS	CS PHO
			× × ×		J' Grab/	1445	7/15/2022	TA S	HEDH THOTA	(5 PH06A
			×××	-	0.5 Grab/	Chhl	7/15/2022	SE	+0119 -00	00Hd 52
Sample Comments			TPH (8	Cont of CHLO	Depth Grab/ Comp	Time Sampled	Date Sampled	Matrix	ntification	Sample Identification
		-	015)		5.8	mperature:	Corrected Temperature:			Total Containers:
Zn AcetatetivaUn. Zii		890-2575 Chain of Custody			() o]	Reading:	Temperature Reading:	Yes No NIA	L	Sample Custody Seals:
Na2S2U3: NASU3					-0.0	actor:	Correction Factor:	9 NIA		Cooler Custody Seals:
NaHSO4: NABIS	Z				123-20	Ö	Thermometer ID:	Yes No		Samples Received Intact:
H <sub>3</sub> PO <sub>4</sub> : HP				nete	(Yed No	Wet Ice:	Red No	Temp Blank:		SAMPLE RECEIPT
H2SU4: H2 NAUH: NA				rs	jved by 4:30pm	the lab, if received				PO #:
	-				TAT starts the day received by	TAT starts the		Conner Shore		Sampler's Name:
2						Due Date:		EDDY COUNTY, NM	ш	Project Location:
None: NO DI Water: H20	2			Pres. Code	Rush	Routine	15	03E1558015		Project Number:
ervativ		ANALYSIS REQUEST			Turn Around	Turn	ת	PLU 15 TWR		Project Name:
Curter.	Deliverables: EDD L. ADaP1 L.	Delive		um.com	Email: bbelill@ensolum.com	Email:		)852	9898540852	Phone:
		Report	Carlsbad, NM 88220	Ca	City, State ZIP:			Carlsbad, NM 88220	Carlsbac	City, State ZIP:
	State of Project:	State	3104 E. Green Street	31	Address:		WY	3122 National parks Hwy	3122 Na	Address:
elds 🗌 RRC 🔄 Supertund 🗌	Program: UST/PST 🔲 PRP 🗌 Brownfields 📙 RRC 🗌	Progra	XTO Energy, Inc.		Company Name:			1, LLC	Ensolum, LLC	Company Name:
	Work Order Comments		Garrett Green		Bill to: (if different)			ų	Ben Belili	Project Manager:
Page 1 of 1	www.xenco.com			73, INN (J1 J	100					
		EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296	5) 585-3443, Lubboch	aso, TX (91	ELF			Xenco		
								10 m m		

5 6

12 13

Chain of Custody

eurofins

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

7/25/2022

Job Number: 890-2575-1 SDG Number: 03E1558015

List Source: Eurofins Carlsbad

# Login Sample Receipt Checklist

Client: Ensolum

#### Login Number: 2575 List Number: 1 Creator: Stutzman, Amanda

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

14

Job Number: 890-2575-1 SDG Number: 03E1558015

List Source: Eurofins Midland

List Creation: 07/19/22 11:13 AM

# Login Sample Receipt Checklist

Client: Ensolum

Login Number: 2575 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").

14

Received by OCD: 8/10/2022 10:53:56 AM

LINKS

EOL

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Released to Imaging: 11/22/2022 11:30:50 AM

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# 🔅 eurofins

# Environment Testing America

# **ANALYTICAL REPORT**

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

# Laboratory Job ID: 890-2582-1

Laboratory Sample Delivery Group: 03E1558013, 03E1558015 Client Project/Site: PLU 15 TWR

# For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

RAMER

Authorized for release by: 7/25/2022 8:08:35 AM Jessica Kramer, Project Manager (432)704-5440 Jessica.Kramer@et.eurofinsus.com

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

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

Laboratory Job ID: 890-2582-1 SDG: 03E1558013, 03E1558015

# **Table of Contents**

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Sample Summary	17
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Client: Ensolum Project/Site: PLU 15 TWR

MDL

ML MPN

MQL NC

ND

NEG

POS

PQL PRES

QC

RER RL

RPD

TEF

TEQ

TNTC

Job ID: 890-2582-1 SDG: 03E1558013, 03E1558015

Qualifiers		3
GC VOA		
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	
GC Semi VOA		5
Qualifier	Qualifier Description	
S1-	Surrogate recovery exceeds control limits, low biased.	
S1+	Surrogate recovery exceeds control limits, high biased.	
U	Indicates the analyte was analyzed for but not detected.	
HPLC/IC		
Qualifier	Qualifier Description	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.	10
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis	
%R	Percent Recovery	44
CFL	Contains Free Liquid	
CFU	Colony Forming Unit	4.2
CNF	Contains No Free Liquid	12
DER	Duplicate Error Ratio (normalized absolute difference)	40
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	14
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)	

Method Detection Limit Minimum Level (Dioxin)

Most Probable Number Method Quantitation Limit

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

Not Calculated

Presumptive

Quality Control

Negative / Absent Positive / Present

Practical Quantitation Limit

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Reporting Limit or Requested Limit (Radiochemistry)

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

7/25/2022

Job ID: 890-2582-1 SDG: 03E1558013, 03E1558015 3 4

Job ID: 890-2582-1

Project/Site: PLU 15 TWR

Client: Ensolum

#### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-2582-1

#### Receipt

The samples were received on 7/19/2022 10:57 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 5.0°C

#### GC VOA

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

#### GC Semi VOA

Method 8015MOD\_NM: The surrogate recovery for the blank associated with preparation batch 880-30312 and analytical batch 880-30251 was outside the upper control limits.

Method 8015MOD\_NM: Surrogate recovery for the following sample was outside control limits: (LCS 880-30312/2-A). Evidence of matrix interferences is not obvious.

Method 8015MOD\_NM: Surrogate recovery for the following sample was outside control limits: BH01A (890-2582-2). 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.

Method: 8021B - Volatile Organic Compounds (GC)

Result Qualifier

<0.00200 U

<0.00200 U

<0.00200 U

<0.00401 U

<0.00200 U

<0.00401 U

RL

0.00200

0.00200

0.00200

0.00401

0.00200

0.00401

Unit

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

D

Prepared

07/21/22 09:38

07/21/22 09:38

07/21/22 09:38

07/21/22 09:38

07/21/22 09:38

07/21/22 09:38

Job ID: 890-2582-1 SDG: 03E1558013, 03E1558015

# 890-2582-1 Matrix: Solid

Dil Fac

1

1

1

1

1

1

Client Sample ID: BH01 Date Collected: 07/18/22 10:40 Date Received: 07/19/22 10:57

Project/Site: PLU 15 TWR

Client: Ensolum

Sample Depth: 0.5

Analyte

Benzene

Toluene

o-Xylene

Ethylbenzene

Xylenes, Total

m-Xylene & p-Xylene

Lab Sample ID: 890-2582-1 Matrix: Solid

Analyzed

07/21/22 17:14

07/21/22 17:14

07/21/22 17:14

07/21/22 17:14

07/21/22 17:14

07/21/22 17:14

11 12 13

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130			07/21/22 09:38	07/21/22 17:14	1
1,4-Difluorobenzene (Surr)	81		70 - 130			07/21/22 09:38	07/21/22 17:14	1
– Method: Total BTEX - Total BTEX Calc	ulation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			07/22/22 10:12	1
- Method: 8015 NM - Diesel Range Orga	anics (DR	O) (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			07/22/22 11:07	1
– Method: 8015B NM - Diesel Range Org	anics (D	RO) (GC)						
Analyte	- · · ·	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		07/21/22 17:20	07/22/22 08:27	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		07/21/22 17:20	07/22/22 08:27	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		07/21/22 17:20	07/22/22 08:27	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	82		70 - 130			07/21/22 17:20	07/22/22 08:27	1
o-Terphenyl	86		70 - 130			07/21/22 17:20	07/22/22 08:27	1
_ Method: 300.0 - Anions, Ion Chromato	ography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	179		4.98	mg/Kg			07/22/22 11:21	1
Client Sample ID: BH01A						Lab San	nple ID: 890-	2582-2
Date Collected: 07/18/22 10:55							Matri	x: Solid
Date Received: 07/19/22 10:57 Sample Depth: 3								
-								
Method: 8021B - Volatile Organic Com Analyte	-	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:38	07/21/22 17:35	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:38	07/21/22 17:35	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:38	07/21/22 17:35	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		07/21/22 09:38	07/21/22 17:35	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:38	07/21/22 17:35	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		07/21/22 09:38	07/21/22 17:35	1

Surrogate%RecoveryQualifierLimits4-Bromofluorobenzene (Surr)11070 - 130

Eurofins Carlsbad

Analyzed

07/21/22 17:35

Prepared

07/21/22 09:38

Released to Imaging: 11/22/2022 11:30:50 AM

7/25/2022

Dil Fac

1

# **Client Sample Results**

Job ID: 890-2582-1 SDG: 03E1558013, 03E1558015

# Lab Sample ID: 890-2582-2

Matrix: Solid

5

Date Collected: 07/18/22 10:55 Date Received: 07/19/22 10:57

**Client Sample ID: BH01A** 

Project/Site: PLU 15 TWR

Sample Depth: 3

Client: Ensolum

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	90		70 - 130			07/21/22 09:38	07/21/22 17:35	1
Method: Total BTEX - Total BTEX	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			07/22/22 10:12	1
Method: 8015 NM - Diesel Range	e Organics (DR	O) (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			07/22/22 11:07	
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)		Qualifier U U	RL 49.8 49.8 49.8	mg/Kg	<u>D</u>	Prepared 07/21/22 17:20 07/21/22 17:20 07/21/22 17:20	Analyzed 07/22/22 08:48 07/22/22 08:48 07/22/22 08:48	Dil Fac 1 1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result <49.8 <49.8 <49.8 <49.8	Qualifier U U U	49.8	mg/Kg	<u> </u>	07/21/22 17:20 07/21/22 17:20 07/21/22 17:20	07/22/22 08:48 07/22/22 08:48 07/22/22 08:48	1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result <49.8	Qualifier U U U	49.8 49.8 49.8	mg/Kg	<u>D</u>	07/21/22 17:20 07/21/22 17:20	07/22/22 08:48 07/22/22 08:48	
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result <49.8 <49.8 <49.8 <49.8 <49.8	Qualifier U U U Qualifier S1-	49.8 49.8 49.8 Limits	mg/Kg	<u>D</u>	07/21/22 17:20 07/21/22 17:20 07/21/22 17:20 07/21/22 17:20 <b>Prepared</b>	07/22/22 08:48 07/22/22 08:48 07/22/22 08:48 <b>Analyzed</b>	
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result           <49.8	Qualifier U U Qualifier S1- S1-	49.8 49.8 49.8 <u>Limits</u> 70 - 130	mg/Kg	<u> </u>	07/21/22 17:20 07/21/22 17:20 07/21/22 17:20 07/21/22 17:20 Prepared 07/21/22 17:20	07/22/22 08:48 07/22/22 08:48 07/22/22 08:48 07/22/22 08:48 07/22/22 08:48	1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	<ul> <li>Result</li> <li>&lt;49.8</li> <li>&lt;49.8</li> <li>&lt;49.8</li> <li>&lt;49.8</li> <li>&lt;49.8</li> <li>&lt;66</li> <li>67</li> <li>omatography -</li> </ul>	Qualifier U U Qualifier S1- S1-	49.8 49.8 49.8 <u>Limits</u> 70 - 130	mg/Kg	<u>D</u>	07/21/22 17:20 07/21/22 17:20 07/21/22 17:20 07/21/22 17:20 Prepared 07/21/22 17:20	07/22/22 08:48 07/22/22 08:48 07/22/22 08:48 07/22/22 08:48 07/22/22 08:48	

# **Surrogate Summary**

Project/Site: PLU 15 TWR

Job ID: 890-2582-1 SDG: 03E1558013, 03E1558015

Prep Type: Total/NA

Prep Type: Total/NA

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

			/	Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
ab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-17129-A-12-E MS	Matrix Spike	122	89	
880-17129-A-12-F MSD	Matrix Spike Duplicate	112	96	
890-2582-1	BH01	99	81	
890-2582-2	BH01A	110	90	
LCS 880-30210/1-A	Lab Control Sample	106	95	
LCSD 880-30210/2-A	Lab Control Sample Dup	111	95	
MB 880-30210/5-A	Method Blank	96	85	
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	
ample ID	Client Sample ID	(70-130)	(70-130)	
A-41-D MS	Matrix Spike	84	83	
-A-41-E MSD	Matrix Spike Duplicate	85	84	
-1	BH01	82	86	
2-2	BH01A	66 S1-	67 S1-	
-30312/2-A	Lab Control Sample	135 S1+	142 S1+	
380-30312/3-A	Lab Control Sample Dup	116	127	
80-30312/1-A	Method Blank	128	146 S1+	

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Job ID: 890-2582-1 SDG: 03E1558013, 03E1558015

Project/Site: PLU 15 TWR

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

Lab Sample ID: MB	880-30210/5-A
•	

Matrix: Solid Analysis Batch: 30194

Client: Ensolum

Analysis Batch: 30194							Prep Batch	1: <b>30210</b>
	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:38	07/21/22 11:25	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:38	07/21/22 11:25	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:38	07/21/22 11:25	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/21/22 09:38	07/21/22 11:25	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/21/22 09:38	07/21/22 11:25	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/21/22 09:38	07/21/22 11:25	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130			07/21/22 09:38	07/21/22 11:25	1
1,4-Difluorobenzene (Surr)	85		70 - 130			07/21/22 09:38	07/21/22 11:25	1

#### Lab Sample ID: LCS 880-30210/1-A Matrix: Solid

### Analysis Batch: 30194

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09742		mg/Kg		97	70 - 130	
Toluene	0.100	0.09907		mg/Kg		99	70 - 130	
Ethylbenzene	0.100	0.1036		mg/Kg		104	70 - 130	
m-Xylene & p-Xylene	0.200	0.2101		mg/Kg		105	70 - 130	
o-Xylene	0.100	0.1150		mg/Kg		115	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

#### Lab Sample ID: LCSD 880-30210/2-A

# Matrix: Solid

Analysis Batch: 30194							Prep	Batch:	30210
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.1021		mg/Kg		102	70 - 130	5	35
Toluene	0.100	0.1030		mg/Kg		103	70 - 130	4	35
Ethylbenzene	0.100	0.1119		mg/Kg		112	70 - 130	8	35
m-Xylene & p-Xylene	0.200	0.2241		mg/Kg		112	70 - 130	6	35
o-Xylene	0.100	0.1231		mg/Kg		123	70 - 130	7	35

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

# Lab Sample ID: 880-17129-A-12-E MS

#### Matrix: Solid .....

Analysis Batch: 30194									Prep	p Batch: 30	J210
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Benzene	<0.00200	U	0.100	0.07628		mg/Kg		76	70 - 130		
Toluene	<0.00200	U	0.100	0.09150		mg/Kg		91	70 - 130		

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Prep Type: Total/NA

**Client Sample ID: Matrix Spike** 

Client Sample ID: Lab Control Sample Dup

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Type: Total/NA

Prep Batch: 30210

Released to Imaging: 11/22/2022 11:30:50 AM

Client: Ensolum

Project/Site: PLU 15 TWR

#### Job ID: 890-2582-1 SDG: 03E1558013, 03E1558015

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

Lab Sample ID: 880-17129-A- Matrix: Solid	-12-E MS									Client S	Sample ID:		
Analysis Batch: 30194											Prep Ty Prep E	-	
Analysis Batch. 30194	Sample	Sam	nlo	Spike	MS	MS					%Rec	battin.	3021
Analyte	Result			Added	Result		Unit		D	%Rec	Limits		
Ethylbenzene	<0.00200	-		0.100	0.1027	Quanner	mg/Kg			102	70 - 130		
n-Xylene & p-Xylene	0.0220			0.201	0.2128		mg/Kg			95	70 - 130		
p-Xylene	0.00221			0.201	0.2120		mg/Kg			105	70 - 130 70 - 130		
луши				0.100	0.1154		mg/rtg			105	70 - 130		
Surrogate	MS %Recovery	MS Qual	lifior	Limits									
4-Bromofluorobenzene (Surr)	122	Quai		70 - 130									
1,4-Difluorobenzene (Surr)	89			70 - 130 70 - 130									
	40 E MOD							0			Matrix Onl		
Lab Sample ID: 880-17129-A Matrix: Solid	-12-7 1050							Cile	int Sa	imple ID:	Matrix Spi		
											Prep Ty	-	
Analysis Batch: 30194	Sample	Sam	nlo	Spike	MSD	MSD					Prep E %Rec	batch:	3021 RP
Analyta	Result		•	-			Unit		Б	% Bee		RPD	
Analyte Benzene	<0.00200		mer	Added	0.09120	Qualifier	Unit		_ <u>D</u>	91	Limits 70 - 130	18	Lim
Foluene	<0.00200			0.0998	0.09120		mg/Kg			91 93	70 - 130 70 - 130	10	
				0.0998			mg/Kg				70 - 130 70 - 130		3
Ethylbenzene	<0.00200				0.09823		mg/Kg			98		4	:
n-Xylene & p-Xylene	0.0221			0.200	0.1979		mg/Kg			88	70 - 130	7	
p-Xylene	0.00981			0.0998	0.1073		mg/Kg			98	70 - 130	7	3
<b>.</b>		MSD		,									
Surrogate	% <i>Recovery</i>	Qual	mer	Limits 70 - 130									
4-Bromofluorobenzene (Surr)	96			70 - 130 70 - 130									
1,4-Difluorobenzene (Surr)	90			70 - 130									
ethod: 8015B NM - Dies	el Range Or	gan	ics (DR	0) (GC)									
Lab Sample ID: MB 880-3031	2/1-A									Client Sa	ample ID: M	ethod	Blan
Matrix: Solid											Prep Ty	pe: To	tal/N
Analysis Batch: 30251											Prep E	Batch:	3031
		ΜВ	МВ										
Analyte	Re	esult	Qualifier	RL		Unit	t	D	P	repared	Analyze	ł	Dil Fa
Gasoline Range Organics	<	50.0	U	50.0		mg/	Kg	_	07/2	1/22 17:20	07/22/22 00	:07	
(GRO)-C6-C10													
Diesel Range Organics (Over	<	50.0	U	50.0		mg/	Kg		07/2	1/22 17:20	07/22/22 00	:07	
C10-C28)				<b>F^ ^</b>			K		07/0	4/00 47 00	07/00/00 00	.07	
Oll Range Organics (Over C28-C36)	<	50.0	U	50.0		mg/	ng		07/2	1/22 17:20	07/22/22 00	.07	
		MВ	МВ										
Surrogate	%Reco	very	Qualifier	Limits					P	repared	Analyze	1	Dil Fa
1-Chlorooctane		128		70 - 130					07/2	1/22 17:20	07/22/22 00	:07	
p-Terphenyl		146	S1+	70 - 130					07/2	1/22 17:20	07/22/22 00	:07	
	12/2 4							C	lient	Sample	ID: Lab Cor	trol S	amp
Lab Sample ID: LCS 880-303	12/2-A												
Lab Sample ID: LCS 880-303 Matrix: Solid	12/2-A									Campio			
	12/2-A									Campio	Prep Ty Prep E	pe: To	tal/N

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	 1000	880.1		mg/Kg		88	70 - 130	 
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	1131		mg/Kg		113	70 - 130	
C10-C28)								

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Job ID: 890-2582-1 SDG: 03E1558013, 03E1558015

Client: Ensolum Project/Site: PLU 15 TWR

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

Matrix: Solid	)312/2-A							-	ID: Lab Co Prep 1	Type: Tot	
Analysis Batch: 30251									Prep	Batch:	3031
	105	LCS									
Surrogate	%Recovery		Limits								
1-Chlorooctane		S1+	70 - 130								
o-Terphenyl		S1+	70 <u>-</u> 130								
Lab Sample ID: LCSD 880-3	30312/3-A					Clier	nt Sam	n <mark>ple ID:</mark> I	Lab Contro		
Matrix: Solid									Prep 1	Type: Tot	al/N
Analysis Batch: 30251									Prep	Batch:	
			Spike	LCSD	LCSD				%Rec		RF
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Lim
Gasoline Range Organics			1000	807.8		mg/Kg		81	70 - 130	9	2
(GRO)-C6-C10			1000					100	70 100	10	
Diesel Range Organics (Over C10-C28)			1000	996.6		mg/Kg		100	70 - 130	13	2
	LCSD	1000									
Surrogata			Limits								
Surrogate 1-Chlorooctane	% <i>Recovery</i> 116	Quaimer	70 - 130								
	110		70 - 130 70 - 130								
p-Terphenyl	121		70 - 130								
Analuta	Sample	-	Spike Added	MS	MS Qualifiar	Unit	<b>D</b>	% <b>B</b> aa	%Rec		
Analyte		Qualifier	Added	907.6	Qualifier	Unit	<u>D</u>	88	Limits 70 - 130		
Gasoline Range Organics GRO)-C6-C10	<50.0	0	1000	907.0		mg/Kg		00	70 - 130		
Diesel Range Organics (Over	<50.0	U	1000	796.3		mg/Kg		80	70 - 130		
C10-C28)						0 0					
	MS	MS									
Surrogate	MS %Recovery	MS Qualifier	Limits								
-			Limits								
1-Chlorooctane	%Recovery										
1-Chlorooctane o-Terphenyl	<b>%Recovery</b> 84 83		70 - 130						Nutrie Or		
1-Chlorooctane o-Terphenyl Lab Sample ID: 880-17068-/	<b>%Recovery</b> 84 83		70 - 130			CI	ient Sa	ample IC	): Matrix Sp		
1-Chlorooctane o-Terphenyl Lab Sample ID: 880-17068-/ Matrix: Solid	<b>%Recovery</b> 84 83		70 - 130			CI	ient Sa	ample IE	Prep 1	Type: Tot	al/N
1-Chlorooctane o-Terphenyl Lab Sample ID: 880-17068-/ Matrix: Solid	%Recovery 84 83 A-41-E MSD	Qualifier	70 - 130 70 - 130	MSD	MSD	CI	ient Sa	ample IC	Prep 1 Prep		tal/N 3031
1-Chlorooctane o-Terphenyl Lab Sample ID: 880-17068-/ Matrix: Solid Analysis Batch: 30251	%Recovery 84 83 A-41-E MSD Sample	<i>Qualifier</i> Sample	70 - 130 70 - 130 Spike	MSD Result	MSD Qualifier				Prep 1 Prep %Rec	Type: Tot Batch: 3	al/N 3031 RP
1-Chlorooctane o-Terphenyl Lab Sample ID: 880-17068-/ Matrix: Solid Analysis Batch: 30251 Analyte	%Recovery 84 83 A-41-E MSD Sample Result	<i>Qualifier</i> Sample Qualifier	70 - 130 70 - 130		MSD Qualifier	Unit	ient Sa	ample IC <u>%Rec</u> 89	Prep 1 Prep %Rec Limits	Type: Tot	t <mark>al/N</mark> 3031 RP Lim
1-Chlorooctane o-Terphenyl Lab Sample ID: 880-17068-/ Matrix: Solid Analysis Batch: 30251 Analyte Gasoline Range Organics	%Recovery 84 83 A-41-E MSD Sample	<i>Qualifier</i> Sample Qualifier	70 - 130 70 - 130 Spike Added	Result				%Rec	Prep 1 Prep %Rec	Type: Tot Batch: : 	t <mark>al/N</mark> 3031 RP Lim
1-Chlorooctane o-Terphenyl Lab Sample ID: 880-17068-/ Matrix: Solid Analysis Batch: 30251 Analyte Gasoline Range Organics (GRO)-C6-C10	%Recovery 84 83 A-41-E MSD Sample Result	Qualifier Sample Qualifier U	70 - 130 70 - 130 Spike Added	Result		Unit		%Rec	Prep 1 Prep %Rec Limits	Type: Tot Batch: : 	tal/N 3031 RF Lin
1-Chlorooctane o-Terphenyl Lab Sample ID: 880-17068-/ Matrix: Solid Analysis Batch: 30251 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	%Recovery         84           83         83           A-41-E MSD         Sample           Result         <50.0	Qualifier Sample Qualifier U	70 - 130 70 - 130 <b>Spike</b> Added 999	<b>Result</b> 917.2		- <mark>Unit</mark> mg/Kg		<b>%Rec</b> 89	Prep 1 Prep %Rec Limits 70 - 130	Type: Tot Batch: : RPD 1	tal/N 3031 RP Lim
1-Chlorooctane o-Terphenyl Lab Sample ID: 880-17068-/ Matrix: Solid Analysis Batch: 30251 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	%Recovery         84           83         83           A-41-E MSD         Sample           Result         <50.0	Qualifier Sample Qualifier U	70 - 130 70 - 130 <b>Spike</b> Added 999	<b>Result</b> 917.2		- <mark>Unit</mark> mg/Kg		<b>%Rec</b> 89	Prep 1 Prep %Rec Limits 70 - 130	Type: Tot Batch: : RPD 1	tal/N 3031 RP Lim
Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-17068-/ Matrix: Solid Analysis Batch: 30251 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	<u>%Recovery</u> 84 83 A-41-E MSD Sample <u>Result</u> <50.0	Qualifier Sample Qualifier U U	70 - 130 70 - 130 <b>Spike</b> Added 999	<b>Result</b> 917.2		- <mark>Unit</mark> mg/Kg		<b>%Rec</b> 89	Prep 1 Prep %Rec Limits 70 - 130	Type: Tot Batch: : RPD 1	al/N
1-Chlorooctane o-Terphenyl Lab Sample ID: 880-17068-/ Matrix: Solid Analysis Batch: 30251 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	<u>%Recovery</u> 84 83 A-41-E MSD Sample <u>Result</u> <50.0 <50.0	Qualifier Sample Qualifier U U	70 - 130 70 - 130 Spike Added 999	<b>Result</b> 917.2		- <mark>Unit</mark> mg/Kg		<b>%Rec</b> 89	Prep 1 Prep %Rec Limits 70 - 130	Type: Tot Batch: : RPD 1	tal/N 3031 RP Lim 2

Client: Ensolum

Project/Site: PLU 15 TWR

# **QC Sample Results**

Job ID: 890-2582-1
SDG: 03E1558013, 03E1558015

Method: 300.0 - Anions, Ion Chromatography

-											
Lab Sample ID: MB 880-30121/ Matrix: Solid	/1-A							Client S	Sample ID:		
									Prep	Type: S	
Analysis Batch: 30315		МВ МВ									
Analyte	Pa	sult Qualifie	ar	RL	Unit		D	Prepared	Analy	zod	Dil Fac
Chloride		5.00 U		5.00	0mr mg/K		<u> </u>	riepaieu	07/22/22		1
		0.00 0		0.00	ing/it	9			01/22/22	10.01	
Lab Sample ID: LCS 880-30121	1/2-A						Clie	nt Sample	e ID: Lab C	ontrol S	ample
Matrix: Solid									Prep	Type: S	oluble
Analysis Batch: 30315											
			Spike	LCS	LCS				%Rec		
Analyte			Added	Result	Qualifier	Unit		D %Rec	Limits		
Chloride			250	273.9		mg/Kg		110	90 _ 110		
Lab Sample ID: LCSD 880-3012	21/2_1					CI	iont Sa		Lab Contro	al Samal	o Dur
Matrix: Solid	21/ <b>3-</b> A							imple iD.		Type: S	
Analysis Batch: 30315									Пер	Type. O	orubit
			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	I	D %Rec	Limits	RPD	Limi
			250	274.9		mg/Kg		110	90 - 110	0	20
Chloride											
Chloride	RMS							Client	Sample ID	• Matrix	Spike
_ Lab Sample ID: 880-17088-A-1	-B MS							Client	Sample ID		
Lab Sample ID: 880-17088-A-1 Matrix: Solid	-B MS							Client		: Matrix Type: S	
Lab Sample ID: 880-17088-A-1		Sample	Spike	MS	MS			Client			
Lab Sample ID: 880-17088-A-1 Matrix: Solid Analysis Batch: 30315	Sample	Sample Qualifier	Spike Added		MS Qualifier	Unit	ſ	Client	Prep		
Lab Sample ID: 880-17088-A-1 Matrix: Solid Analysis Batch: 30315 Analyte	Sample						1		Prep %Rec		
Lab Sample ID: 880-17088-A-1 Matrix: Solid Analysis Batch: 30315 Analyte Chloride	Sample Result 526		Added	Result		Unit mg/Kg	2	<b>D</b> % <b>Rec</b> 107	Prep %Rec Limits 90 - 110	Type: S	oluble
Lab Sample ID: 880-17088-A-1 Matrix: Solid Analysis Batch: 30315 Analyte Chloride Lab Sample ID: 880-17088-A-1	Sample Result 526		Added	Result		Unit mg/Kg	2	<b>D</b> % <b>Rec</b> 107	Prep %Rec Limits 90 - 110 D: Matrix Sp	Type: S	
Lab Sample ID: 880-17088-A-1 Matrix: Solid Analysis Batch: 30315 Analyte Chloride Lab Sample ID: 880-17088-A-1 Matrix: Solid	Sample Result 526		Added	Result		Unit mg/Kg	2	<b>D</b> % <b>Rec</b> 107	Prep %Rec Limits 90 - 110 D: Matrix Sp	Type: S	
Lab Sample ID: 880-17088-A-1 Matrix: Solid Analysis Batch: 30315 Analyte Chloride Lab Sample ID: 880-17088-A-1	Sample Result 526 -C MSD	Qualifier	Added 249	<b>Result</b> 790.9	Qualifier	Unit mg/Kg	2	<b>D</b> % <b>Rec</b> 107	Prep %Rec Limits 90 - 110 D: Matrix S Prep	Type: S	blicate
Lab Sample ID: 880-17088-A-1 Matrix: Solid Analysis Batch: 30315 Analyte Chloride Lab Sample ID: 880-17088-A-1 Matrix: Solid	Sample Result 526 -C MSD Sample	Qualifier	Added	Result 790.9		Unit mg/Kg	Client	<b>D</b> % <b>Rec</b> 107	Prep %Rec Limits 90 - 110 D: Matrix Sp	Type: S	

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# **QC Association Summary**

Client: Ensolum Project/Site: PLU 15 TWR

Job ID: 890-2582-1 SDG: 03E1558013, 03E1558015

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# **GC VOA**

### Analysis Batch: 30194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2582-1	BH01	Total/NA	Solid	8021B	30210
890-2582-2	BH01A	Total/NA	Solid	8021B	30210
MB 880-30210/5-A	Method Blank	Total/NA	Solid	8021B	30210
LCS 880-30210/1-A	Lab Control Sample	Total/NA	Solid	8021B	30210
LCSD 880-30210/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30210
880-17129-A-12-E MS	Matrix Spike	Total/NA	Solid	8021B	30210
880-17129-A-12-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30210

#### Prep Batch: 30210

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2582-1	BH01	Total/NA	Solid	5035	
890-2582-2	BH01A	Total/NA	Solid	5035	
MB 880-30210/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30210/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30210/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17129-A-12-E MS	Matrix Spike	Total/NA	Solid	5035	
880-17129-A-12-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

#### Analysis Batch: 30351

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2582-1	BH01	Total/NA	Solid	Total BTEX	
890-2582-2	BH01A	Total/NA	Solid	Total BTEX	

# GC Semi VOA

#### Analysis Batch: 30251

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2582-1	BH01	Total/NA	Solid	8015B NM	30312
890-2582-2	BH01A	Total/NA	Solid	8015B NM	30312
MB 880-30312/1-A	Method Blank	Total/NA	Solid	8015B NM	30312
LCS 880-30312/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30312
LCSD 880-30312/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30312
880-17068-A-41-D MS	Matrix Spike	Total/NA	Solid	8015B NM	30312
880-17068-A-41-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30312

#### Prep Batch: 30312

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2582-1	BH01	Total/NA	Solid	8015NM Prep	
890-2582-2	BH01A	Total/NA	Solid	8015NM Prep	
MB 880-30312/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30312/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30312/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-17068-A-41-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-17068-A-41-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 30385

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2582-1	BH01	Total/NA	Solid	8015 NM	
890-2582-2	BH01A	Total/NA	Solid	8015 NM	

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**Client Sample ID** 

Method Blank

Matrix Spike

Lab Control Sample

Lab Control Sample Dup

Matrix Spike Duplicate

BH01

BH01A

# **QC Association Summary**

Client: Ensolum Project/Site: PLU 15 TWR

Leach Batch: 30121

Lab Sample ID

MB 880-30121/1-A

LCS 880-30121/2-A

LCSD 880-30121/3-A

880-17088-A-1-B MS

880-17088-A-1-C MSD

890-2582-1

890-2582-2

HPLC/IC

Job ID: 890-2582-1 SDG: 03E1558013, 03E1558015

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 0: 890-2582-1

 03E1558015

 2

 3

 Prep Batch

 5

 6

# 5 6 7 8 9 10 11

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Prep Type	Matrix	Method	Prep Batch
Soluble	Solid	DI Leach	
Soluble	Solid	DI Leach	
Soluble	Solid	DI Leach	
Soluble	Solid	DI Leach	
Soluble	Solid	DI Leach	
Soluble	Solid	DI Leach	
Soluble	Solid	DI Leach	

# Analysis Batch: 30315

- [							
	Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
	890-2582-1	BH01	Soluble	Solid	300.0	30121	
	890-2582-2	BH01A	Soluble	Solid	300.0	30121	
	MB 880-30121/1-A	Method Blank	Soluble	Solid	300.0	30121	
	LCS 880-30121/2-A	Lab Control Sample	Soluble	Solid	300.0	30121	
	LCSD 880-30121/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30121	
	880-17088-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30121	
	880-17088-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30121	

Job ID: 890-2582-1 SDG: 03E1558013, 03E1558015

# Lab Sample ID: 890-2582-1 Matrix: Solid

Lab Sample ID: 890-2582-2

Matrix: Solid

Client Sample ID: BH01 Date Collected: 07/18/22 10:40 Date Received: 07/19/22 10:57

Project/Site: PLU 15 TWR

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			4.99 g	5 mL	30210	07/21/22 09:38	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30194	07/21/22 17:14	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30351	07/22/22 10:12	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30385	07/22/22 11:07	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	30312	07/21/22 17:20	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30251	07/22/22 08:27	SM	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	30121	07/20/22 11:51	SMC	XEN MID
Soluble	Analysis	300.0		1			30315	07/22/22 11:21	СН	XEN MID

#### Client Sample ID: BH01A Date Collected: 07/18/22 10:55

Date Received: 07/19/22 10:57

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	30210	07/21/22 09:38	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30194	07/21/22 17:35	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30351	07/22/22 10:12	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30385	07/22/22 11:07	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	30312	07/21/22 17:20	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30251	07/22/22 08:48	SM	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	30121	07/20/22 11:51	SMC	XEN MID
Soluble	Analysis	300.0		1			30315	07/22/22 11:29	СН	XEN MID

#### Laboratory References:

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

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Job ID: 890-2582-1
SDG: 03E1558013, 03E1558015

# Project/Site: PLU 15 TWR

Client: Ensolum

# Laboratory: Eurofins Midland

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

uthority		rogram	Identification Number	Expiration Date
xas		NELAP T104704400-22-24 06-30-23		06-30-23
The following analytes the agency does not of	•	ut the laboratory is not certifi	ied by the governing authority. This list ma	ay include analytes for w
0,		Matrix	Analyte	
Analysis Method 8015 NM	Prep Method	Matrix Solid	Analyte Total TPH	

Eurofins Carlsbad

# **Method Summary**

Client: Ensolum Project/Site: PLU 15 TWR

Job ID: 890-2582-1 SDG: 03E1558013, 03E1558015

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

#### Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions. SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

Eurofins Carlsbad

Job ID: 890-2582-1 SDG: 03E1558013, 03E1558015

Client: Ensolum
Project/Site: PLU 15 TWR

ab Sample ID.	Client Sample ID	Matrix	Collected	Received	Depth	
90-2582-1	BH01	Solid	07/18/22 10:40	07/19/22 10:57	0.5	
90-2582-2	BH01A	Solid	07/18/22 10:55	07/19/22 10:57	3	

.



💸 eurofins

Environment	Testing
Xenco	

# **Chain of Custody**

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

Work Order No:

							Норр		,				. ,							www	xenco	.com	Page	of	1
Project Manager:	Ben Belill Bill to: (if different)					t)	Garrett Green							Work Order Comments											
Company Name:	Ensol	lum, LLC				Compar	ny Name	9:	XTO Energy, Inc.								Program: UST/PST PRP Brownfields RRC Superfund								rfund [
Address:	3122	National	parks H	lwy		Address	5:		3104 E. Green Street								State of Project:								
City, State ZIP:	Carls	bad, NM	88220			City, Sta	ate ZIP:		Carlsbad, NM 88220							Reporting: Level II _ Level III _ PST/UST ] TRRP _ Level IV							vel IV 🗌		
Phone:	98985	540852			Email:	bbelill@	ensolu	.m.co	n								Delive	erables	EDD			ADaP	т 🗆 о	her:	
Project Name:		PLU	15 TWF	۲	Turn	Around								ANAL	YSIS F	REQ	UEST						Prese	rvative Cod	tes
Project Number:	03	E155801	3, 03 <b>E</b> 1	558015	Routine	Rusi	n	Pres. Code															None: NO	DI Wat	ter: H <sub>2</sub> O
Project Location:		EDDY C	OUNTY	NM	Due Date:		2													i –	1	i –	Cool: Cool	MeOH:	Me
ampler's Name:			er Shor		TAT starts th	e day rece	eived by	1		-			- 8	. J	5±2		hu	•			•		HCL: HC	HNO3:	
0 #:				0	the lab, if rec	eived by 4	4:30pm	2						- 11.4		-						_	H2S04: H2	NaOH	Na
SAMPLE RECEI	PT	Joop E	Blank:	Yes No	Wet Ice:	Ves	No	Paramete	â					1									H <sub>3</sub> PO <sub>4</sub> : HP		
amples Received In	niact:	(Yes)	No	Thermomete		Um~E	D	L PE	300.							1							NaHSO₄: N	ABIS	
Cooler Custody Seals	S:	Yes No	(N/A	Correction Fa	actor:	-0		a l	PA:					890	-2582 (	Chai	n of C	ustody					Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : Na	aSO <sub>3</sub>	
Sample Custody Sea	ls:	Yes No	NIA	Temperature		5.			S (E		-		- 1					e.			P 1		Zn Acetate+		
Total Conteiners:				Corrected Te	mperature:	5-	<u>ට</u>		SIDE	015)	(8021												NaOH+Asco	orbic Acid: SA	VPC
Sample Iden	tificati	on	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	CHLORIDES (EPA: 300.0)	ТРН (8015)	BTEX												Samp	le Commen	nts
BHO	1		S	7/18/2022	1040	0.5'	G	1	Х	х	X														
BH01	A		S	7/18/2022	1055	3'	G	1	х	х	X														
¥ BH01	В		S	7/18/2022	1100	4'	G	1	X	х	X												Hold I	reading 3	(
			·																				Sample		
						· · · · · ·								-									Cost Cer	nter: 202771	1001
ð	7	1																					nAPF	ent Number 220564168	5
														-+		-	-				+			2207746719 2205638843	
Total 200.7 / 60 ircle Method(s) an otice: Signature of this d service. Eurofins Xence Eurofins Xenco. A mini Relinquished by:	id Met locumen o will be imum ch	t and reling liable only f arge of \$85.0	e analyz ulshment o	ed of samples consist of samples and applied to each p Received	shall not assu	PLP 601 urchase or me any res arge of \$5	l O: 8R der from o ponsibilit	CRA cilent co y for any sample s	Sb A mpany y losses submitte Date/	s Ba to Eurot or expo d to Eu Time	Be C Tins Xen enses Ir rofins X	Cd Cr nco, its af ncurred b (enco, bu Rel	Co C filiates a ny the cli t not and	u Pb and subc ent if su alyzed. 1	Mn M contracto	ors. It s are ms w	i Se assigns due to c ill be en	Ag Ti standa	rd term ances b inless p	is and o revious	Hg: 1 conditions	631 / s rol iated.	245.1 / 747		ne
Cart	-			lae	Mo	-		1.1	9.9	33	103	27													
													_			_	-		_						
				-					_	_		4													_

# Login Sample Receipt Checklist

Client: Ensolum

Login Number: 2582 List Number: 1 Creator: Clifton, Cloe

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

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

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Job Number: 890-2582-1

List Source: Eurofins Carlsbad

SDG Number: 03E1558013, 03E1558015

# Login Sample Receipt Checklist

Client: Ensolum

List Number: 2

<6mm (1/4").

Login Number: 2582

Creator: Rodriguez, Leticia

Job Number: 890-2582-1

List Source: Eurofins Midland

List Creation: 07/20/22 10:53 AM

SDG Number: 03E1558013, 03E1558015

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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	

N/A

Containers requiring zero headspace have no headspace or bubble is



# APPENDIX E

**NMOCD** Notifications

Released to Imaging: 11/22/2022 11:30:50 AM

# **Tacoma Morrissey**

From:	Hamlet, Robert, EMNRD <robert.hamlet@state.nm.us></robert.hamlet@state.nm.us>
Sent:	Wednesday, May 11, 2022 4:57 PM
То:	Green, Garrett J
Cc:	DelawareSpills /SM; Ben Belill; Aimee Cole; Tacoma Morrissey; Kalei Jennings; Bratcher, Mike,
	EMNRD; Nobui, Jennifer, EMNRD; Nobui, Jennifer, EMNRD
Subject:	(Extension Approval) - PLU 15 TWR Battery (Incident Numbers nAPP2205641685, nAPP2205638843, nAPP2207746719)

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

RE: Incident #NAPP2205641685, NAPP2205638843, NAPP2207746719

### Garrett,

Your request for an extension to **August 10th, 2022** is approved. Please include this e-mail correspondence in the remediation and/or closure report.

Robert Hamlet • Environmental Specialist - Advanced Environmental Bureau EMNRD - Oil Conservation Division 811 S. First Street | Artesia, NM 88210 575.909.0302 | robert.hamlet@state.nm.us http://www.emnrd.state.nm.us/OCD/



From: Green, Garrett J <garrett.green@exxonmobil.com>

Sent: Wednesday, May 11, 2022 2:41 PM

**To:** Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>

Cc: DelawareSpills /SM <DelawareSpills@exxonmobil.com>; Ben Belill <bbelill@ensolum.com>; Aimee Cole <acole@ensolum.com>; Tacoma Morrissey <tmorrissey@ensolum.com>; Kalei Jennings <kjennings@ensolum.com> Subject: [EXTERNAL] XTO - Extension Request - PLU 15 TWR Battery (Incident Numbers nAPP2205641685, nAPP2205638843, nAPP2207746719)

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

All,

# PLU 15 TWR Battery (Incident Numbers nAPP2205641685, nAPP2205638843, nAPP2207746719)

XTO is requesting an extension for the current deadlines of May 12, 2022, May 21, 2022, and June 2, 2022 for submitting a remediation work plan, closure, or deferral report required in 19.15.29.12.B.(1) NMAC at the PLU 15 TWR Battery for Incident Numbers nAPP2205641685, nAPP2205638843, and nAPP2207746719. The releases occurred on February 11,

2022, February 20, 2022, and March 4, 2022, respectively. Fluids were released on pad around active production equipment. An initial site assessment has been conducted to assess each release area and analytical results indicate that additional remediation is required.

Due to all three releases occurring on the same pad, delineation and remediation activities are scheduled to be completed concurrently. XTO requests to extend the deadline to complete remediation activities and submit a closure or deferral report for Incident Numbers nAPP2205641685, nAPP2205638843, and nAPP2207746719 to August 10, 2022, which is a 90-day extension of the due date for the first release.

Thank you,

#### **Garrett Green**

Environmental Coordinator Delaware Business Unit (575) 200-0729 Garrett.Green@ExxonMobil.com

XTO Energy, Inc. 3104 E. Greene Street | Carlsbad, NM 88220 | M: (575)200-0729

From:	<u>Green, Garrett J</u>
To:	ocd.enviro@state.nm.us; Bratcher, Mike, EMNRD; Hamlet, Robert, EMNRD
Cc:	Pennington, Shelby G; Tacoma Morrissey; DelawareSpills /SM
Subject:	XTO - Sampling Notification (week of 7/11/22 - 7/15/22)
Date:	Friday, July 8, 2022 1:21:32 PM

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

All,

XTO plans to complete final sampling activities at the following sites the week of July 11, 2022.

Monday, July 11 - PLU 442, 443 / nAPP2214734717

Wednesday, July 13

- PLU 15 TWR Battery / nAPP2205641685, nAPP2205638843, nAPP2207746719

Thursday, July 14

- PLU 15 TWR Battery / nAPP2205641685, nAPP2205638843, nAPP2207746719

Friday, July 15

- PLU 15 TWR Battery / nAPP2205641685, nAPP2205638843, nAPP2207746719

Thank you,

#### **Garrett Green**

Environmental Coordinator Delaware Business Unit (575) 200-0729 <u>Garrett.Green@ExxonMobil.com</u>

XTO Energy, Inc. 3104 E. Greene Street | Carlsbad, NM 88220 | M: (575)200-0729

# **Tacoma Morrissey**

From:	Green, Garrett J <garrett.green@exxonmobil.com></garrett.green@exxonmobil.com>
Sent:	Monday, July 11, 2022 5:10 PM
То:	ocd.enviro@state.nm.us; Bratcher, Mike, EMNRD; Hamlet, Robert, EMNRD
Cc:	Ben Belill; DelawareSpills /SM
Subject:	XTO 48 Liner Notification - PLU 15 TWR - nAPP2205641685, nAPP2205638843 and nAPP2207746719

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

Good afternoon,

This is sent as a 48-hour notification, XTO is scheduled to inspect the lined containment at PLU 15 TWR Battery released on (2/11/22 nAPP2205641685, 2/20/22 nAPP2205638843, 3/4/22 nAPP2207746719), on Thursday, July 14, 2022, at 9:30am MST. A 24 hour release notification for nAPP2205641685 was sent out on Saturday, February 12, 2022 1:42 PM since the release was greater than 25 barrels in volume. Please call us with any questions or concerns.

GPS Coordinates: (32.209, -103.770)

Thank you,

Garrett Green Environmental Coordinator Delaware Business Unit (575) 200-0729 Garrett.Green@ExxonMobil.com

XTO Energy, Inc. 3104 E. Greene Street | Carlsbad, NM 88220 | M: (575)200-0729

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

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

District III

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

District IV

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

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

Page 255 of 255 CONDITIONS

Action 132704

CONDITIONS

Operator: X	TO ENERGY, INC	OGRID: 5380					
	401 Holiday Hill Road Iidland, TX 79707	Action Number: 132704					
		Action Type: [C-141] Release Corrective Action (C-141)					
CONDITION	s	-					
Created By	Condition		Condition Date				
jharimon	Regarding application ID 132704, Incident # NAPP2207746719 POKER LAKE UNIT 15 TWIN WELL conditions and points of deferral. My apologies for the mistake. XTO's deferral requests to complet construction/alteration or final plugging and abandonment, whichever occurs first. XTO does not be	e final remediation during any future major	11/22/2022				

conditions and points of determaining any lattice major	
construction/alteration or final plugging and abandonment, whichever occurs first. XTO does not believe deferment will result in imminent risk to human	
health, the environment, or groundwater. The areas requested for deferral are identified on the site map as "PH01" and "PH02". The areas have been	
delineated and documented in the report. Currently, OCD approves this request. The Deferral Request and C-141 will be accepted for record and marked	
accordingly. The release will remain open in OCD database files and reflect an open environmental issue. (This is a federal site and will require like	
approval from BLM.)	