District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources Department

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NAPP2214735696
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

		•	·				
Responsible Party XTO Energy				OGRID 5380			
Contact Name Garrett Green C			Contact Te	Contact Telephone 575-200-0729			
Contact email garrett.green@exxonmobil.com Incident i			Incident #	(assigned by OCD)			
	dress 3104 E. Greene St		w Mexico, 88220				
		Location	of Release So	ource			
Latitude 32.20968			Longitude _	-103.81491			
		(NAD 83 in dec	rimal degrees to 5 decim	al places)			
Site Name PLU 18	Twin Wells Ranch 15	5H	Site Type	Production Well			
Date Release Discov			API# (if app				
			I				
Unit Letter Sect	1	Range	Coun	ty			
B 19 24S 31E Eddy				ý			
	State 🗷 Federal 🔲 To	Nature and	l Volume of F	Release justification for the volumes provided below)			
Crude Oil	Volume Release			Volume Recovered (bbls)			
Produced Water	Volume Release	ed (bbls)		Volume Recovered (bbls)			
		tion of total dissolv water >10,000 mg	\ /	☐ Yes ☐ No			
Condensate	Volume Release	ed (bbls)		Volume Recovered (bbls)			
☐ Natural Gas	Volume Release	ed (Mcf)		Volume Recovered (Mcf)			
✓ Other (describe)	Volume/Weight	Released (provide	units)	Volume/Weight Recovered (provide units)			
Produced water w/FR 8.00 BBLS 7.00 BBLS				7.00 BBLS			
				p caused fluids to release into containment and onto pad. on retained for remediation purposes.			

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- 73			-		0 4	0.4
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	$u \subset$		4	\boldsymbol{v}		\boldsymbol{v}

Incident ID	NAPP2214735696
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Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?	If YES, for what reason(s) does the respon	sible party consider this a major release?
Yes 🗷 No		
If YES, was immediate n N/A	otice given to the OCD? By whom? To wh	nom? When and by what means (phone, email, etc)?
	Initial Re	esponse
The responsible	party must undertake the following actions immediately	y unless they could create a safety hazard that would result in injury
➤ The source of the rele	ease has been stopped.	
▼ The impacted area has	as been secured to protect human health and	the environment.
▼ Released materials has	ave been contained via the use of berms or d	likes, absorbent pads, or other containment devices.
▲ All free liquids and re	ecoverable materials have been removed and	d managed appropriately.
If all the actions describe	d above have <u>not</u> been undertaken, explain v	why:
NA		
Per 19.15.29.8 B. (4) NM	1AC the responsible party may commence re	emediation immediately after discovery of a release. If remediation
has begun, please attach	a narrative of actions to date. If remedial e	efforts have been successfully completed or if the release occurred blease attach all information needed for closure evaluation.
regulations all operators are public health or the environi failed to adequately investig	required to report and/or file certain release notified ment. The acceptance of a C-141 report by the Ogate and remediate contamination that pose a threat	best of my knowledge and understand that pursuant to OCD rules and fications and perform corrective actions for releases which may endanger OCD does not relieve the operator of liability should their operations have at to groundwater, surface water, human health or the environment. In responsibility for compliance with any other federal, state, or local laws
Printed Name: Garrett G	reen	Title: SSHE Coordinator
Signature:	A Sun	Date:
email: garrett.green@exx	konmobil.com	Telephone: 575-200-0729
OCD Only		
Received by:Jocelyn	Harimon	Date:05/27/2022

Total Produced Water =

Total Produced Water =

Total Crude Oil =

8.00 bbls

0.00 bbls

7.00 bbls

Location:	PLU 18 Twin Wells Ranch 155H		
Spill Date:	5/15/2022		
	Area 1		
Approximate A	rea =	16.84	cu.ft.
	VOLUME OF LEAK		
Total Crude Oil	=	0.00	bbls
Total Produced	Water =	3.00	bbls
	Area 2	-	•
Approximate A	rea =	2251.00	sq. ft.
Average Satura	tion (or depth) of spill =	1.00	inches
Average Porosi	ty Factor =	0.03	
	VOLUME OF LEAK		
Total Crude Oil	=	0.00	bbls
Total Produced	Water =	5.00	bbls
	TOTAL VOLUME OF LEAK		
Total Crude Oil	=	0.00	bbls
		_	

TOTAL VOLUME RECOVERED

of New Mexico

Incident ID	NAPP2214735696
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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	Page 5 of 1	84
Incident ID	NAPP2214735696	
District RP		
Facility ID		
Application ID		

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

Printed Name: __Garrett Green______ Title: _Environmental Coordinator______ Signature: ______ Date: ______ O9/20/2023_____ email: _garrett.green@exxonmobil.com_____ Telephone: ______ 575-200-0729______

OCD Only

Received by: _______ Date: _______ Date: ________ Date: ________

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Incident ID	NAPP2214735696
District RP	
Facility ID	
Application ID	

Closure

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

Closure Report Attachment Checklist: Each of the following items must be included in the closure report.

A scaled site and sampling diagram as described in 19.15.29.	11 NMAC
Photographs of the remediated site prior to backfill or photomust be notified 2 days prior to liner inspection)	s of the liner integrity if applicable (Note: appropriate OCD District office
☐ Laboratory analyses of final sampling (Note: appropriate OD	C District office must be notified 2 days prior to final sampling)
□ Description of remediation activities	
and regulations all operators are required to report and/or file certa may endanger public health or the environment. The acceptance of should their operations have failed to adequately investigate and rehuman health or the environment. In addition, OCD acceptance of compliance with any other federal, state, or local laws and/or regularestore, reclaim, and re-vegetate the impacted surface area to the coaccordance with 19.15.29.13 NMAC including notification with 19.15.29.13 NMAC including notific	lations. The responsible party acknowledges they must substantially onditions that existed prior to the release or their final land use in OCD when reclamation and re-vegetation are complete. Title: _Environmental Coordinator
email: garrett.green@exxonmobil.com	Telephone:575-200-0729
OCD Only	
· 	D. /
Received by:	Date:
	y of liability should their operations have failed to adequately investigate and water, human health, or the environment nor does not relieve the responsible lor regulations.
Closure Approved by: Scott Rodgers	Date: 02/23/2024
Printed Name: Scott Rodgers	Environmental Specialist Adv.



September 20, 2023

New Mexico Oil Conservation Division

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

Re: Closure Request Addendum
PLU 18 Twin Wells Ranch 155H
Incident Number NAPP2214735696
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared the following *Closure Request Addendum* to document depth to groundwater assessment for the PLU 18 Twin Wells Ranch 155H (Site, Figure 1) following a denial of the previous *Closure Request*, submitted on August 12, 2022 (Appendix A). The New Mexico Oil Conservation Division (NMOCD) denied the *Closure Request* based on absence of a water well within ½-mile of the release or would require the use of the strictest Closure Criteria for remediation purposes. A depth to water boring was installed and the following *Closure Request Addendum* details the observations and findings of the groundwater assessment and requests closure for Incident Number NAPP2214735696.

SITE DESCRIPTION AND CLOSURE REQUEST SUMMARY

The Site is located in Unit B, Section 19, Township 24 South, Range 31 East, in Eddy County, New Mexico (32.20968°, -103.81491°) and is associated with oil and gas exploration and production operations on federal land managed by the Bureau of Land Management (BLM).

On May 15, 2022, equipment failure of a pump resulted in the release of approximately 8 barrels (bbls) of produced water treated with friction reducer. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; approximately 7 bbls of fluid were recovered. XTO reported the release to the NMOCD and submitted a Form C-141 on May 27, 2022. The release was assigned Incident NAPP2214735696.

Based on the results of the August 2022 Site Characterization, the following NMOCD Table I Closure Criteria (Closure Criteria) were applied:

- 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

Ensolum, LLC | Environmental, Engineering & Hydrogeologic Consultants 3122 National Parks Highway | Carlsbad, NM 88220 | ensolum.com XTO Energy, Inc Closure Request Addendum PLU 18 Twin Wells Ranch 155H



• Chloride: 10,000 mg/kg

Site assessment and excavation activities were conducted at the Site between June and July 2022 to address the May 15, 2022 release of produced water with friction reducer. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure.

NMOCD denied the Closure Request on September 30, 2022 based on the following reason:

Closure Report Denied. The depth to groundwater has not been adequately determined. When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided in the submission. The responsible party may choose to remediate to the most stringent levels listed in Table 1 of 19.15.29 NMAC in lieu of drilling to determine the depth to groundwater. Confirmation samples should be delineated to 600 mg/kg for chlorides and 100 mg/kg TPH to define the edge of the release laterally. Please resubmit a revised Closure Report by October 31, 2022.

DEPTH TO GROUNDWATER ASSESSMENT

Based on the *Closure Request* denial, a depth to groundwater boring was advanced on August 7, 2023. Soil boring BH01 was advanced approximately 0.20 miles from the release (Figure 1) utilizing an air rotary drill rig. Boring BH01 was completed to 110 feet below ground surface (bgs). The field geologist observed drill cuttings for indications of saturated soils indicative of groundwater conditions as well as documented the lithology on a Lithologic / Soil Sampling Log, which is provided in Appendix B. Field observations did not indicated groundwater was present throughout the 110-foot soil column.

Following completion of drilling activities, the boring was allowed to sit for at least 72 hours to allow slow infill of groundwater, if present, to enter the boring. Observations of boring BH01 following the 72-hour wait period confirmed the absence of groundwater, indicating groundwater beneath the Site is greater than 110 feet bgs.

CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the May 2022 release of produced water with friction reducer utilizing the Closure Criteria for sites with no sensitive receptors and an estimated depth to groundwater between 51 feet and 100 feet bgs. The August 2022 *Closure Request* was denied by NMOCD for not adequately assessing depth to groundwater beneath the Site. A depth to groundwater boring was advanced to assess groundwater beneath the Site, which indicated groundwater beneath the Site is actually greater than 110 feet bgs. This follow-up assessment appears to have reasonably estimated depth to groundwater and confirms remedial actions completed at the Site utilizing the Site-specific Closure Criteria were appropriate and protective of human health, the environment, and groundwater. As such, XTO respectfully requests closure for Incident Number NAPP2214735696.

XTO Energy, Inc Closure Request Addendum PLU 18 Twin Wells Ranch 155H



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

Sincerely, **Ensolum, LLC**

Daniel R. Moir, PG Senior Managing Geologist Ashley L. Ager, M.S., PG Principal

Garrett Green, XTO Tommee Lambert, XTO Bureau of Land Management

Appendices:

CC:

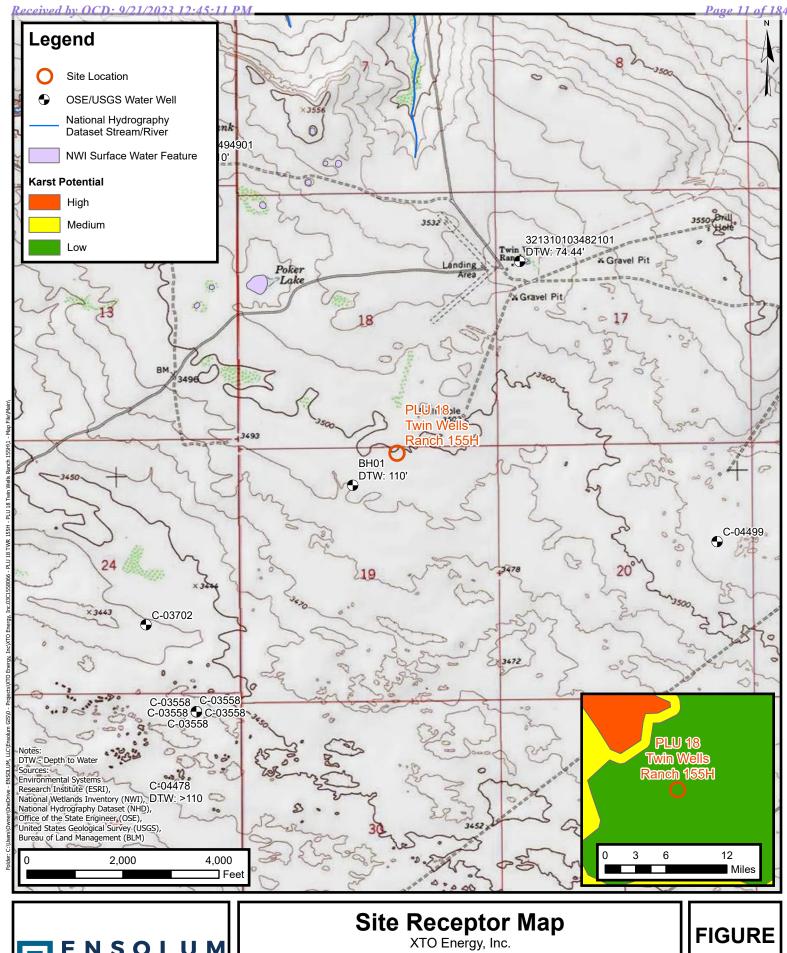
Figure 1 Site Receptor Map

Appendix A Closure Request, dated August 12, 2022

Appendix B Lithologic / Soil Sampling Log



Figure





PLU 18 Twin Wells Ranch 155H Incident Number: NAPP2214735696 Unit B, Section 19, Township 24 South, Range 31 East Eddy County, New Mexico

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APPENDIX A

Closure Request, dated August 12, 2022



August 12, 2022

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

Re: Closure Request

PLU 18 Twin Wells Ranch 155H Incident Number NAPP2214735696 Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared the following Closure Request to document excavation and soil sampling activities completed to address impacted soil at the PLU 18 Twin Wells Ranch 155H (Site). Soil was impacted by a release of produced water and friction reducer onto the surface of the well pad. Based on the excavation activities and analytical results from the soil sampling events, XTO is submitting this Closure Request, describing remediation that has occurred and requesting closure for Incident Number NAPP2214735696.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit B, Section 19, Township 24 South, Range 31 East, in Eddy County, New Mexico (32.20968° N, 103.81491° W) and is associated with oil and gas exploration and production operations on federal land managed by the Bureau of Land Management (BLM).

On May 15, 2022, equipment failure of a pump resulted in the release of approximately 8 barrels (bbls) of produced water treated with friction reducer. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; approximately 7 bbls of fluid were recovered. XTO reported the release to the NMOCD and submitted a Form C-141 on May 27, 2022. The release was assigned Incident Number NAPP2214735696.

The friction reducer is mixed with the produced water and used as frac fluid during the well completion process. The safety data sheet (SDS) for the friction reducer is provided as an attachment.

SITE CHARATERIZATION 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 estimated to be between 50 feet below ground surface (bgs) and 100 feet bgs based on the nearest groundwater well data. The nearest groundwater well is United States

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



Geological Survey (USGS) well 321310103482101, located approximately 0.8 miles northeast of the Site. The depth to groundwater in the well, 74 feet bgs, was most recently measured in 2013. In addition, New Mexico Office of the State Engineer documents three wells, C-4483, C-4499, and C-4478, located approximately 1 mile to 1.5 miles to the west, east, and south of the Site, respectively, all indicating regional depth to groundwater is greater that 100 feet bgs. Multiple data point exist around the Site and there are no surface features indicative of the presence of shallow groundwater. All wells used for depth to water determination are depicted on Figure 1 and the referenced well records are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is Poker Lake approximately 4,360 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: 10,000 mg/kg

SITE ASSESSMENT AND SAMPLING ACTIVITIES

On June 30, 2022 and July 21, 2022, Ensolum personnel visited the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. Seven preliminary soil samples (SS01 through SS07) were collected within and around the release extent from a depth of 0.5 feet bgs to assess the lateral exent of the release. The preliminary soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride Hach® chloride QuanTab® test strips. The release extent and preliminary soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was completed during the site visit and a photographic log is included in Appendix B.

The preliminary 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 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, collected within the release extent indicated that TPH-GRO/TPH-DRO and/or TPH concentrations exceeded the Closure Criteria. Laboratory analytical results for preliminary soil samples SS04 through SS07, collected around the release extent, indicated that benzene, BTEX, TPH-GRO/TPH-DRO and TPH, and chloride concentrations were compliant with the strictest Table 1 Closure Criteria, and confirmed the lateral extent of the release. Laboratory analytical results are summarized on Table 1 and the complete laboratory



analytical reports are included in Appendix C. Based on the laboratory analytical results, additional remediation activities were warranted.

EXCAVATION SOIL SAMPLING ACTIVITIES AND ANALYTICAL RESULTS

On July 21, 2022, Ensolum personnel returned to the Site to oversee excavation activites. Impacted soil was excavated from the release area as indicated by visible staining and laboratory analytical results for the preliminary soil samples. Excavation activities were performed using track-mounted backhoe and transport vehicle. To direct excavation activities, soil was screened for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. The excavation was completed to a depth of 1.5 feet bgs. Photographic documentation of the excavation activities is included in Appendix B.

Following removal of the impacted soil, 5-point composite soil samples were collected at least every 200 square feet from the floor of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples FS01 through FS05 were collected from the floor of the excavation from depths ranging from 1-foot bgs to 1.5 feet bgs. Because the excavation was shallow, the floor sample composite samples included aliquots collected from the nearby sidewalls. The soil samples were collected, handled, and analyzed following the same procedures as described above. The excavation extent and excavation soil sample locations are presented on Figure 3.

The excavation area measured approximately 955 square feet. A total of approximately 55 cubic yards of impacted soil were removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Facility in Carlsbad, New Mexico.

Laboratory analytical results for excavation floor samples FS01 through FS20 indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria and no further remediation was required. The laboratory analytical results are summarized on Table 1 and the complete laboratory analytical reports are included in Appendix C.

CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the May 15, 2022 release of produced water with friction reducer. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure. Based on the soil sample laboratory analytical results, no further remediation is required. XTO will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions. As such, XTO respectfully requests closure for Incident Number NAPP2214735696.

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

Sincerely,

Ensolum, LLC

Tacoma Morrissey Senior Geologist

Mouissey

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

ashley L. ager

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

Appendix B Photographic Log

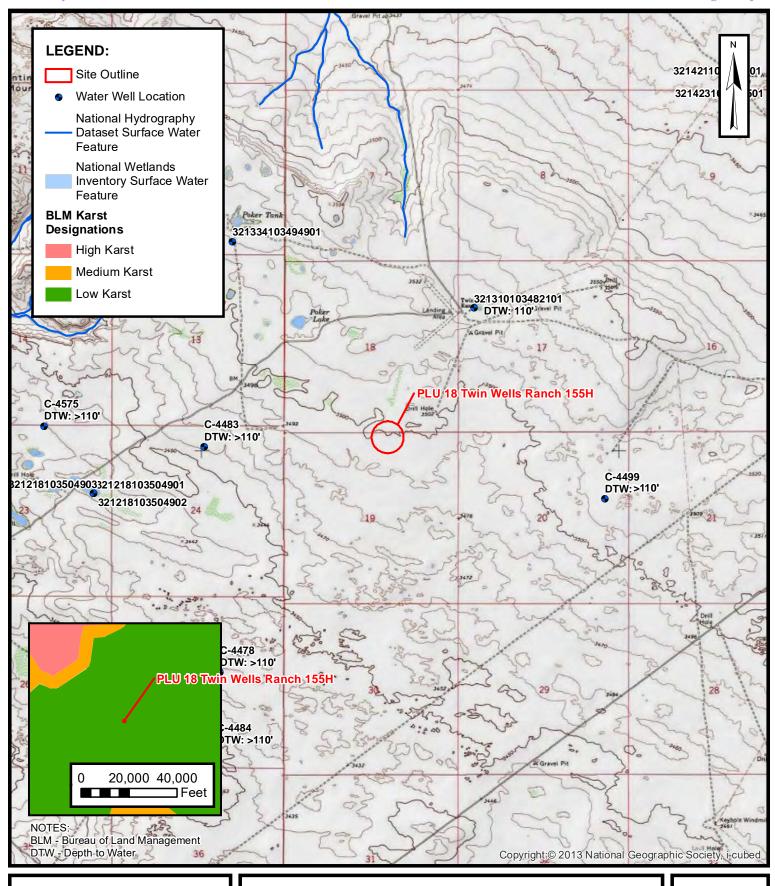
Appendix C Laboratory Analytical Reports & Chain-of-Custody Documentation

Appendix D NMOCD Notifications

Appendix E Safety Data Sheet for Friction Reducer



FIGURES



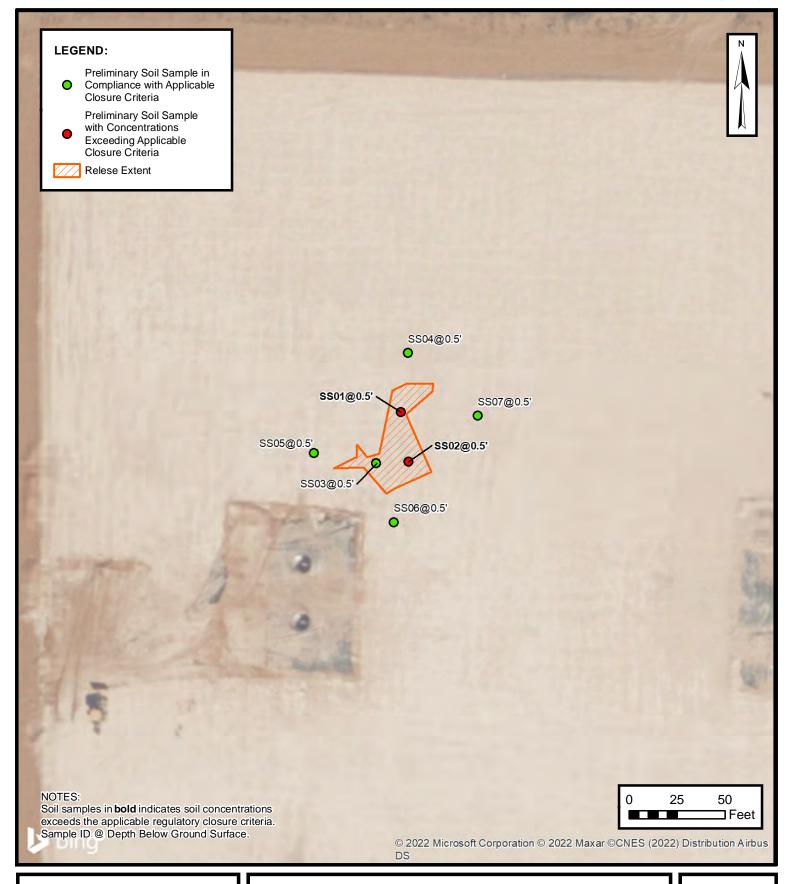


SITE RECEPTOR MAP

XTO ENERGY, INC
PLU 18 TWIN WELLS RANCH 155H
NAPP2214735696

Unit B, Section 19, Township 24S, Range 31E Eddy County, New Mexico FIGURE 1

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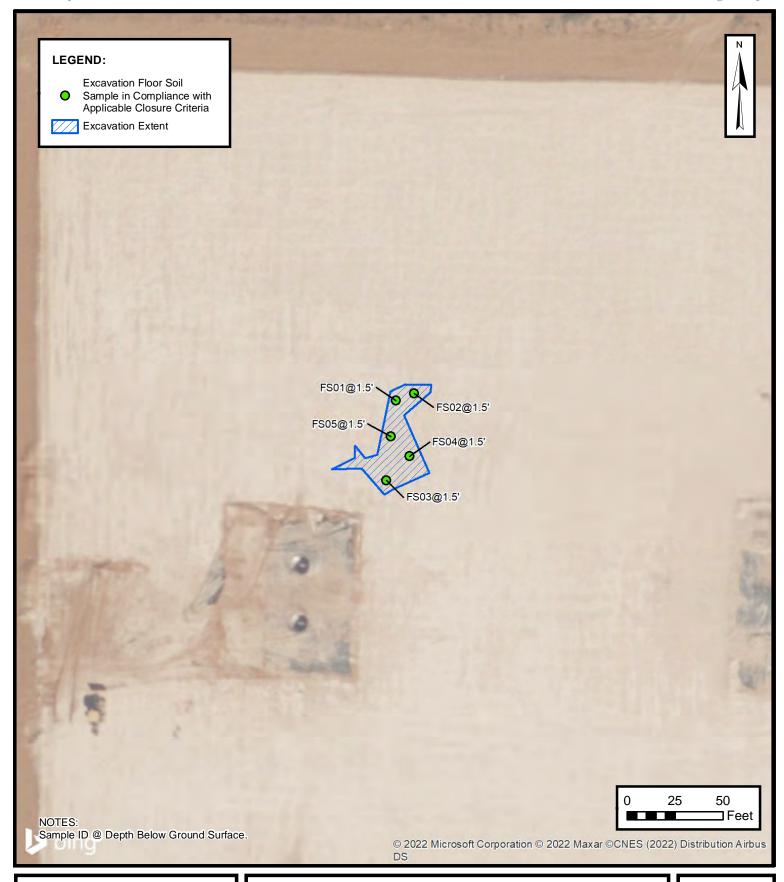
PRELIMINARY SOIL SAMPLE LOCATIONS

XTO ENERGY, INC
PLU 18 TWIN WELLS RANCH 155H
NAPP2214735696
Unit B, Section 19, Township 24S, Range 31E
Eddy County, New Mexico

2

FIGURE

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EXCAVATION SOIL SAMPLE LOCATIONS

XTO ENERGY, INC
PLU 18 TWIN WELLS RANCH 155H
NAPP2214735696
Unit B, Section 19, Township 24S, Range 31E
Eddy County, New Mexico

FIGURE

3



TABLES

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TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS PLU 18 Twin Wells Ranch 155H XTO Energy, Inc. Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 C	losure Criteria (NMAC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	10,000
				Pre	liminary Soil San	nples				
SS01	06/30/2022	0.5	0.0205	4.42	62.4	1,010	2,610	1,070	3,680	343
SS02	06/30/2022	0.5	<0.0202	< 0.0404	121	787	4,340	908	5,250	3,240
SS03	06/30/2022	0.5	<0.00200	< 0.00400	119	22.8	88.5	142	230	1,410
SS04	07/21/2022	0.5	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	79.4
SS05	07/21/2022	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	179
SS06	07/21/2022	0.5	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	55.5
SS07	07/21/2022	0.5	<0.00200	< 0.00399	<49.9	<49.9	84.0	<49.9	84.0	167
				Excav	ation Floor Soil S	amples				
FS01	07/21/2022	1.5	<0.00200	< 0.00399	<49.9	<49.9	173	<49.9	173	11.0
FS02	07/21/2022	1.5	<0.00198	< 0.00397	<49.9	<49.9	144	<49.9	144	34.0
FS03	07/21/2022	1.5	<0.00199	<0.00398	<50.0	<50.0	123	<50.0	123	15.8
FS04	07/21/2022	1.5	<0.00199	<0.00398	<50.0	<50.0	106	<50.0	106	30.3
FS05	07/21/2022	1.5	<0.00200	<0.00399	<50.0	<50.0	92.3	<50.0	92.3	38.0

Notes:

bgs: below ground surface mg/kg: milligrams per kilogram NMOCD: New Mexico Oil Conservation Division BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

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

GRO: Gasoline Range Organics DRO: Diesel Range Organics ORO: Oil Range Organics TPH: Total Petroleum Hydrocarbon

Ensolum 1 of 1



APPENDIX A

Referenced Well Records



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 <u>data</u> from over 13,500 stations nationwide.
- Full News

Groundwater levels for the Nation

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

Search Results -- 1 sites found

site_no list =

• 321310103482101

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

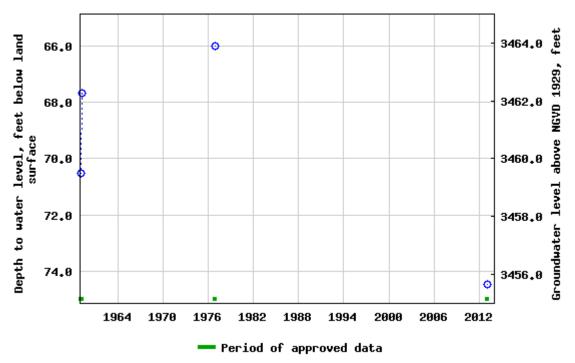
USGS 321310103482101 24S.31E.17.13120

Available data for this site	Groundwater:	Field measurements	; 🗸	GO		
Eddy County, New Mexico						
Hydrologic Unit Code 1306	0011					
Latitude 32°13'14.1", Lon	gitude 103°	48'23.4" NAD8	3			
Land-surface elevation 3,5	30.00 feet	above NGVD29				
This well is completed in th	ne Other aq	uifers (N99990	THER) national a	aquifer.	
This well is completed in th	ne Alluvium	, Bolson Deposi	ts and	d Other Su	rface Depo	sits
(110AVMB) local aquifer		•			•	

Output formats

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

USGS 321310103482101 245.31E.17.13120



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

Accessibility

FOIA

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Policies and Notices

U.S. Department of the Interior | U.S. Geological Survey

Title: Groundwater for USA: Water Levels

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

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

Page Last Modified: 2022-06-28 17:03:47 EDT

0.69 0.49 nadww01





	OSE POD NO		NO.)			WELL TAG ID N	10.		OSE FILE NO(S).			
GENERAL AND WELL LOCATION	POD1 (B)	H-01)				n/a			C-4483				
AT.	WELL OWN	ER NAM	E(S)						PHONE (OPTIO	ONAL)			
, 0C	XTO Energ	gy (Ky	le Li	ttrell)									
רנו	WELL OWN	ER MAIL	JING A	ADDRESS					CITY		STATE		ZIP
EL	6401 Holid	lay Hil	l Dr.						Midland TX 79707				
W (<u> </u>				
Z	WELL			DE	GREES 32°	MINUTES 12'	SECO:						
Ę	LOCATIO	N	LATI	TUDE	32"	12	31.	N]	REQUIRED: ONE TENT	TH OF A	SECOND	
ER.	(FROM GP	S)	LONG	SITUDE	-104°	50'	0.7	72" W	* DATUM REQUIRED: WGS 84				
E.N.	DESCRIPTION				STREET ADD	RESS AND COMM	ON LANDM	IARKS - PLS	S (SECTION TO	WNSHJIP, RANGE) WH	ERE AVA	ILABLE.	
1.6				T24S R30E					(, ,			
	LICENSE NO),	·······································	NAME OF LICENSED	DRILLER	· <u>-</u>				NAME OF WELL DRI	LLING C	OMPANY	
	124					Jackie D. Atki	ns					Associates, I	nc.
	DRILLING S	TARTED	, +	DRILLING ENDED	DEPTH OF CO	MPLETED WELL	(FT)	BORE HO	LE DEPTH (FT)	DEPTH WATER FIRS	T ENCO	UNTERED (FT)	
	11/24/			11/24/2020		rary well mate			110		n/a	, ,	
						•				STATIC WATER LEV	EI IN CC	MDI ETED WE	II (PT)
	COMPLETE	WELL:	IS:	ARTESIAN	DRY HO	LE SHAL	LOW (UNC	ONFINED)		SIAIIC WAIER LEV	n/a		LL (F1)
2. DRILLING & CASING INFORMATION				F5	MUD	ADDIT	TIVE CDE	CIEV.		<u> </u>			
[AT	DRILLING F			✓ AIR	1,1	L							
OR.	DRILLING M	ŒTHOD:	:	ROTARY	HAMME	R CABL	E TOOL	<u>√</u> OTHE	IR - SPECIFY:	Hollo	w Stem	Auger	
NF	DEPTH	(feet bg	gl)	BORE HOLE	CASING	MATERIAL A	ND/OR		ASING	CASING	CASI	NG WALL	SLOT
ق	FROM	TO	0	DIAM	C . 1 . 1	GRADE each casing string			NECTION	INSIDE DIAM.		ICKNESS	SIZE
SIL	(inches)				sections of scree			TYPE ling diameter)	(inches)	(inches)	(inches)	
72	0	11	0	±8.5	<u> </u>	Boring- HSA		(
35													
				<u> </u>									
RIL					İ								<u> </u>
2. D													1
.,				<u> </u>	<u>:</u>								1
				1	 			<u> </u>			 		-
				 									
ĺ					 			 -			 		
					<u> </u>			<u> </u>		<u> </u>	<u> </u>		
	DEPTH	(feet bg	gl)	BORE HOLE	L	IST ANNULAR	SEAL MA	TERIAL A	AND	AMOUNT	1	METHO	D OF
AL.	FROM	TO	0	DIAM. (inches)	GRA	VEL PACK SE	ZE-RANG	E BY INTI	ERVAL	(cubic feet)		PLACEN	MENT
ER													
[AT]					 				==				
R Z						• • • •					\dashv		
[¥]				+								Adaa.a	
ANNULAR MATERIAL				+	<u> </u>					OSE DIL DEC	-14	UZUPM3:12	7
				+	1								
Э.				+	-		<u>.</u>		···		+		
		<u> </u>		1	<u> </u>				"	<u> </u>			
FOR	OSE INTER									0 WELL RECORD		1	0/17)
FILI	e no. C	-44	18			POD	NO.	1	TRN	NO. 6797	44	<u> </u>	
LOC	ATION	12	7	, 7	245	R30 E	Sex	24	WELL TAG I	DNO.	Γ	PAGE	1 OF 2

PAGE 2 OF 2

WELL TAG ID NO.

	DEPEN (4	C1\	I		<u> </u>		ESTIMATED
	DEPTH (1	TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONE (attach supplemental sheets to fully describe all units)	s	WATER BEARING? (YES / NO)	YIELD FOR WATER- BEARING ZONES (gpm)
	0	24	24	Sand, Fine-grained, poorly-graded, with caliche, Tan-Off-White		Y /N	
Ì	24	34	10	Sand, Fine-grained, poorly-graded, silty, with caliche gravel, Tan-Off-W	/hite	Y ✓N	
	34	51	17	Sand, Fine-grained, poorly-graded, silty, with caliche gravel, Light Bro	wn	Y ✓N	
	51	54	3	Sand, Fine-grained, poorly-graded, silty, with caliche gravel, Light Brown	-Browi	y ✓n	
	54	76	22	Sand, Fine-grained, poorly-graded, Brown, dry		Y ✓N	
Ţ	76	101	25	Sand, Fine-grained, poorly-graded, Light-Brown, dry		Y ✓N	
WEL	101	110	ist	Y ✓N			
4. HYDROGEOLOGIC LOG OF WELL				Y N			
,oG				Y N			
ICI				Y N			
COG				Y N			
EO				Y N			
ROC						Y N	
EX.D						Y N	
4						Y N	
						Y N	
						Y N	
						Y N	
						Y N	
						Y N	•
						Y N	
	METHOD U	AL ESTIMATED					
	РИМ	р Па	IR LIFT	BAILER OTHER - SPECIFY:	WEI	L YIELD (gpm):	0.00
		· L.					
NOI	WELL TES			ACH A COPY OF DATA COLLECTED DURING WELL TESTING, IN ME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OV			
TEST; RIG SUPERVIS	MISCELLA	NEOUS INI	16	emporary well materials removed and the soil boring backfilled usi et below ground surface, then hydrated bentonite chips from ten fe ogs adapted from LTE on-site geologist.	ng dril et belo	l cuttings from tot w ground surface	al depth to ten to surface.
5. TEST	PRINT NAM		RILL RIG SUPE	RVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CON	NSTRU(CTION OTHER TH	AN LICENSEE:
SIGNATURE	CORRECT	RECORD O	F THE ABOVE	FIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL 30 DAYS AFTER COMPLETION OF WELL DRILLING:	LIEF, T	HE FOREGOING I LD WITH THE ST	S A TRUE AND
	Jack K	Itkins		Jackie D. Atkins	SE DI	T DE C21†202 0	m3;29
ý.	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	SIGNAT	URE OF DRILLI	BR / PRINT SIGNEE NAME		DATE	
_	R OSE INTER	NAL USE			ELL RE	CORD & LOG (Ver	rsion 06/30/2017)
FIL	ENO.	<u> </u>	<u> </u>	POD NO. TRN NO.	<u>6</u>	<u>67774</u>	

LOCATION

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



koswell Office 1900 WEST SECOND STREET ROSWELL, NM 88201

STATE OF NEW MEXICO OFFICE OF THE STATE ENGINEER

Trn Mbr: 679344 File Nbr:

C 04483

Well File Nbr: C 04483 POD1

Jan. 22, 2021

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

Greetings:

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

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

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

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

Andrew Dennis (575) 622 - 6521

drywell



	OSE POD NO	•	0.)		WELL TAG ID NO.			OSE FILE NO(S).			
GENERAL AND WELL LOCATION	POD1 (M	W-1)			n/a			C-4499				
Ψ	WELL OWNE	_	•					PHONE (OPTIO	ONAL)			
0	XTO Energ	gy (Kyle	Littrell)									
[]			IG ADDRESS					CITY		STATE		ZIP
WE	6401 Holid	lay Hill	Dr.					Midland		TX	79707	
S	WELL		I	DEGREES	MINUTES	SECOND	S					
ΥŢ	LOCATIO	N L	ATITUDE	32°	12'	15.89	" N	ACCURACY	REQUIRED: ONE TENT	TH OF A S	SECOND	
ER	(FROM GP	S) L	ONGITUDE	-103°	47'	36.29	" W	* DATUM REG	QUIRED: WGS 84			
EN	DESCRIPTION		ING WELL LOCATION	O STREET ADD	RESS AND COMMON	LANDMAR	RKS – PLS	S (SECTION, TO	WNSHJIP, RANGE) WH	ERE AVA	ILABLE	
1.0	SE NE Sec	. 20 T24	IS R31E									
	LICENSE NO	· ·	NAME OF LICENSE	D DRILLER					NAME OF WELL DRI	LLING C	OMPANY	
	124	19			Jackie D. Atkins				Atkins Eng	ineering	Associates, I	nc.
	DRILLING S		DRILLING ENDED		, ,			LE DEPTH (FT)	DEPTH WATER FIRS			
	12/30/	2020	12/30/2020	tempo	temporary well material 1			110		n/a		
7	COMPLETE	WELL IS	: ARTESIAN	DRY HO	DRY HOLE SHALLOW (UNCONFINED)			STATIC WATER LEV	EL IN CO n/a		ILL (FT)	
2. DRILLING & CASING INFORMATION	DRILLING FI	LUID:	✓ AIR	MUD	MUD ADDITIVES – SPECIFY:				1			
ORM	DRILLING M	ETHOD:	ROTARY	П намме	R CABLE T	OOL	OTHE	R – SPECIFY:	Hollo	w Stem	Auger	
Ž	DEPTH	`	BORE HOLE	CASING	MATERIAL AND GRADE	O/OR	CA	ASING	CASING		NG WALL	SLOT
2	FROM TO DIAM		(include	each casing string,	and		NECTION YPE	INSIDE DIAM. T		CKNESS inches)	SIZE (inches)	
CAS		110	(inches)	note	sections of screen)	1		ling diameter)	` ′			` ′
જ	0	110	±8.5		Boring- HSA							
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D.												
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	DEPTH	(feet bgl)	poid non		IST ANNULAR SI	EAL MAT	ERIAL A	AND	AMOUNT		метно	
IAL	FROM	то	DIAM. (inches) GRA	AVEL PACK SIZE	-RANGE I	BY INTE	RVAL	(cubic feet)		PLACEN	MENT
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ANNULAR MATERIAL												
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	OSE INTER	NAL US	E			_	.,		0 WELL RECORD			0/17)
├	ENO.		1499		POD NO		/	TRN		53	32	
LOC	ATION		2	45.31	E.20.2	ノイン		WELL TAG I	D NO.	_	PAGE	1 OF 2

OSE DJJ JAN 27 2021 PM3:34

	DEPTH (feet bgl)	THICKNESS (feet)	INCLUDE WATI	ND TYPE OF MATER ER-BEARING CAVII pplemental sheets to	TES OR FRAC	TURE ZONES	5	WATE BEARIN (YES/1	NG?	ESTIMATED YIELD FOR WATER- BEARING ZONES (gpm)		
	0	6	6	SAND, well g	raded, fine-to-large gr	ain particles red	l-brown, dry	Ì	¥	√N			
	6	8	2		I, fine grained little cla			noist		√ N			
	8	11	3		solidated, some sand,	· · · · · ·	•	-	Y	√ N			
	11	46	35	CALICHE, mod. cons					Y	√ N			
	46	74	28	SAND, well-graded,	medium grain,caliche	gravel (1-4mm), light brown,	dry.	Y	√ N			
اد	74	110	36		ed, fine/large grain, fev				Y	√ N			
VEL									Y	N			
4. HYDROGEOLOGIC LOG OF WELL							Y	N					
90'													
ICT													
507													
EO							-		Y	N			
ROC									Y	N			
EXD								İ	Y	N			
4.1									Y	N			
			<u> </u>						Y	N			
							,		Y	N			
	-								Y	N			
									Y	N			
									Y	N			
	 								Y	N			
	METHOD U	SED TO ES	TIMATE YIELD	OF WATER-BEARIN	IG STRATA:				L ESTIMA				
	PUM	P A	IR LIFT	BAILER O	THER - SPECIFY:			WEL	L YIELD	(gpm):	0.00		
NO	WELL TES			ACH A COPY OF DA' ME, AND A TABLE S									
TEST; RIG SUPERVISION	MISCELLA	NEOUS INF	fe	emporary well materi et below ground surf ogs adapted from WS	ace, then hydrated b								
EST	PRINT NAM	(E(S) OF D	RILL RIG SUPER	RVISOR(S) THAT PRO	OVIDED ONSITE SU	PERVISION O	F WELL CON	STRUC	TION OT	HER TH	IAN LICENSEE:		
5.1	Shane Eldri			.,									
TURE	CORRECT	RECORD O	F THE ABOVE I	FIES THAT, TO THE I DESCRIBED HOLE AT 30 DAYS AFTER COM	ND THAT HE OR SH	E WILL FILE							
6. SIGNATURE	Jack A	tkins		Ja	ackie D. Atkins				01/15/2021				
9		SIGNAT	URE OF DRILLE	ER / PRINT SIGNEE	NAME				I	DATE			
FOF	R OSE INTER	NAL USE					WR-20 WE	LL REC	ORD & L	OG (Vei	rsion 06/30/2017)		
			luaa		POD NO.	7	TRN NO.	11	825	35	> 1		

WELL TAG ID NO. PAGE 2
USE DI) JAN 27 2021 PM3:34

PAGE 2 OF 2

LOCATION

2021-1-15_C-4499_POD1_OSE_Well Record and Log_plu129-forsign

Final Audit Report 2021-01-15

Created:

2021-01-15

By:

Lucas Middleton (lucas@atkinseng.com)

Status:

Signed

Transaction ID:

CBJCHBCAABAAgs296c366oClflrLCiy9WDKJlrUnq-9u

"2021-1-15_C-4499_POD1_OSE_Well Record and Log_plu129-f orsign" History

- Document created by Lucas Middleton (lucas@atkinseng.com) 2021-01-15 8:45:00 PM GMT- IP address: 69.21.248.123
- Document emailed to Jack Atkins (jack@atkinseng.com) for signature 2021-01-15 8:45:35 PM GMT
- Email viewed by Jack Atkins (jack@atkinseng.com) 2021-01-15 9:05:13 PM GMT- IP address: 74.50.153.115
- Document e-signed by Jack Atkins (jack@atkinseng.com)

 Signature Date: 2021-01-15 9:13:18 PM GMT Time Source: server- IP address: 74.50.153.115
- Agreement completed.
 2021-01-15 9:13:18 PM GMT

DISE DII JAN 27 2021 PK3:34



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

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PAGE 1 OF 2

WELL TAG ID NO.

NO	OSE POD NO. (WELL NO.) POD1 (BH-01) WELL TAG ID NO. n/a							OSE FILE NO(S C-4478	5).	C-4478					
DCATI	WELL OWNE XTO Energ	٠,						PHONE (OPTIO	DNAL)						
VELL LA	WELL OWNI 6401 Holid							CITY Midland		STATE TX 79	707	ZIP			
1. GENERAL AND WELL LOCATION	WELL LOCATION (FROM GPS) LONGITUDE DESCRIPTION RELATING WELL LO SW SE NE Sec. 25 T24S R30H		TITUDE NGITUDE NG WELL LOCATION TO	GREES 32° -103° STREET ADD	MINUTES 11' 49' RESS AND COMMO	SECON 22.5	57" N 14" W	* DATUM REC	REQUIRED: ONE TENT QUIRED: WGS 84 WNSHJIP, RANGE) WHI						
	LICENSE NO		NAME OF LICENSED		Jackie D. Atkins			<u> </u>	NAME OF WELL DRI Atkins Eng	LLING COMPAI		nc.			
	DRILLING S'		DRILLING ENDED 10/07/2020		OMPLETED WELL (F			LE DEPTH (FT) 110	DEPTH WATER FIRS	t encounter n/a	ED (FT)				
Z	COMPLETE	O WELL IS:	ARTESIAN	✓ DRY HOLE SHALLOW (UNCONFINED)					TED WE	LL (FT)					
TIO	DRILLING F	LUID:	✓ AIR	MUD MUD	CIFY:		 								
RMA	DRILLING M	ETHOD:	✓ ROTARY	П намме	R CABLE	rool	□ ОТНЕ	R – SPECIFY:	Hollo	w Stem Aug	er				
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)			CASING CONNECTION TYPE (add coupling diameter)		CASING INSIDE DIAM. (inches)	THICKNI	CASING WALL THICKNESS (inches)				
& CA	0	110	±8.5	Boring- HSA			(auu coup								
ING.															
MIL															
2. DI												 -			
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							=								
		_	-						-			<u></u>			
T.		(feet bgl)	BORE HOLE DIAM. (inches)	1	IST ANNULAR S				AMOUNT (cubic feet)		IETHO!				
RIA	FROM	TO	DIAW. (menes)	GKZ	AVEL FACE SIZE	KANGI	S D I IN I E	ERVAL	(cubic feet)		<u> </u>	1271			
MATE															
ANNULAR MATERIAL															
3. AI															
							<u> </u>	<u>-</u>							
FOR	OSEASTER	NAL USE	10)		I			WR-2	0 WELL RECORD	k LOG (Versi	on 06/3	U/17)			

LOCATION

	DEPTH (i	TO	THICKNESS (feet)	INCLUDE WATE	D TYPE OF MA R-BEARING C. plemental sheet	AVITIES O	R FRACT	URE ZONE	s	BEAR	TER LING? / NO)	YII V B)	TIMATED ELD FOR VATER- EARING NES (gpm)
	0	3	3	Sand, 1	fine-grained, poo	rly-graded,	Red-Brov	wn		Y	√ N		
	3	5	2		vel, 20-30 mil, v					Y	√ N		
	5	13	8		with some grave			own		Y	✓ N		
	13	24	9		e-grained, well-				- †	Y	✓ N		
	24	34	10	· · ·	ium-grained, wel		•			Y	√ N		
ا د	34	44	10		grained, well-g					Y	√ N		
ÆLI	44	110	66	Sand, fine-grained, wel					Brown	Y	√ N		
)F W	••			band, imo gramou, wor	. groote, some c	,		Smonw Item		Y	N		
HYDROGEOLOGIC LOG OF WELL											N		
CLC											N		
DO											N/S	}	11.023
TOE											N.	3	
i OCI		-								Y Y	N	4	
YDE										Y	N.	,	
4. H										Y	N	اب	- 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
									+	Y	N	2	******
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										Y	N		
									-	Y	N		
					2 200 4 0 4					Y	N		
	_	_		OF WATER-BEARING						L ESTIN L YIELD	MATED (gpm):		0.00
	PUMI	Δ Δ	IR LIFT	BAILER OT	HER – SPECIF	Y:					(BF—)		0.00
VISION	WELL TES			ACH A COPY OF DAT ME, AND A TABLE SH									OD,
VISI	MISCELLA	NEOUS INF	ORMATION:	11	1	444	i h	مند بدائم الكاماء	11نساد م		- C +	مار اما	-4h 4a 4au
ER			16	emporary well materia et below ground surfa									
TEST; RIG SUPERV				ogs adapted from LTE			•						
RIG													
EST;	DD TAIT AT A A	(E(6) OE DI	DILL DIC CLIDE	RVISOR(S) THAT PRO	VIDED ONEFT	CIDEDA	SION OF	WELL CON	CTDIIC	TION O	тиер ти	IANII	ICENSEE.
5. T			MILL KIO SUFER	(VISOR(S) IIIAI IRO	VIDED ORBITI	SOLEKAL	SION OI	WELL CON	BIROC	TION	THER II.	IAN L	ICENSEE.
	Shane Eldric	1ge											
				FIES THAT, TO THE B									
TRE				DESCRIBED HOLE AN 30 DAYS AFTER COM				HIS WELL I	RECOR	D WITH	THE STA	ATE E	NGINEER
ATI	AND IIIL I	Diamii iio	DDDK WIIIIK	JO DATED AN TEXT COME	i EE HOIV OF A	DDD DIGD	DI 110.						
SIGNATURE	Jack &	Atkins		Jac	ckie D. Atkins					10/2	6/2020		
6. S											D 4 MD		
		SIGNAT	UKE OF DRILLE	ER / PRINT SIGNEE	NAME						DATE		
_FOI	OSE JACTERI	NAL USE						WR-20 WE	LL REC	CORD &	LOG (Ve	rsion (06/30/2017)
	E NO		NX		POD NO.	1		TRN NO.	9	78	382	2	
LO	CATION C	QUIS	-3Œ	=-25	2-3	-3	WELL	rag id no.	~	JA!		PA	GE 2 OF 2

2020-10-26_C-4478POD1_OSE_Well Record and Log-89-forsign

Final Audit Report

2020-10-27

Created:

2020-10-27

Ву:

Lucas Middleton (lucas@atkinseng.com)

Status:

Signed

Transaction ID:

CBJCHBCAABAAESGKFRG9AU3NcytvOCSRntC1Y-zTs43Y

"2020-10-26_C-4478POD1_OSE_Well Record and Log-89-forsig n" History

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Adobe Sign



APPENDIX B

Photographic Log



Photographic Log

XTO Energy, Inc.
PLU 18 Twin Wells Ranch 155H
NAPP2214735696





Photograph 1 Date: 05/16/2022

Description: View of staining observed during initial site assessment, facing east.

Photograph 2 Date: 05/16/2022

Description: View of staining observed during initial site assessment, facing south.







Photograph 4 Date: 08/11/2022

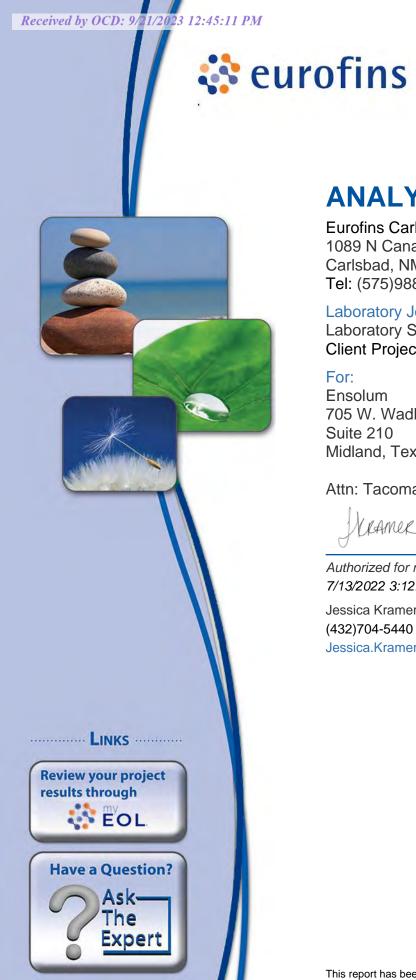
Description: North view of final excavation.

ENSOLUM

APPENDIX C

Laboratory Analytical Reports &

Chain of Custody Documentation



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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: 890-2493-1

Laboratory Sample Delivery Group: 03E1558066 Client Project/Site: PLU 18 Twin Wells 155H

For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Tacoma Morrissey

RAMER

Authorized for release by: 7/13/2022 3:12:59 PM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

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

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

Client: Ensolum
Project/Site: PLU 18 Twin Wells 155H
Laboratory Job ID: 890-2493-1
SDG: 03E1558066

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Definitions/Glossary

Job ID: 890-2493-1 Client: Ensolum Project/Site: PLU 18 Twin Wells 155H

SDG: 03E1558066

Qualifiers

GC VOA

Qualifier **Qualifier Description**

Indicates the analyte was analyzed for but not detected.

GC Semi VOA

В Compound was found in the blank and sample.

Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

U Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier **Qualifier Description**

Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
n	Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery

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

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac **Dilution Factor**

DL Detection Limit (DoD/DOE)

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

DLC Decision Level Concentration (Radiochemistry)

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

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

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

NC Not Calculated

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

NEG Negative / Absent POS Positive / Present

PQL Practical Quantitation Limit

PRES Presumptive QC **Quality Control**

RER Relative Error Ratio (Radiochemistry)

Reporting Limit or Requested Limit (Radiochemistry) RL

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

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

TNTC Too Numerous To Count

Case Narrative

Client: Ensolum

Project/Site: PLU 18 Twin Wells 155H

Job ID: 890-2493-1

SDG: 03E1558066

Job ID: 890-2493-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-2493-1

Receipt

The samples were received on 7/1/2022 9:06 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 5.6°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 method blank for preparation batch 880-28993 and analytical batch 880-29112 contained Gasoline Range Organics (GRO)-C6-C10 and Total TPH above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

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

HPLC/IC

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

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Job ID: 890-2493-1

Project/Site: PLU 18 Twin Wells 155H
SDG: 03E1558066

Client Sample ID: SS01

Date Collected: 06/30/22 10:00

Lab Sample ID: 890-2493-1

Matrix: Solid

Date Received: 07/01/22 09:06 Sample Depth: 0.5

Client: Ensolum

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fa
Benzene	0.0205		0.0200		mg/Kg		07/12/22 14:57	07/13/22 13:09	1
Toluene	<0.0998	U	0.0998		mg/Kg		07/11/22 11:47	07/12/22 15:03	5
Ethylbenzene	<0.0998	U	0.0998		mg/Kg		07/11/22 11:47	07/12/22 15:03	5
m-Xylene & p-Xylene	<0.0401	U	0.0401		mg/Kg		07/12/22 14:57	07/13/22 13:09	1
o-Xylene	4.40		0.0998		mg/Kg		07/11/22 11:47	07/12/22 15:03	5
Xylenes, Total	4.40		0.200		mg/Kg		07/11/22 11:47	07/12/22 15:03	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	103		70 - 130				07/11/22 11:47	07/12/22 15:03	5
1,4-Difluorobenzene (Surr)	71		70 - 130				07/11/22 11:47	07/12/22 15:03	5
Method: Total BTEX - Total B	EX Calculation								
Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	4.42		0.0998		mg/Kg			07/12/22 15:02	
Method: 8015 NM - Diesel Rar	ogo Organico (DB)	O) (GC)							
Analyte	•	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	3680		49.8	14.9	mg/Kg			07/07/22 09:01	
Method: 8015B NM - Diesel Ra	ange Organics (D	RO) (GC)							
Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	62.4	В	49.8	14.9	mg/Kg		07/05/22 08:59	07/07/22 07:17	
Diesel Range Organics (Over C10-C28)	1010		49.8	14.9	mg/Kg		07/05/22 08:59	07/07/22 07:17	
Oll Range Organics (Over C28-C36)	2610		49.8	14.9	mg/Kg		07/05/22 08:59	07/07/22 07:17	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1-Chlorooctane	96		70 - 130				07/05/22 08:59	07/07/22 07:17	
o-Terphenyl	87		70 - 130				07/05/22 08:59	07/07/22 07:17	
Method: 300.0 - Anions, Ion C	hromatography -	Soluble							
		0	D.		1114		Danie and d	A II	B.: E
Analyte	Result	Qualifier			Unit	D	Prepared	Analyzed	Dil Fa

Client Sample ID: SS02

Date Collected: 06/30/22 10:05

Lab Sample ID: 890-2493-2

Matrix: Solid

Date Collected: 06/30/22 10:05 Date Received: 07/01/22 09:06

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0202	U	0.0202	mg/Kg		07/12/22 14:57	07/13/22 13:29	10
Toluene	<0.0202	U	0.0202	mg/Kg		07/12/22 14:57	07/13/22 13:29	10
Ethylbenzene	<0.0202	U	0.0202	mg/Kg		07/12/22 14:57	07/13/22 13:29	10
m-Xylene & p-Xylene	<0.0404	U	0.0404	mg/Kg		07/12/22 14:57	07/13/22 13:29	10
o-Xylene	<0.0202	U	0.0202	mg/Kg		07/12/22 14:57	07/13/22 13:29	10
Xylenes, Total	<0.0404	U	0.0404	mg/Kg		07/12/22 14:57	07/13/22 13:29	10

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7/12/2022

Lab Sample ID: 890-2493-2

Job ID: 890-2493-1

Client: Ensolum SDG: 03E1558066 Project/Site: PLU 18 Twin Wells 155H

Client Sample ID: SS02

Date Collected: 06/30/22 10:05 Date Received: 07/01/22 09:06

Sample Depth: 0.5

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96	70 - 130	07/12/22 14:57	07/13/22 13:29	10
1,4-Difluorobenzene (Surr)	94	70 - 130	07/12/22 14:57	07/13/22 13:29	10

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.0404	U	0.0404	mg/Kg			07/12/22 15:02	1

Method: 8015 NM - Diesel Range (Organics (DRO) (GC)						
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	5250	49 9	15.0 mg/Kg			07/07/22 09:01	

Method: 8015B NM - Diesel Rang	e Organics (D	RO) (GC)							
Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	121	В	49.9	15.0	mg/Kg		07/05/22 08:59	07/07/22 07:37	1
Diesel Range Organics (Over C10-C28)	787		49.9	15.0	mg/Kg		07/05/22 08:59	07/07/22 07:37	1
Oll Range Organics (Over C28-C36)	4340		49.9	15.0	mg/Kg		07/05/22 08:59	07/07/22 07:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	98		70 - 130	07/05/22 08:59	07/07/22 07:37	1
o-Terphenyl	97		70 - 130	07/05/22 08:59	07/07/22 07:37	1

Method: 300.0 - Anions, ion Chromatography - Soluble									
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Chloride	3240		25.0	mg/Kg			07/08/22 11:57	5

Lab Sample ID: 890-2493-3 **Client Sample ID: SS03** Date Collected: 06/30/22 10:10 **Matrix: Solid**

Date Received: 07/01/22 09:06

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/11/22 11:47	07/12/22 10:51	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/11/22 11:47	07/12/22 10:51	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/11/22 11:47	07/12/22 10:51	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/11/22 11:47	07/12/22 10:51	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/11/22 11:47	07/12/22 10:51	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/11/22 11:47	07/12/22 10:51	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	124		70 - 130			07/11/22 11:47	07/12/22 10:51	1
1,4-Difluorobenzene (Surr)	77		70 - 130			07/11/22 11:47	07/12/22 10:51	1

Result Qualifier Unit Analyzed Analyte RL Prepared Dil Fac Total BTEX <0.00400 U 0.00400 mg/Kg 07/12/22 15:02

Lab Sample ID: 890-2493-3

Client Sample Results

Client: Ensolum Job ID: 890-2493-1 Project/Site: PLU 18 Twin Wells 155H SDG: 03E1558066

Client Sample ID: SS03

Date Collected: 06/30/22 10:10 Date Received: 07/01/22 09:06

Method: 300.0 - Anions, Ion Chromatography - Soluble

Result Qualifier

1410

Sample Depth: 0.5

Analyte

Chloride

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	230		50.0	15.0	mg/Kg			07/07/22 09:01	1
Method: 8015B NM - Diesel Ran	ge Organics (D	RO) (GC)							
Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	119	В	50.0	15.0	mg/Kg		07/05/22 08:59	07/06/22 17:15	1
Diesel Range Organics (Over C10-C28)	22.8	J	50.0	15.0	mg/Kg		07/05/22 08:59	07/06/22 17:15	1
OII Range Organics (Over C28-C36)	88.5		50.0	15.0	mg/Kg		07/05/22 08:59	07/06/22 17:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	104		70 - 130				07/05/22 08:59	07/06/22 17:15	1
o-Terphenyl	111		70 - 130				07/05/22 08:59	07/06/22 17:15	1

RL

25.2

Unit

mg/Kg

D

Prepared

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Dil Fac

Analyzed

07/08/22 12:06

Surrogate Summary

Client: Ensolum Job ID: 890-2493-1 Project/Site: PLU 18 Twin Wells 155H SDG: 03E1558066

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limit
		BFB1	DFBZ1	
_ab Sample ID	Client Sample ID	(70-130)	(70-130)	
380-16527-A-1-D MS	Matrix Spike	97	95	
380-16527-A-1-E MSD	Matrix Spike Duplicate	111	94	
390-2491-A-3-E MS	Matrix Spike	121	84	
390-2491-A-3-F MSD	Matrix Spike Duplicate	114	82	
390-2493-1	SS01	103	71	
390-2493-2	SS02	96	94	
390-2493-3	SS03	124	77	
_CS 880-29434/1-A	Lab Control Sample	120	89	
_CS 880-29558/1-A	Lab Control Sample	100	100	
_CSD 880-29434/2-A	Lab Control Sample Dup	125	85	
_CSD 880-29558/2-A	Lab Control Sample Dup	99	101	
MB 880-29368/5-A	Method Blank	81	80	
MB 880-29434/5-A	Method Blank	86	79	
MB 880-29558/5-A	Method Blank	96	99	
Surrogate Legend				
BFB = 4-Bromofluorobe	nzene (Surr)			

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2489-A-1-A MS	Matrix Spike	120	110	
890-2489-A-1-A MSD	Matrix Spike Duplicate	122	114	
890-2493-1	SS01	96	87	
890-2493-2	SS02	98	97	
890-2493-3	SS03	104	111	
LCS 880-28993/2-A	Lab Control Sample	103	100	
LCSD 880-28993/3-A	Lab Control Sample Dup	107	102	
MB 880-28993/1-A	Method Blank	113	130	
Surrogate Legend				

OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-2493-1 Project/Site: PLU 18 Twin Wells 155H

SDG: 03E1558066

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-29368/5-A

Lab Sample ID: MB 880-29434/5-A

Matrix: Solid

Analysis Batch: 29380

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 29368

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/10/22 14:09	07/11/22 11:51	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/10/22 14:09	07/11/22 11:51	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/10/22 14:09	07/11/22 11:51	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/10/22 14:09	07/11/22 11:51	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/10/22 14:09	07/11/22 11:51	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/10/22 14:09	07/11/22 11:51	1

MB MB

Surrogate	%Recovery	Qualifier	Limits		
4-Bromofluorobenzene (Surr)	81		70 - 130		
1,4-Difluorobenzene (Surr)	80		70 - 130		

Prepared Dil Fac Analyzed 07/10/22 14:09 07/11/22 11:51 07/10/22 14:09 07/11/22 11:51

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

Prep Batch: 29434

Matrix: Solid Analysis Batch: 29380 мв мв

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/11/22 11:47	07/12/22 03:37	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/11/22 11:47	07/12/22 03:37	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/11/22 11:47	07/12/22 03:37	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/11/22 11:47	07/12/22 03:37	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/11/22 11:47	07/12/22 03:37	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/11/22 11:47	07/12/22 03:37	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		70 - 130	07/11/22 11:47	07/12/22 03:37	1
1,4-Difluorobenzene (Surr)	79		70 - 130	07/11/22 11:47	07/12/22 03:37	1

Lab Sample ID: LCS 880-29434/1-A

Matrix: Solid

Analysis Batch: 29380

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 29434

l		Spike	LCS	LCS				%Rec	
	Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
	Benzene	0.100	0.08859		mg/Kg		89	70 - 130	
l	Toluene	0.100	0.09338		mg/Kg		93	70 - 130	
	Ethylbenzene	0.100	0.09925		mg/Kg		99	70 - 130	
İ	m-Xylene & p-Xylene	0.200	0.1974		mg/Kg		99	70 - 130	
	o-Xylene	0.100	0.1160		mg/Kg		116	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	120	70 - 130
1,4-Difluorobenzene (Surr)	89	70 - 130

Lab Sample ID: LCSD 880-29434/2-A

Matrix: Solid

Analysis Batch: 29380

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

Prep Batch: 29434

Spike LCSD LCSD RPD %Rec Result Qualifier Analyte Added Unit %Rec Limits **RPD** Limit Benzene 0.100 0.08556 mg/Kg 86 70 - 130 3

Prep Type: Total/NA

Client Sample ID: Matrix Spike

Prep Type: Total/NA

QC Sample Results

Client: Ensolum Job ID: 890-2493-1 Project/Site: PLU 18 Twin Wells 155H SDG: 03E1558066

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

Lab Sample ID: LCSD 880-29434/2-A

Matrix: Solid Analysis Ratch: 20380

Analysis Batch: 29360						Prep Batch: 294			
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene	0.100	0.09204		mg/Kg		92	70 - 130	1	35
Ethylbenzene	0.100	0.09312		mg/Kg		93	70 - 130	6	35
m-Xylene & p-Xylene	0.200	0.1907		mg/Kg		95	70 - 130	3	35
o-Xylene	0.100	0.1058		mg/Kg		106	70 - 130	9	35

LCSD LCSD %Recovery Qualifier Surrogate Limits 70 - 130 4-Bromofluorobenzene (Surr) 125 1,4-Difluorobenzene (Surr) 85 70 - 130

Lab Sample ID: 890-2491-A-3-E MS

Matrix: Solid

m-Xylene & p-Xylene

o-Xylene

Analysis Batch: 29380										Batch: 29434
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U	0.101	0.08093		mg/Kg		80	70 - 130	
Toluene	<0.00200	U	0.101	0.08986		mg/Kg		89	70 - 130	
Ethylbenzene	< 0.00200	U	0.101	0.09249		mg/Kg		92	70 - 130	

0.202

0.101

MS MS %Recovery Qualifier Surrogate Limits 70 - 130 4-Bromofluorobenzene (Surr) 121 70 - 130 1,4-Difluorobenzene (Surr) 84

<0.00399 U

<0.00200 U

Lab S

Matri

Analysis Batch: 29380

Sample ID: 890-2491-A-3-F MSD	Client Sample ID: Matrix Spike Duplicate
rix: Solid	Prep Type: Total/NA

0.1874

0.1022

mg/Kg

mg/Kg

Prep Batch: 29434

70 - 130

70 - 130

93

101

Client Sample ID: Lab Control Sample Dup

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00200	U	0.100	0.08202		mg/Kg		82	70 - 130	1	35
Toluene	<0.00200	U	0.100	0.08618		mg/Kg		86	70 - 130	4	35
Ethylbenzene	<0.00200	U	0.100	0.09013		mg/Kg		90	70 - 130	3	35
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1843		mg/Kg		92	70 - 130	2	35
o-Xylene	<0.00200	U	0.100	0.09839		mg/Kg		98	70 - 130	4	35

MSD MSD %Recovery Qualifier Limits Surrogate 4-Bromofluorobenzene (Surr) 70 - 130 114 82 70 - 130 1,4-Difluorobenzene (Surr)

Lab Sample ID: MB 880-29558/5-A

Matrix: Solid

Analysis Batch: 29611

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

Prep Batch: 29558

	MB MB						
Analyte R	esult Qua	alifier RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene <0.0	0200 U	0.00200	mg/Kg		07/12/22 14:57	07/13/22 10:58	1
Toluene <0.0	0200 U	0.00200	mg/Kg		07/12/22 14:57	07/13/22 10:58	1
Ethylbenzene <0.0	0200 U	0.00200	mg/Kg		07/12/22 14:57	07/13/22 10:58	1
m-Xylene & p-Xylene <0.0	0399 U	0.00399	mg/Kg		07/12/22 14:57	07/13/22 10:58	1

QC Sample Results

Client: Ensolum Job ID: 890-2493-1 SDG: 03E1558066 Project/Site: PLU 18 Twin Wells 155H

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

Lab Sample ID: MB 880-29558/5-A

Matrix: Solid

Analysis Batch: 29611

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 29558

		IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/12/22 14:57	07/13/22 10:58	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		07/12/22 14:57	07/13/22 10:58	1

мв мв

MR MR

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130	07/12/22 14:57	07/13/22 10:58	1
1,4-Difluorobenzene (Surr)	99		70 - 130	07/12/22 14:57	07/13/22 10:58	1

Lab Sample ID: LCS 880-29558/1-A **Client Sample ID: Lab Control Sample** Prep Type: Total/NA

Matrix: Solid

Analysis Batch: 29611							Prep	Batch:	29558
	Spike	LCS	LCS				%Rec		
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Benzene	0.100	0.09533		mg/Kg		95	70 - 130		
Toluene	0.100	0.09379		ma/Ka		94	70 - 130		

mg/Kg 70 - 130 Ethylbenzene 0.100 0.09457 95 m-Xylene & p-Xylene 0.200 0.1987 99 70 - 130 mg/Kg o-Xylene 0.100 0.1053 105 70 - 130 mg/Kg LCS LCS

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

Lab Sample ID: LCSD 880-29558/2-A

Matrix: Solid

Analysis Batch: 29611

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

Prep Batch: 29558

1		Spike	LCSD	LCSD				%Rec		RPD
	Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
	Benzene	0.100	0.09955		mg/Kg		100	70 - 130	4	35
	Toluene	0.100	0.09280		mg/Kg		93	70 - 130	1	35
	Ethylbenzene	0.100	0.09166		mg/Kg		92	70 - 130	3	35
	m-Xylene & p-Xylene	0.200	0.1919		mg/Kg		96	70 - 130	3	35
	o-Xylene	0.100	0.1019		mg/Kg		102	70 - 130	3	35

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	99	70 - 130
1.4-Difluorobenzene (Surr)	101	70 - 130

Lab Sample ID: 880-16527-A-1-D MS

Matrix: Solid

Analysis Batch: 29611

Client Sample ID: Matrix Spil	(e
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Prep Type: Total/NA

Prep Batch: 29558

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00199	U	0.0998	0.09311		mg/Kg		93	70 - 130	
Toluene	< 0.00199	U	0.0998	0.09834		mg/Kg		97	70 - 130	
Ethylbenzene	< 0.00199	U	0.0998	0.09857		mg/Kg		99	70 - 130	
m-Xylene & p-Xylene	0.0129		0.200	0.2078		mg/Kg		98	70 - 130	
o-Xylene	0.00546		0.0998	0.1077		mg/Kg		102	70 - 130	

Client: Ensolum Job ID: 890-2493-1 Project/Site: PLU 18 Twin Wells 155H SDG: 03E1558066

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

95

Lab Sample ID: 880-16527-A-1-D MS

Matrix: Solid

Analysis Batch: 29611

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 29558

MS MS Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 97 70 - 130

Lab Sample ID: 880-16527-A-1-E MSD

Matrix: Solid

Analysis Batch: 29611

1,4-Difluorobenzene (Surr)

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 29558

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00199	U	0.100	0.09270		mg/Kg		92	70 - 130	0	35
Toluene	< 0.00199	U	0.100	0.1017		mg/Kg		100	70 - 130	3	35
Ethylbenzene	< 0.00199	U	0.100	0.1036		mg/Kg		103	70 - 130	5	35
m-Xylene & p-Xylene	0.0129		0.201	0.2212		mg/Kg		104	70 - 130	6	35
o-Xylene	0.00546		0.100	0.1174		mg/Kg		111	70 - 130	9	35

70 - 130

MSD MSD

%Recovery Qualifier Surrogate Limits 4-Bromofluorobenzene (Surr) 111 70 - 130 1,4-Difluorobenzene (Surr) 94 70 - 130

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

Lab Sample ID: MB 880-28993/1-A

Matrix: Solid

Analysis Batch: 29112

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 28993

	IVID	IVID							
Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	34.41	J	50.0	15.0	mg/Kg		07/05/22 08:59	07/06/22 10:39	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	15.0	mg/Kg		07/05/22 08:59	07/06/22 10:39	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	15.0	mg/Kg		07/05/22 08:59	07/06/22 10:39	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	113		70 - 130	07/05/22 08:5	9 07/06/22 10:39	1
o-Terphenyl	130		70 - 130	07/05/22 08:5	9 07/06/22 10:39	1

Lab Sample ID: LCS 880-28993/2-A

Matrix: Solid

Analysis Batch: 29112

Client Sample ID: Lab Control Sample

			Spike	LCS	LCS				%Rec	
	Analyte	Α	dded	Result	Qualifier	Unit	D	%Rec	Limits	
	Gasoline Range Organics		1000	919.7		mg/Kg		92	70 - 130	
	(GRO)-C6-C10									
	Diesel Range Organics (Over		1000	1066		mg/Kg		107	70 - 130	
ı	C10 C28)									

C10-C28)

	LUS	LUS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	103		70 - 130
o-Terphenyl	100		70 - 130

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Prep Type: Total/NA Prep Batch: 28993

Client: Ensolum Job ID: 890-2493-1 Project/Site: PLU 18 Twin Wells 155H

SDG: 03E1558066

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

Lab Sample ID: LCSD 880-28993/3-A

Matrix: Solid

Analysis Batch: 29112

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 28993

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	955.0		mg/Kg		95	70 - 130	4	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	1048		mg/Kg		105	70 - 130	2	20
C10-C28)									

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	107		70 - 130
o-Terphenyl	102		70 - 130

Lab Sample ID: 890-2489-A-1-A MS

Matrix: Solid

Analysis Batch: 29112

Client Sample ID: Matrix Spike

Prep Type: Total/NA Prep Batch: 28993

MS MS Qualifier Limits Surrogate %Recovery 1-Chlorooctane 70 - 130 120 o-Terphenyl 110 70 - 130

Lab Sample ID: 890-2489-A-1-A MSD

Matrix: Solid

Analysis Batch: 29112

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 28993

	MSD MSD	
Surrogate	%Recovery Qualifie	r Limits
1-Chlorooctane	122	70 - 130
o-Terphenyl	114	70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-28997/1-A

Matrix: Solid

Analysis Batch: 29213

Client Sample ID: Method Blank **Prep Type: Soluble**

Client Sample ID: Lab Control Sample Dup

MB MB Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fac Chloride <5.00 U 5.00 07/08/22 07:48 mg/Kg

Analysis Batch: 29213

Lab Sample ID: LCS 880-28997/2-A	Client Sample ID: Lab Control Sample
Matrix: Solid	Prep Type: Soluble
Analysis Ratch: 20213	

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit %Rec Limits Chloride 250 243.8 mg/Kg 98 90 - 110

Lab Sample ID: LCSD 880-28997/3-A

Matrix: Solid

Analysis Batch: 29213

Analysis Batch. 23210									
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	250	244.3		mg/Kg		98	90 - 110	0	20

Eurofins Carlsbad

Prep Type: Soluble

Chloride

QC Sample Results

Client: Ensolum Job ID: 890-2493-1 Project/Site: PLU 18 Twin Wells 155H

SDG: 03E1558066

Method: 300.0 - Anions, Ion Chromatography (Continued)

35.6

Lab Sample ID: 890-2491-A-4-F MS Client Sample ID: Matrix Spike

Matrix: Solid Prep Type: Soluble Analysis Batch: 29213

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

253

Lab Sample ID: 890-2491-A-4-G MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid Prep Type: Soluble

314.4

mg/Kg

110

90 - 110

Analysis Batch: 29213 Sample Sample Spike MSD MSD %Rec RPD

Result Qualifier Added Result Qualifier Limits RPD Limit Analyte Unit D %Rec Chloride 35.6 253 304.1 mg/Kg 106 90 - 110 3 20

QC Association Summary

Client: Ensolum Project/Site: PLU 18 Twin Wells 155H

Job ID: 890-2493-1 SDG: 03E1558066

GC VOA

Prep Batch: 29368

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-29368/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 29380

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2493-1	SS01	Total/NA	Solid	8021B	29434
890-2493-3	SS03	Total/NA	Solid	8021B	29434
MB 880-29368/5-A	Method Blank	Total/NA	Solid	8021B	29368
MB 880-29434/5-A	Method Blank	Total/NA	Solid	8021B	29434
LCS 880-29434/1-A	Lab Control Sample	Total/NA	Solid	8021B	29434
LCSD 880-29434/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	29434
890-2491-A-3-E MS	Matrix Spike	Total/NA	Solid	8021B	29434
890-2491-A-3-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	29434

Prep Batch: 29434

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2493-1	SS01	Total/NA	Solid	5035	<u> </u>
890-2493-3	SS03	Total/NA	Solid	5035	
MB 880-29434/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-29434/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-29434/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2491-A-3-E MS	Matrix Spike	Total/NA	Solid	5035	
890-2491-A-3-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 29558

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2493-1	SS01	Total/NA	Solid	5035	 -
890-2493-2	SS02	Total/NA	Solid	5035	
MB 880-29558/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-29558/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-29558/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-16527-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
880-16527-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 29560

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2493-1	SS01	Total/NA	Solid	Total BTEX	-
890-2493-2	SS02	Total/NA	Solid	Total BTEX	
890-2493-3	SS03	Total/NA	Solid	Total BTEX	

Analysis Batch: 29611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2493-1	SS01	Total/NA	Solid	8021B	29558
890-2493-2	SS02	Total/NA	Solid	8021B	29558
MB 880-29558/5-A	Method Blank	Total/NA	Solid	8021B	29558
LCS 880-29558/1-A	Lab Control Sample	Total/NA	Solid	8021B	29558
LCSD 880-29558/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	29558
880-16527-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	29558
880-16527-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	29558

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QC Association Summary

Client: Ensolum Project/Site: PLU 18 Twin Wells 155H Job ID: 890-2493-1

SDG: 03E1558066

GC Semi VOA

Prep Batch: 28993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2493-1	SS01	Total/NA	Solid	8015NM Prep	
890-2493-2	SS02	Total/NA	Solid	8015NM Prep	
890-2493-3	SS03	Total/NA	Solid	8015NM Prep	
MB 880-28993/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-28993/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-28993/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2489-A-1-A MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2489-A-1-A MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 29112

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2493-1	SS01	Total/NA	Solid	8015B NM	28993
890-2493-2	SS02	Total/NA	Solid	8015B NM	28993
890-2493-3	SS03	Total/NA	Solid	8015B NM	28993
MB 880-28993/1-A	Method Blank	Total/NA	Solid	8015B NM	28993
LCS 880-28993/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	28993
LCSD 880-28993/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	28993
890-2489-A-1-A MS	Matrix Spike	Total/NA	Solid	8015B NM	28993
890-2489-A-1-A MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	28993

Analysis Batch: 29177

Lab Sa	imple ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-24	93-1	SS01	Total/NA	Solid	8015 NM	
890-24	93-2	SS02	Total/NA	Solid	8015 NM	
890-24	93-3	SS03	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 28997

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2493-1	SS01	Soluble	Solid	DI Leach	
890-2493-2	SS02	Soluble	Solid	DI Leach	
890-2493-3	SS03	Soluble	Solid	DI Leach	
MB 880-28997/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-28997/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-28997/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2491-A-4-F MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2491-A-4-G MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 29213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2493-1	SS01	Soluble	Solid	300.0	28997
890-2493-2	SS02	Soluble	Solid	300.0	28997
890-2493-3	SS03	Soluble	Solid	300.0	28997
MB 880-28997/1-A	Method Blank	Soluble	Solid	300.0	28997
LCS 880-28997/2-A	Lab Control Sample	Soluble	Solid	300.0	28997
LCSD 880-28997/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	28997
890-2491-A-4-F MS	Matrix Spike	Soluble	Solid	300.0	28997
890-2491-A-4-G MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	28997

Job ID: 890-2493-1

Client: Ensolum Project/Site: PLU 18 Twin Wells 155H SDG: 03E1558066

Client Sample ID: SS01 Lab Sample ID: 890-2493-1 Date Collected: 06/30/22 10:00 Matrix: Solid

Date Received: 07/01/22 09:06

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	29558	07/12/22 14:57	MR	XEN MID
Total/NA	Analysis	8021B		10	5 mL	5 mL	29611	07/13/22 13:09	MR	XEN MID
Total/NA	Prep	5035			5.01 g	5 mL	29434	07/11/22 11:47	EL	XEN MID
Total/NA	Analysis	8021B		50			29380	07/12/22 15:03	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			29560	07/12/22 15:02	SM	XEN MID
Total/NA	Analysis	8015 NM		1			29177	07/07/22 09:01	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	28993	07/05/22 08:59	AM	XEN MID
Total/NA	Analysis	8015B NM		1			29112	07/07/22 07:17	SM	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	28997	07/05/22 09:12	CH	XEN MID
Soluble	Analysis	300.0		1			29213	07/08/22 11:48	CH	XEN MID

Client Sample ID: SS02 Lab Sample ID: 890-2493-2

Date Collected: 06/30/22 10:05 Matrix: Solid Date Received: 07/01/22 09:06

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	29558	07/12/22 14:57	MR	XEN MID
Total/NA	Analysis	8021B		10	5 mL	5 mL	29611	07/13/22 13:29	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			29560	07/12/22 15:02	SM	XEN MID
Total/NA	Analysis	8015 NM		1			29177	07/07/22 09:01	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	28993	07/05/22 08:59	AM	XEN MID
Total/NA	Analysis	8015B NM		1			29112	07/07/22 07:37	SM	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	28997	07/05/22 09:12	CH	XEN MID
Soluble	Analysis	300.0		5			29213	07/08/22 11:57	CH	XEN MID

Client Sample ID: SS03 Lab Sample ID: 890-2493-3

Date Collected: 06/30/22 10:10 Date Received: 07/01/22 09:06

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	29434	07/11/22 11:47	EL	XEN MID
Total/NA	Analysis	8021B		1			29380	07/12/22 10:51	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			29560	07/12/22 15:02	SM	XEN MID
Total/NA	Analysis	8015 NM		1			29177	07/07/22 09:01	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	28993	07/05/22 08:59	AM	XEN MID
Total/NA	Analysis	8015B NM		1			29112	07/06/22 17:15	SM	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	28997	07/05/22 09:12	CH	XEN MID
Soluble	Analysis	300.0		5			29213	07/08/22 12:06	CH	XEN MID

Laboratory References:

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

Eurofins Carlsbad

Released to Imaging: 2/23/2024 2:44:26 PM

Matrix: Solid

Accreditation/Certification Summary

 Client: Ensolum
 Job ID: 890-2493-1

 Project/Site: PLU 18 Twin Wells 155H
 SDG: 03E1558066

Laboratory: Eurofins Midland

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

Authority	Pi	rogram	Identification Number	Expiration Date
Texas	N	ELAP	T104704400-22-24	06-30-23
The following analytes the agency does not of		ut the laboratory is not certifi	ed by the governing authority. This list ma	ay include analytes fo
	er certification.			
Analysis Method	Prep Method	Matrix	Analyte	
9 ,		Matrix Solid	Analyte Total TPH	

2

3

4

R

10

4.0

13

114

Method Summary

Job ID: 890-2493-1 Client: Ensolum Project/Site: PLU 18 Twin Wells 155H

SDG: 03E1558066

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

Solid

Solid

Client: Ensolum

Lab Sample ID

890-2493-1

890-2493-2

890-2493-3

Project/Site: PLU 18 Twin Wells 155H

SS01

SS02

SS03

Client Sample ID

Job ID: 890-2493-1

SDG: 03E1558066

Matrix	Collected	Received	Depth	
Solid	06/30/22 10:00	07/01/22 09:06	0.5	

07/01/22 09:06 0.5

07/01/22 09:06 0.5

06/30/22 10:05

06/30/22 10:10

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EL Paso, TX (915) 585-3443, Lubbock, 1X (80b) 794-1295 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	www.xenco.com Page of
Project Manager: TACOND MOMSSEM Bill to: (if different)	Work Order Comments
CONSOLAYO. Company Name:	UST/PST
3172 Nati. Parks Hwd Address.	1
CANYOLA NA 32720 City, State ZIP:	Level III
T Email: FMUMISCA PENTOLUM COM Deliverables:	EDD ☐ ADaPT ☐ Other:
Project Name: QLU 18 TWIN WELLS 155H Turn Around	Preservative Codes
03E155 8006 16	None: NO DI Water: H ₂ O
Project Location: Eddly County NM Due Date:	Ю
er's Name:	
The root, it received by troubin	12504:112 NAOD: NA
Temp Blank: (es No Wet Ice: (es No	AH: DO HEN
act: (Yes) No Thermometer ID: TALED 7 88	INAMES OF THE STATE OF THE STAT
Yes No Tar Correction Factor:	Na22203: Na50 3
seals: Yes No W/A	ALOU ALOUD AND AND SAN
Total Containers:	NaOn+Ascoloic Acid: SAN
Sample Identification Matrix Sampled Sampled Comp Cont Cont Cont Cont Cont Cont Cont Cont	Sample Comments
5501	
5507 5 6/30 (1005/0.5/6/11/11/11	
SCM2 S 6/30 M/O 0,5 6 1 V V V	
A IN IN IN IN IN IN IN IN IN IN IN IN IN	
Total 200,7 / 6010 200,8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Ca Ca Cu Fe Pb Mg Mn Mo Ni R S 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 Tl U	Se Ag SiO ₂ Nd Sf 11 Sf O V ZiI Hg: 1631 / 245.1 / 7470 / 7471
Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of service. Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	
Relinquished by: (Signature) Received by: (Signature) Rec	Received by: (Signature) Date/Time
Jan 10 11/10 9010	

Chain of Custody

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Eurofins Carlsbad

1089 N Canal St

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Chain of Custody Record

🔆 eurofins

Environment Testing
America

State, Zip TX 79701 ss01 (890-2493-1) plu 18 twin wells 155h Carlsbad, NM 88220 Phone 575-988-3199 Fax 575-988-3199 Vote 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 aboratory 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. ss02 (890-2493-2) Empty Kit Relinquished by Possible Hazard Identification ss03 (890-2493-3) Sample Identification - Client ID (Lab ID) 132-704-5440(Tel) Midland 1211 W Florida Ave elinquished by: eliverable Requested I II III IV Other (specify) elinquished by urofins Environment Testing South Centr Custody Seals Intact

∆ Yes ∆ No iipping/Receiving lient Information inquished by (Sub Contract Lab) Custody Seal No Sampler Date/Time 88000022 TAT Requested (days): Primary Deliverable Rank 2 Due Date Requested Phone: Date/Time: 6/30/22 6/30/22 6/30/22 Date Mountain 10 05 Mountain 10 10 Sample 10 00 (C=comp G=grab Preservation Code: Type Company Company Matrix Solid Solid Solid Kramer Jessica Lab PM Jessica Kramer@et.eurofinsus com E-Mail Field Filtered Sample (Yes or No) NELAP - Louisiana NELAP - Texas lime. Perform MS/MSD (Yes or No) Special Instructions/QC Requirements Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) × × × 8015MOD_NM/8015NM_S_Prep (MOD) Full TPH Cooler Temperature(s) °C and Other Remarks eceived by Return To Client × × × 300_ORGFM_28D/DI_LEACH Chloride × 8021B/6036FP Calc BTEX × × × × × Total_BTEX_GCV Analysis Requested 8015MOD_Calc × × × Disposal By Lab New Mexico Carrier Tracking No(s) State of Origin: Method of Shipment Date/Time d' 0 QArchive For *.* Total Number of containers A HCL B NaOH C Zn Acetate D Nitric Acid F MeNH G Amchlor H Ascorbic Acid J I Ice J DI Water K EDTA L EDA 4 COC No: 890-827 1 Preservation Codes Page 1 of 1 Special Instructions/Note ..2SO4

i TSP Dodecahydrate
U Acetone
V MCAA
W pH 4-5
Y Trizm°
Z o" Company Ver 06/08/2021 Jompany None AsNaO2 Na2O4S Na2SO3 Na2SO3 H2SO4 Months

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-2493-1 SDG Number: 03E1558066

Login Number: 2493 List Source: Eurofins Carlsbad

List Number: 1 Creator: Clifton, Cloe

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2493-1 SDG Number: 03E1558066

Login Number: 2493
List Source: Eurofins Midland
List Number: 2
List Creation: 07/05/22 09:17 AM

Creator: Kramer, Jessica

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	N/A	

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<6mm (1/4").



Received by OCD: 9/21/2023 12:45:11 PM

.....LINKS

Review your project results through

EOL

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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: 890-2624-1

Laboratory Sample Delivery Group: 03E1558066 Client Project/Site: PLU 18 TWIN WELLS 155H

For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Tacoma Morrissey

RAMER

Authorized for release by: 8/2/2022 1:08:07 PM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

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

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

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS 155H
Laboratory Job ID: 890-2624-1
SDG: 03E1558066

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Sample Summary	22
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Definitions/Glossary

Client: Ensolum Job ID: 890-2624-1 Project/Site: PLU 18 TWIN WELLS 155H

SDG: 03E1558066

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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

LOD

MQL

Glossary	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)	

DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor

DL	Detection Limit (DoD/DOE)
DI RA RE IN	Indicates a Dilution Re-analysis Re-extraction

DL, KA, KE, IN	indicates a Dilution, Re-analysis, Re-extraction, or additional initial metals/anion analysis of the sample	•

DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)

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

Method Quantitation Limit

Limit of Detection (DoD/DOE)

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

NC	Not Calculated

ND Not Det	ected 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
RFR	Relative Error Ratio (Radiochemistry)

RI	Reporting Limit or Requested Limit (Radiochemistry)	١
· · · -	reporting Elithe of resqueeted Elithe (readlectionion)	/

RPD	Relative Percent Difference, a measure of the relative difference between two points
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TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

Case Narrative

Client: Ensolum

Project/Site: PLU 18 TWIN WELLS 155H

Job ID: 890-2624-1 SDG: 03E1558066

Job ID: 890-2624-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-2624-1

Receipt

The samples were received on 7/22/2022 9:08 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

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 880-30914 and analytical batch 880-31149 was outside control limits. Sample matrix interference is suspected.

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

GC Semi VOA

Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-30765 and analytical batch 880-30743 recovered outside control limits for the following analytes: Diesel Range Organics (Over C10-C28).

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

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-30601 and analytical batch 880-30721 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.

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-30601 and analytical batch 880-30721 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.

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Lab Sample ID: 890-2624-1

Job ID: 890-2624-1

Client: Ensolum Project/Site: PLU 18 TWIN WELLS 155H SDG: 03E1558066

Client Sample ID: FS01

Date Collected: 07/21/22 14:45 Date Received: 07/22/22 09:08

Sample Depth: 1.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/28/22 10:44	08/02/22 03:33	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/28/22 10:44	08/02/22 03:33	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/28/22 10:44	08/02/22 03:33	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		07/28/22 10:44	08/02/22 03:33	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/28/22 10:44	08/02/22 03:33	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		07/28/22 10:44	08/02/22 03:33	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130			07/28/22 10:44	08/02/22 03:33	1
1,4-Difluorobenzene (Surr)	119		70 - 130			07/28/22 10:44	08/02/22 03:33	1
Method: Total BTEX - Total BTEX (Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			08/02/22 12:18	1
Method: 8015 NM - Diesel Range C	rganics (DR	O) (GC)						
Analyte	•	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	173		49.9	mg/Kg			07/28/22 09:08	1
Method: 8015B NM - Diesel Range	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		07/27/22 08:40	07/27/22 16:51	1
Diesel Range Organics (Over C10-C28)	<49.9	U *1	49.9	mg/Kg		07/27/22 08:40	07/27/22 16:51	1
Oll Range Organics (Over C28-C36)	173		49.9	mg/Kg		07/27/22 08:40	07/27/22 16:51	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	83		70 - 130			07/27/22 08:40	07/27/22 16:51	1
o-Terphenyl	82		70 - 130			07/27/22 08:40	07/27/22 16:51	1
Method: 300.0 - Anions, Ion Chron	natography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Client Sample ID: FS02 Lab Sample ID: 890-2624-2 Matrix: Solid

Date Collected: 07/21/22 14:50 Date Received: 07/22/22 09:08

Sample Depth: 1.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		07/28/22 10:44	08/02/22 03:54	1
Toluene	<0.00198	U	0.00198	mg/Kg		07/28/22 10:44	08/02/22 03:54	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		07/28/22 10:44	08/02/22 03:54	1
m-Xylene & p-Xylene	<0.00397	U	0.00397	mg/Kg		07/28/22 10:44	08/02/22 03:54	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		07/28/22 10:44	08/02/22 03:54	1
Xylenes, Total	< 0.00397	U	0.00397	mg/Kg		07/28/22 10:44	08/02/22 03:54	1

Lab Sample ID: 890-2624-2

Job ID: 890-2624-1

Client: Ensolum Project/Site: PLU 18 TWIN WELLS 155H SDG: 03E1558066

Client Sample ID: FS02

Date Collected: 07/21/22 14:50 Date Received: 07/22/22 09:08

Sample Depth: 1.5

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97	70 - 130	07/28/22 10:44	08/02/22 03:54	1
1,4-Difluorobenzene (Surr)	118	70 - 130	07/28/22 10:44	08/02/22 03:54	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397	mg/Kg			08/02/22 12:18	1

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

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	144	49.9	mg/Kg			07/28/22 09:08	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		07/27/22 08:40	07/27/22 17:12	1
Diesel Range Organics (Over C10-C28)	<49.9	U *1	49.9	mg/Kg		07/27/22 08:40	07/27/22 17:12	1
Oll Range Organics (Over C28-C36)	144		49.9	mg/Kg		07/27/22 08:40	07/27/22 17:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepar	red	Analyzed	Dil Fac
1-Chlorooctane	91		70 - 130	07/27/22	08:40	07/27/22 17:12	1
o-Terphenyl	89		70 - 130	07/27/22	08:40	07/27/22 17:12	1

Method: 300.0 - Anions, Ion Chrom	natography - 🤄	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	34.0		5.01	ma/Ka			07/27/22 14:38	1

Client Sample ID: FS03 Lab Sample ID: 890-2624-3 Date Collected: 07/21/22 14:55 **Matrix: Solid**

Date Received: 07/22/22 09:08

Sample Depth: 1.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		07/28/22 10:44	08/02/22 04:14	1
Toluene	<0.00199	U	0.00199	mg/Kg		07/28/22 10:44	08/02/22 04:14	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		07/28/22 10:44	08/02/22 04:14	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		07/28/22 10:44	08/02/22 04:14	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		07/28/22 10:44	08/02/22 04:14	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		07/28/22 10:44	08/02/22 04:14	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130			07/28/22 10:44	08/02/22 04:14	1
1,4-Difluorobenzene (Surr)	114		70 - 130			07/28/22 10:44	08/02/22 04:14	1

Method: Total BTEX - Total BTEX (Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			08/02/22 12:18	1

Lab Sample ID: 890-2624-3

Job ID: 890-2624-1

Client: Ensolum Project/Site: PLU 18 TWIN WELLS 155H SDG: 03E1558066

Client Sample ID: FS03 Date Collected: 07/21/22 14:55 Date Received: 07/22/22 09:08

Sample Depth: 1.5

	Method: 8015 NM - Diesel Range Organics (DRO) (GC)										
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac		
L	Total TPH	123		50.0	mg/Kg			07/28/22 09:08	1		

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		07/27/22 08:40	07/27/22 17:33	1
Diesel Range Organics (Over C10-C28)	<50.0	U *1	50.0	mg/Kg		07/27/22 08:40	07/27/22 17:33	1
Oll Range Organics (Over C28-C36)	123		50.0	mg/Kg		07/27/22 08:40	07/27/22 17:33	1

	,	~			, y = u u	
1-Chlorooctane	94		70 - 130	07/27/22 08:40	07/27/22 17:33	1
o-Terphenyl	99		70 - 130	07/27/22 08:40	07/27/22 17:33	1
<u> </u>						

Method: 300.0 - Anions, ion Chrom	latograpny - Soluble						
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15.8	4.98	mg/Kg			07/27/22 14:46	1

Client Sample ID: FS04 Lab Sample ID: 890-2624-4 Date Collected: 07/21/22 15:00 **Matrix: Solid**

Date Received: 07/22/22 09:08

Sample Depth: 1.5

Analyte

(GRO)-C6-C10

C10-C28)

Gasoline Range Organics

Diesel Range Organics (Over

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		07/28/22 10:44	08/02/22 04:35	1
Toluene	<0.00199	U	0.00199	mg/Kg		07/28/22 10:44	08/02/22 04:35	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		07/28/22 10:44	08/02/22 04:35	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		07/28/22 10:44	08/02/22 04:35	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		07/28/22 10:44	08/02/22 04:35	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		07/28/22 10:44	08/02/22 04:35	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130			07/28/22 10:44	08/02/22 04:35	1
1,4-Difluorobenzene (Surr)	119		70 - 130			07/28/22 10:44	08/02/22 04:35	1
Method: Total BTEX - Total B1	ΓEX Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			08/02/22 12:18	1
Method: 8015 NM - Diesel Rar	nge Organics (DR	O) (GC)						
	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte	Result						. ,	

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Analyzed

07/27/22 17:54

07/27/22 17:54

RL

50.0

50.0

Unit

mg/Kg

mg/Kg

Prepared

07/27/22 08:40

07/27/22 08:40

Dil Fac

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

Result Qualifier

<50.0 U

<50.0 U *1

Job ID: 890-2624-1

SDG: 03E1558066

Project/Site: PLU 18 TWIN WELLS 155H

Date Received: 07/22/22 09:08

Client Sample ID: FS04 Lab Sample ID: 890-2624-4 Date Collected: 07/21/22 15:00

Matrix: Solid

Sample Depth: 1.5

Client: Ensolum

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Oll Range Organics (Over	106		50.0	mg/Kg		07/27/22 08:40	07/27/22 17:54	1
C28-C36)								
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130			07/27/22 08:40	07/27/22 17:54	1
o-Terphenyl	91		70 - 130			07/27/22 08:40	07/27/22 17:54	1

Method: 300.0 - Anions, Ion Chromatography - Soluble Result Qualifier RL Unit Prepared Analyzed Dil Fac Chloride 30.3 5.00 mg/Kg 07/27/22 14:54

Client Sample ID: FS05 Lab Sample ID: 890-2624-5

Date Collected: 07/21/22 15:05 **Matrix: Solid**

Date Received: 07/22/22 09:08

Sample Depth: 1.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/28/22 10:44	08/02/22 04:56	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/28/22 10:44	08/02/22 04:56	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/28/22 10:44	08/02/22 04:56	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		07/28/22 10:44	08/02/22 04:56	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/28/22 10:44	08/02/22 04:56	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		07/28/22 10:44	08/02/22 04:56	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130			07/28/22 10:44	08/02/22 04:56	1
1,4-Difluorobenzene (Surr)	117		70 - 130			07/28/22 10:44	08/02/22 04:56	1
Method: Total BTEX - Total BT	EX Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	П	0.00000				08/02/22 12:18	
- Total BTEX	.0.00000	U	0.00399	mg/Kg			00/02/22 12.10	'
Method: 8015 NM - Diesel Ran			0.00399	mg/kg			06/02/22 12.16	'
. -	ige Organics (DR		0.00399 RL	Unit	D	Prepared	Analyzed	
: Method: 8015 NM - Diesel Ran	ige Organics (DR	O) (GC)			<u>D</u>	Prepared		
Method: 8015 NM - Diesel Ran Analyte	rige Organics (DR) Result 92.3	O) (GC) Qualifier	RL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Method: 8015 NM - Diesel Ran Analyte Total TPH	ge Organics (DR Result 92.3 ange Organics (D	O) (GC) Qualifier	RL	Unit	<u>D</u>	Prepared Prepared	Analyzed	Dil Fac
Method: 8015 NM - Diesel Ran Analyte Total TPH Method: 8015B NM - Diesel Ra	ge Organics (DR Result 92.3 ange Organics (D	O) (GC) Qualifier RO) (GC) Qualifier	RL 50.0	Unit mg/Kg		<u> </u>	Analyzed 07/28/22 09:08	Dil Fac
Method: 8015 NM - Diesel Ran Analyte Total TPH Method: 8015B NM - Diesel Ra Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	nge Organics (DR Result 92.3 ange Organics (Di Result	Qualifier RO) (GC) Qualifier U		Unit mg/Kg		Prepared	Analyzed 07/28/22 09:08	Dil Fac
Method: 8015 NM - Diesel Ran Analyte Total TPH Method: 8015B NM - Diesel Ra Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	rige Organics (DR Result 92.3 range Organics (DI Result <50.0	Qualifier RO) (GC) Qualifier U	RL 50.0	Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 07/27/22 08:40	Analyzed 07/28/22 09:08 Analyzed 07/27/22 18:16	Dil Fac Dil Fac
Method: 8015 NM - Diesel Ran Analyte Total TPH Method: 8015B NM - Diesel Ra Analyte Gasoline Range Organics (GRO)-C6-C10	rige Organics (DR Result 92.3 range Organics (DI Result <50.0	O) (GC) Qualifier RO) (GC) Qualifier U	RL 50.0 50.0 50.0	Unit mg/Kg Unit mg/Kg		Prepared 07/27/22 08:40 07/27/22 08:40	Analyzed 07/28/22 09:08 Analyzed 07/27/22 18:16 07/27/22 18:16	Dil Fac Dil Fac 1
Method: 8015 NM - Diesel Ran 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	rige Organics (DR Result 92.3 range Organics (DI Result <50.0	O) (GC) Qualifier RO) (GC) Qualifier U U *1	RL 50.0 50.0 50.0	Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 07/27/22 08:40 07/27/22 08:40	Analyzed 07/28/22 09:08 Analyzed 07/27/22 18:16 07/27/22 18:16	Dil Fac Dil Fac 1 1 1 1
Method: 8015 NM - Diesel Ran Analyte Total TPH Method: 8015B NM - Diesel Ra Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	ange Organics (DR Result 92.3 ange Organics (Di Result < 50.0 < 50.0 92.3	O) (GC) Qualifier RO) (GC) Qualifier U U *1	RL 50.0 50.0 50.0	Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 07/27/22 08:40 07/27/22 08:40 07/27/22 08:40	Analyzed 07/28/22 09:08 Analyzed 07/27/22 18:16 07/27/22 18:16 07/27/22 18:16	Dil Fac Dil Fac 1

Chloride

07/27/22 15:02

Client Sample Results

Client: Ensolum Job ID: 890-2624-1 Project/Site: PLU 18 TWIN WELLS 155H SDG: 03E1558066

Client Sample ID: FS05 Lab Sample ID: 890-2624-5

Date Collected: 07/21/22 15:05 Matrix: Solid

Date Received: 07/22/22 09:08

4.95

mg/Kg

Sample Depth: 1.5 Method: 300.0 - Anions, Ion Chromatography - Soluble Analyte Result Qualifier Dil Fac RL Unit D Prepared Analyzed

38.0

Surrogate Summary

 Client: Ensolum
 Job ID: 890-2624-1

 Project/Site: PLU 18 TWIN WELLS 155H
 SDG: 03E1558066

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-17204-A-219-D MS	Matrix Spike	84	114	
880-17204-A-219-E MSD	Matrix Spike Duplicate	79	113	
890-2624-1	FS01	101	119	
890-2624-2	FS02	97	118	
890-2624-3	FS03	98	114	
890-2624-4	FS04	103	119	
890-2624-5	FS05	96	117	
LCS 880-30914/1-A	Lab Control Sample	83	112	
LCSD 880-30914/2-A	Lab Control Sample Dup	83	113	
MB 880-30914/5-A	Method Blank	88	107	
MB 880-31025/5-A	Method Blank	84	107	
Surrogate Legend				
BFB = 4-Bromofluorobenz	zene (Surr)			

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1001	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-17301-A-1-E MS	Matrix Spike	99	88	
880-17301-A-1-F MSD	Matrix Spike Duplicate	99	89	
390-2624-1	FS01	83	82	
390-2624-2	FS02	91	89	
390-2624-3	FS03	94	99	
390-2624-4	FS04	93	91	
390-2624-5	FS05	85	84	
CS 880-30765/2-A	Lab Control Sample	89	82	
_CSD 880-30765/3-A	Lab Control Sample Dup	107	108	
MB 880-30765/1-A	Method Blank	82	83	

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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Released to Imaging: 2/23/2024 2:44:26 PM

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6

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10

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14

QC Sample Results

Client: Ensolum Job ID: 890-2624-1 SDG: 03E1558066 Project/Site: PLU 18 TWIN WELLS 155H

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-30914/5-A

Matrix: Solid Analysis Batch: 31149 Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 30914

1

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/28/22 10:44	08/01/22 22:02	
Toluene	<0.00200	U	0.00200	mg/Kg		07/28/22 10:44	08/01/22 22:02	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/28/22 10:44	08/01/22 22:02	
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/28/22 10:44	08/01/22 22:02	
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/28/22 10:44	08/01/22 22:02	
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/28/22 10:44	08/01/22 22:02	•

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		70 - 130	07/28/22 10:44	08/01/22 22:02	1
1,4-Difluorobenzene (Surr)	107		70 - 130	07/28/22 10:44	08/01/22 22:02	1

Lab Sample ID: LCS 880-30914/1-A **Client Sample ID: Lab Control Sample**

Matrix: Solid

Analysis Batch: 31149

Prep Type: Total/NA

Prep Batch: 30914

Spike LCS LCS Analyte Added Result Qualifier Unit %Rec Limits Benzene 0.100 0.1036 mg/Kg 104 70 - 130 Toluene 0.100 0.09141 mg/Kg 91 70 - 130 0.100 0.08864 Ethylbenzene mg/Kg 89 70 - 130 0.200 0.1728 86 70 - 130 m-Xylene & p-Xylene mg/Kg 0.100 0.08598 70 - 130 o-Xylene mg/Kg

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	83		70 - 130
1,4-Difluorobenzene (Surr)	112		70 - 130

Lab Sample ID: LCSD 880-30914/2-A

Matrix: Solid

Analysis Batch: 31149

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 30914

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.1144		mg/Kg		114	70 - 130	10	35	
Toluene	0.100	0.09687		mg/Kg		97	70 - 130	6	35	
Ethylbenzene	0.100	0.09273		mg/Kg		93	70 - 130	5	35	
m-Xylene & p-Xylene	0.200	0.1810		mg/Kg		91	70 - 130	5	35	
o-Xylene	0.100	0.08961		mg/Kg		90	70 - 130	4	35	

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	83	70 - 130
1,4-Difluorobenzene (Surr)	113	70 - 130

Lab Sample ID: 880-17204-A-219-D MS

Matrix: Solid

Analysis Batch: 31149

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

Prep Batch: 30914

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U	0.101	0.09553		mg/Kg	_	94	70 - 130	
Toluene	0.00294		0.101	0.08456		mg/Kg		81	70 - 130	

QC Sample Results

Client: Ensolum Job ID: 890-2624-1 SDG: 03E1558066 Project/Site: PLU 18 TWIN WELLS 155H

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

Lab Sample ID: 880-17204-A-219-D MS

Matrix: Solid

Analysis Batch: 31149

Client Sample ID: Matrix Spike	
--------------------------------	--

Prep Type: Total/NA

Prep Batch: 30914

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylbenzene	<0.00201	U	0.101	0.07943		mg/Kg		78	70 - 130	
m-Xylene & p-Xylene	<0.00402	U	0.201	0.1536		mg/Kg		75	70 - 130	
o-Xylene	<0.00201	U F1	0.101	0.07431		mg/Kg		73	70 - 130	

MS MS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	84		70 - 130
1,4-Difluorobenzene (Surr)	114		70 - 130

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 30914

Lab Sample ID: 880-17204-A-219-E MSD **Matrix: Solid**

Analysis Batch: 31149

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00201	U	0.0990	0.09528		mg/Kg		95	70 - 130	0	35
Toluene	0.00294		0.0990	0.08036		mg/Kg		78	70 - 130	5	35
Ethylbenzene	<0.00201	U	0.0990	0.07361		mg/Kg		73	70 - 130	8	35
m-Xylene & p-Xylene	<0.00402	U	0.198	0.1413		mg/Kg		70	70 - 130	8	35
o-Xylene	<0.00201	U F1	0.0990	0.06848	F1	mg/Kg		69	70 - 130	8	35

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	79		70 - 130
1,4-Difluorobenzene (Surr)	113		70 - 130

Lab Sample ID: MB 880-31025/5-A

Matrix: Solid

Analysis Batch: 31149

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

Prep Batch: 31025

	IVID	IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/29/22 15:19	08/01/22 11:15	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/29/22 15:19	08/01/22 11:15	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/29/22 15:19	08/01/22 11:15	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/29/22 15:19	08/01/22 11:15	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/29/22 15:19	08/01/22 11:15	1
Xylenes, Total	< 0.00400	U	0.00400	mg/Kg		07/29/22 15:19	08/01/22 11:15	1

MB MB

MD MD

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		70 - 130	07/29/22 15:19	08/01/22 11:15	1
1,4-Difluorobenzene (Surr)	107		70 - 130	07/29/22 15:19	08/01/22 11:15	1

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

Lab Sample ID: MB 880-30765/1-A

Matrix: Solid

Analysis Batch: 30743

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

Prep Batch: 30765

мв мв Result Qualifier Unit Prepared Gasoline Range Organics <50.0 U 50.0 mg/Kg 07/27/22 08:40 07/27/22 09:41

(GRO)-C6-C10

Job ID: 890-2624-1 Client: Ensolum Project/Site: PLU 18 TWIN WELLS 155H SDG: 03E1558066

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

MB MB

Lab Sample ID: MB 880-30765/1-A **Matrix: Solid**

Analysis Batch: 30743

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

Prep Batch: 30765

Analyte Result Qualifier RL Unit Prepared Analyzed Dil Fac <50.0 U 50.0 07/27/22 08:40 07/27/22 09:41 Diesel Range Organics (Over mg/Kg C10-C28) 50.0 07/27/22 08:40 07/27/22 09:41 Oll Range Organics (Over C28-C36) <50.0 U mg/Kg

MB MB Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 1-Chlorooctane 82 70 - 130 07/27/22 08:40 07/27/22 09:41 83 70 - 130 07/27/22 08:40 07/27/22 09:41 o-Terphenyl

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 880-30765/2-A **Matrix: Solid** Prep Type: Total/NA **Analysis Batch: 30743**

Prep Batch: 30765

LCS LCS Spike Analyte Added Result Qualifier Unit D %Rec Limits Gasoline Range Organics 1000 1071 107 70 - 130 mg/Kg (GRO)-C6-C10 1000 848.8 Diesel Range Organics (Over 85 70 - 130mg/Kg C10-C28)

LCS LCS Qualifier Surrogate %Recovery Limits 1-Chlorooctane 70 - 130 89 o-Terphenyl 82 70 - 130

Lab Sample ID: LCSD 880-30765/3-A

Matrix: Solid Analysis Batch: 30743 Client Sample ID: Lab Control Sample Dup Prep Type: Total/NA

Prep Batch: 30765

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics	1000	1037		mg/Kg		104	70 - 130	3	20	
(GRO)-C6-C10										
Diesel Range Organics (Over	1000	1108	*1	mg/Kg		111	70 - 130	26	20	
C10-C28)										

LCSD LCSD Surrogate %Recovery Qualifier Limits 1-Chlorooctane 107 70 - 130 o-Terphenyl 108 70 - 130

Lab Sample ID: 880-17301-A-1-E MS

Matrix: Solid

Analysis Batch: 30743

Client Sample ID: Matrix Spike

Prep Type: Total/NA Prep Batch: 30765

MS MS %Rec Sample Sample Spike Result Qualifier Added Result Qualifier %Rec Analyte Unit Limits <50.0 U 1000 Gasoline Range Organics 1100 106 70 - 130mg/Kg (GRO)-C6-C10 1000 760.4 Diesel Range Organics (Over <50.0 U *1 mg/Kg 76 70 - 130

C10-C28)

	IVIS	IVIS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	99		70 - 130
o-Terphenyl	88		70 - 130

Client: Ensolum Job ID: 890-2624-1 Project/Site: PLU 18 TWIN WELLS 155H SDG: 03E1558066

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

Lab Sample ID: 880-17301-A-1-F MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Analysis Batch: 30743

Prep Type: Total/NA Prep Batch: 30765

-	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	999	1099		mg/Kg		106	70 - 130	0	20
(GRO)-C6-C10											
Diesel Range Organics (Over	<50.0	U *1	999	782.1		mg/Kg		78	70 - 130	3	20
C10-C28)											

MSD MSD %Recovery Qualifier

Surrogate Limits 1-Chlorooctane 70 - 130 99 o-Terphenyl 89 70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-30601/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 30721

мв мв

Analyte Result Qualifier Unit RL Prepared Analyzed Dil Fac Chloride <5.00 U 5.00 mg/Kg 07/27/22 09:44

Lab Sample ID: LCS 880-30601/2-A **Client Sample ID: Lab Control Sample Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 30721

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	262.2		mg/Kg		105	90 - 110	

Lab Sample ID: LCSD 880-30601/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 30721

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	250	262.4		mg/Kg		105	90 - 110	0	20	

Lab Sample ID: 880-17254-A-1-B MS Client Sample ID: Matrix Spike

Matrix: Solid

Analysis Batch: 30721

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	<99.0	U	4950	4828		ma/Ka		96	90 - 110	

Lab Sample ID: 880-17254-A-1-C MSD

Matrix: Solid

Analysis Batch: 30721

Analysis battii. 30721											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	<99.0	U	4950	4817		mg/Kg		96	90 - 110	0	20

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Prep Type: Soluble

Prep Type: Soluble

Client Sample ID: Matrix Spike Duplicate

QC Sample Results

Client: Ensolum Job ID: 890-2624-1 Project/Site: PLU 18 TWIN WELLS 155H

SDG: 03E1558066

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-17301-A-3-F MS Client Sample ID: Matrix Spike

Matrix: Solid Prep Type: Soluble Analysis Batch: 30721

Sample Sample Spike MS MS %Rec Result Qualifier Result Qualifier Added Analyte Unit %Rec Limits Chloride 9.76 F1 250 555.7 F1 mg/Kg 218 90 - 110

Lab Sample ID: 880-17301-A-3-G MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid Prep Type: Soluble

Analysis Batch: 30721

Sample Sample Spike MSD MSD %Rec RPD Result Qualifier Added Result Qualifier Limits RPD Limit Analyte Unit D %Rec Chloride 9.76 F1 250 555.5 F1 mg/Kg 218 90 - 110 0 20

QC Association Summary

Client: Ensolum Project/Site: PLU 18 TWIN WELLS 155H Job ID: 890-2624-1 SDG: 03E1558066

GC VOA

Prep Batch: 30914

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2624-1	FS01	Total/NA	Solid	5035	
890-2624-2	FS02	Total/NA	Solid	5035	
890-2624-3	FS03	Total/NA	Solid	5035	
890-2624-4	FS04	Total/NA	Solid	5035	
890-2624-5	FS05	Total/NA	Solid	5035	
MB 880-30914/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30914/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30914/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17204-A-219-D MS	Matrix Spike	Total/NA	Solid	5035	
880-17204-A-219-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 31025

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-31025/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 31149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2624-1	FS01	Total/NA	Solid	8021B	30914
890-2624-2	FS02	Total/NA	Solid	8021B	30914
890-2624-3	FS03	Total/NA	Solid	8021B	30914
890-2624-4	FS04	Total/NA	Solid	8021B	30914
890-2624-5	FS05	Total/NA	Solid	8021B	30914
MB 880-30914/5-A	Method Blank	Total/NA	Solid	8021B	30914
MB 880-31025/5-A	Method Blank	Total/NA	Solid	8021B	31025
LCS 880-30914/1-A	Lab Control Sample	Total/NA	Solid	8021B	30914
LCSD 880-30914/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30914
880-17204-A-219-D MS	Matrix Spike	Total/NA	Solid	8021B	30914
880-17204-A-219-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30914

Analysis Batch: 31314

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2624-1	FS01	Total/NA	Solid	Total BTEX	
890-2624-2	FS02	Total/NA	Solid	Total BTEX	
890-2624-3	FS03	Total/NA	Solid	Total BTEX	
890-2624-4	FS04	Total/NA	Solid	Total BTEX	
890-2624-5	FS05	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 30743

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2624-1	FS01	Total/NA	Solid	8015B NM	30765
890-2624-2	FS02	Total/NA	Solid	8015B NM	30765
890-2624-3	FS03	Total/NA	Solid	8015B NM	30765
890-2624-4	FS04	Total/NA	Solid	8015B NM	30765
890-2624-5	FS05	Total/NA	Solid	8015B NM	30765
MB 880-30765/1-A	Method Blank	Total/NA	Solid	8015B NM	30765
LCS 880-30765/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30765
LCSD 880-30765/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30765
880-17301-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	30765
880-17301-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30765

QC Association Summary

Client: Ensolum Project/Site: PLU 18 TWIN WELLS 155H Job ID: 890-2624-1

SDG: 03E1558066

GC Semi VOA

Prep Batch: 30765

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2624-1	FS01	Total/NA	Solid	8015NM Prep	
890-2624-2	FS02	Total/NA	Solid	8015NM Prep	
890-2624-3	FS03	Total/NA	Solid	8015NM Prep	
890-2624-4	FS04	Total/NA	Solid	8015NM Prep	
890-2624-5	FS05	Total/NA	Solid	8015NM Prep	
MB 880-30765/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30765/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30765/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-17301-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-17301-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 30869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2624-1	FS01	Total/NA	Solid	8015 NM	
890-2624-2	FS02	Total/NA	Solid	8015 NM	
890-2624-3	FS03	Total/NA	Solid	8015 NM	
890-2624-4	FS04	Total/NA	Solid	8015 NM	
890-2624-5	FS05	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 30601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2624-1	FS01	Soluble	Solid	DI Leach	
890-2624-2	FS02	Soluble	Solid	DI Leach	
890-2624-3	FS03	Soluble	Solid	DI Leach	
890-2624-4	FS04	Soluble	Solid	DI Leach	
890-2624-5	FS05	Soluble	Solid	DI Leach	
MB 880-30601/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-30601/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-30601/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-17254-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-17254-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
880-17301-A-3-F MS	Matrix Spike	Soluble	Solid	DI Leach	
880-17301-A-3-G MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 30721

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2624-1	FS01	Soluble	Solid	300.0	30601
890-2624-2	FS02	Soluble	Solid	300.0	30601
890-2624-3	FS03	Soluble	Solid	300.0	30601
890-2624-4	FS04	Soluble	Solid	300.0	30601
890-2624-5	FS05	Soluble	Solid	300.0	30601
MB 880-30601/1-A	Method Blank	Soluble	Solid	300.0	30601
LCS 880-30601/2-A	Lab Control Sample	Soluble	Solid	300.0	30601
LCSD 880-30601/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30601
880-17254-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30601
880-17254-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30601
880-17301-A-3-F MS	Matrix Spike	Soluble	Solid	300.0	30601
880-17301-A-3-G MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30601

Project/Site: PLU 18 TWIN WELLS 155H

Job ID: 890-2624-1

SDG: 03E1558066

Client Sample ID: FS01

Client: Ensolum

Lab Sample ID: 890-2624-1 Date Collected: 07/21/22 14:45

Matrix: Solid

Date Received: 07/22/22 09:08

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	30914	07/28/22 10:44	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31149	08/02/22 03:33	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			31314	08/02/22 12:18	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30869	07/28/22 09:08	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	30765	07/27/22 08:40	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30743	07/27/22 16:51	SM	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	30601	07/25/22 15:31	KS	XEN MID
Soluble	Analysis	300.0		1			30721	07/27/22 14:31	CH	XEN MID

Client Sample ID: FS02 Lab Sample ID: 890-2624-2

Date Collected: 07/21/22 14:50 Matrix: Solid

Date Received: 07/22/22 09:08

Dil Final Batch Batch Initial Batch Prepared Prep Type Туре Method Run Factor Amount Amount Number or Analyzed Lab **Analyst** Total/NA Prep 5035 5.04 g 5 mL 30914 07/28/22 10:44 MR XEN MID 8021B Total/NA Analysis 1 5 mL 5 mL 31149 08/02/22 03:54 MR XEN MID Total/NA Total BTEX 31314 Analysis 08/02/22 12:18 SM XEN MID 1 Total/NA Analysis 8015 NM 30869 07/28/22 09:08 SM XEN MID 30765 Total/NA 8015NM Prep 10.03 g 07/27/22 08:40 DM XEN MID Prep 10 mL Total/NA Analysis 8015B NM 30743 07/27/22 17:12 SM XEN MID Soluble DI Leach 4.99 g 50 mL 30601 07/25/22 15:31 KS **XEN MID** Leach Soluble Analysis 300.0 30721 07/27/22 14:38 CH XEN MID

Client Sample ID: FS03 Lab Sample ID: 890-2624-3

Date Collected: 07/21/22 14:55 Date Received: 07/22/22 09:08

Dil Batch Batch Initial Final Batch Prepared Prep Type Туре Method Run Factor Amount Amount Number or Analyzed Analyst Lab 07/28/22 10:44 Total/NA Prep 5035 5.02 g 5 mL 30914 MR XEN MID Total/NA Analysis 8021B 5 mL 5 mL 31149 08/02/22 04:14 MR XEN MID Total/NA Total BTEX 31314 08/02/22 12:18 SM XEN MID Analysis 1 Total/NA Analysis 8015 NM 30869 07/28/22 09:08 SM XEN MID Total/NA Prep 8015NM Prep 10.00 g 10 mL 30765 07/27/22 08:40 DM XEN MID Total/NA 8015B NM 30743 07/27/22 17:33 XEN MID Analysis 1 SM Soluble DI Leach 5.02 g 50 mL 30601 07/25/22 15:31 KS XEN MID Leach Soluble Analysis 300.0 30721 07/27/22 14:46 СН XEN MID

Lab Sample ID: 890-2624-4 Client Sample ID: FS04

Date Collected: 07/21/22 15:00 Date Received: 07/22/22 09:08

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	30914	07/28/22 10:44	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31149	08/02/22 04:35	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			31314	08/02/22 12:18	SM	XEN MID

Eurofins Carlsbad

Matrix: Solid

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Matrix: Solid

Lab Chronicle

Client: Ensolum Job ID: 890-2624-1 Project/Site: PLU 18 TWIN WELLS 155H SDG: 03E1558066

Client Sample ID: FS04

Lab Sample ID: 890-2624-4 Date Collected: 07/21/22 15:00 Matrix: Solid

Date Received: 07/22/22 09:08

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			30869	07/28/22 09:08	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	30765	07/27/22 08:40	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30743	07/27/22 17:54	SM	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	30601	07/25/22 15:31	KS	XEN MID
Soluble	Analysis	300.0		1			30721	07/27/22 14:54	CH	XEN MID

Client Sample ID: FS05 Lab Sample ID: 890-2624-5

Date Collected: 07/21/22 15:05 Matrix: Solid

Date Received: 07/22/22 09:08

	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	30914	07/28/22 10:44	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31149	08/02/22 04:56	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			31314	08/02/22 12:18	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30869	07/28/22 09:08	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	30765	07/27/22 08:40	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30743	07/27/22 18:16	SM	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	30601	07/25/22 15:31	KS	XEN MID
Soluble	Analysis	300.0		1			30721	07/27/22 15:02	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

 Client: Ensolum
 Job ID: 890-2624-1

 Project/Site: PLU 18 TWIN WELLS 155H
 SDG: 03E1558066

Laboratory: Eurofins Midland

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

Authority Texas		ogram	Identification Number	Expiration Date		
		ELAP	T104704400-22-24	06-30-23		
The following analytes the agency does not of		ut the laboratory is not certifi	ed by the governing authority. This list ma	ay include analytes f		
0 ,						
Analysis Method		Matrix	Analyte			
Analysis Method 8015 NM		Matrix Solid	Analyte Total TPH			

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Method Summary

Client: Ensolum

Project/Site: PLU 18 TWIN WELLS 155H

Job ID: 890-2624-1

SDG: 03E1558066

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

Protocol References:

ASTM = ASTM International

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

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Sample Summary

Client: Ensolum

Project/Site: PLU 18 TWIN WELLS 155H

Job ID: 890-2624-1

SDG: 03E1558066

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2624-1	FS01	Solid	07/21/22 14:45	07/22/22 09:08	1.5
890-2624-2	FS02	Solid	07/21/22 14:50	07/22/22 09:08	1.5
890-2624-3	FS03	Solid	07/21/22 14:55	07/22/22 09:08	1.5
890-2624-4	FS04	Solid	07/21/22 15:00	07/22/22 09:08	1.5
890-2624-5	FS05	Solid	07/21/22 15:05	07/22/22 09:08	1.5

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 Work Order No:	06) 794-1296 575) 988-3199 www.xenco.com Page of	Work Order Comments	Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐	State of Project:		eve	Reporting: Level III PST/UST TRRP Deliverables: EDD ADaPT Other:	Reporting: Level III PST/UST TRRP Deliverables: EDD ADaPT Other:	Reporting: Level III PST/UST TRRP Deliverables: EDD ADaPT Other:	Reporting: Level Level PST/UST TRRP Deliverables: EDD ADaPT Other: SREQUEST Preservative None: NO Cool: Cool HITH eporting: Level III PST/UST TRRP Deliverables: EDD ADaPT Other: S REQUEST Preservative None: NO Cool: Cool HCL: HC H250 4: H2 H3PO 4: NABIS	Reporting: Level Level Other: S REQUEST	Reporting: Level III PST/UST TRRP Deliverables: EDD ADaPT Other: SREQUEST Preservative None: NO Cool: Cool HCL: HC H20 4: HP H30 4: HP H30 4: HP H30 4: NABIS H30 5: NABIS H30 5: NABIS H30 5: NABIS H30 6: N	Reporting: Level III PST/UST TRRP Deliverables: EDD ADaPT Other: SREQUEST Preservative Cool: Cool Cool H2.0 4: H2 H3.0 4: H3 H3.0 4: H3	Reporting: Level III PST/UST TRRP Deliverables: EDD ADaPT Other: SAEQUEST Preservative None: NO Cool: Cool HCL: HC H204: H2 H304: H2 H306: H2 H306: H2 H306: H2 H306: H2 H306: H2 H306: H2 H306: H2 H306: H2 H306: H2 H306: H2 H306: H2 H306: H306: H30 H306:	Reporting: Level III PST/UST TRRP Deliverables: EDD ADaPT Other: SREQUEST Preservative None: NO Cool: Cool HCL: HC H;PO 4: HP H;PO 4: HP NaHSO 4: NABIS Nah: So 0; NaSO 3 S24 Chain of Custody CC: (CC. SG 9 The ideas of the contract Sample Comtains Cool: Cool CC: (CC. SG 9 The ideas of the cool The ideas of the coo	Reporting: Level III PS Deliverables: EDD ADaPT S24 Chain of Custody	Reporting: Level III PST/UST TRRP Deliverables: EDD ADaPT Other: SREQUEST	Reporting: Level III PS Deliverables: EDD ADaPT S24 Chain of Custody	IS REQUEST Deliverables: EDD ADAPT ADAPT	Reporting: Level III PS Deliverables: EDD ADaPT S24 Chain of Custody	Reporting: Level III Ps Deliverables: EDD ADapT S24 Chain of Custody	es: EDD	EDD ADAPT EDD ADAPT FOR ADAPT	EDD ADAPT EDD ADAPT PS ADAPT ADAPT	EDD ADAPT EDD ADAPT PS A	EDD ADAPT EDD ADAPT PS AG SiO Na Sr T Hg: 1631/245.17	
EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296	Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	and by the breen	V72			4. Green Qexxon nobil. com		Pres. Code		sameters	i se j	10) Ho	*of Cont	2.2				>>>		C P		Al Sb As Ba Be B	botice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco. A minimum charge of \$85.00 will be enforced unless previously negotiated.	Date/Time Relinquished by: (Signatur	7-22-22 908	9	
Environment Testing Midlan	Xenco EL Pa Hobb	Co Mori (SSE)	7	Grand Shates Hay	1, Nm 58220 City, State ZIP:	257837 Email: 941124.	18 Tes, 19 Wells 1954 / Turn Around	A. S.	Particle Date: 74.7 TAT starts the day received by the lab, if received by 4:30pm	Temp Blank: Yes No Wet Ice: Yes No Yes No Thermometer ID: W	N/A Correction Factor:	Corrected Temperature:	Matrix Date Time Depth Grab/ Sampled Sampled Comp	5 H21/22 1445 1.5	1,450	1456		V 808 V				'6020: 8RCRA 13PPM Texas 11 Al S to be analyzed TCLP / SPLP 6010 : 8RCRA	ment of samples constitutes a valid purchase order from client compar he cost of samples and shall not assume any responsibility for any losses will be applied to each project and a charge of \$5 for each sample subrr	Rebeived by (Signature)	Che Cido	2	
eurofins 🖺	×	Project Manager: 16/12 Ass.	W	3/22	City, State ZIP: Cc/5/2,d	Phone: S>7-2	Project Name: 06.118	Der: 0361	31.20	PLE RECEIPT	Yes No	Sample Custody Seals: Yes No Total Containers:	Sample Identification	F501	F502	F503	Flory	F50 S				Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed	Notice: Signature of this document and relinquish of service. Eurofins Xenco will be lable only for the of Eurofins Xenco. A minimum charge of \$85.00 w	Relinguished by (Signature)	4	2 5	

Chain of Custody

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-2624-1 SDG Number: 03E1558066

Login Number: 2624 List Source: Eurofins Carlsbad

List Number: 1 Creator: Clifton, Cloe

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2624-1 SDG Number: 03E1558066

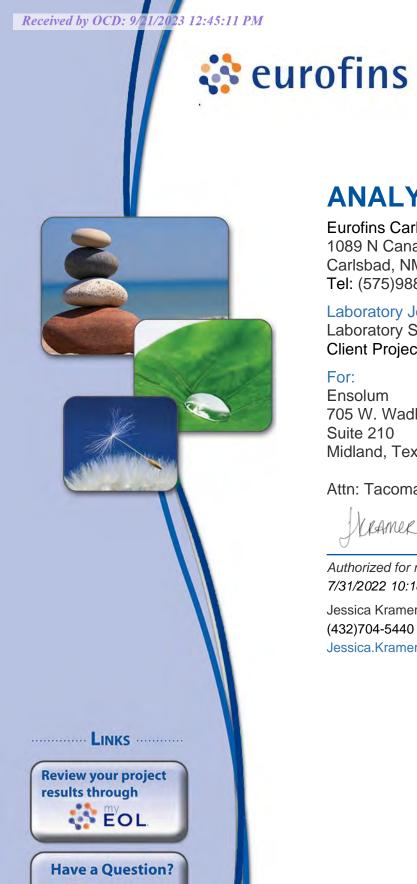
Login Number: 2624 **List Source: Eurofins Midland** List Number: 2 List Creation: 07/25/22 09:19 AM

Creator: Rodriguez, Leticia

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

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<6mm (1/4").



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Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-2625-1

Laboratory Sample Delivery Group: 03E1558066 Client Project/Site: PLU 18 TWIN WELLS 155H

For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Tacoma Morrissey

RAMER

Authorized for release by: 7/31/2022 10:18:26 AM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

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

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

Client: Ensolum Project/Site: PLU 18 TWIN WELLS 155H Laboratory Job ID: 890-2625-1 SDG: 03E1558066

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Definitions/Glossary

Job ID: 890-2625-1 Client: Ensolum Project/Site: PLU 18 TWIN WELLS 155H

SDG: 03E1558066

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier **Qualifier Description** F1 MS and/or MSD recovery exceeds control limits. 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

Duplicate Error Ratio (normalized absolute difference) DER

Dil Fac **Dilution Factor**

Detection Limit (DoD/DOE)

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

DLC Decision Level Concentration (Radiochemistry)

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

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

MDL Method Detection Limit ML Minimum Level (Dioxin) MPN Most Probable Number MOI Method Quantitation Limit

NC Not Calculated

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

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

PRES Presumptive **Quality Control** QC

Relative Error Ratio (Radiochemistry) **RER**

Reporting Limit or Requested Limit (Radiochemistry) RL

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

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

TNTC Too Numerous To Count

Case Narrative

Client: Ensolum

Project/Site: PLU 18 TWIN WELLS 155H

Job ID: 890-2625-1

SDG: 03E1558066

Job ID: 890-2625-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-2625-1

Receipt

The sample was received on 7/22/2022 9:08 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.0°C

GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-30687 and analytical batch 880-31048 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.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-30703 and analytical batch 880-31048 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA

Method 8015MOD NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-30667 and analytical batch 880-30645 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

HPLC/IC

Method 300 ORGFM 28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-30601 and analytical batch 880-30721 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.

Method 300 ORGFM 28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-30601 and analytical batch 880-30721 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.

Matrix: Solid

Lab Sample ID: 890-2625-1

Client Sample Results

Client: Ensolum Job ID: 890-2625-1 Project/Site: PLU 18 TWIN WELLS 155H SDG: 03E1558066

Client Sample ID: SS04

Date Collected: 07/21/22 15:20 Date Received: 07/22/22 09:08

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/26/22 11:38	07/30/22 21:16	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/26/22 11:38	07/30/22 21:16	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/26/22 11:38	07/30/22 21:16	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		07/26/22 11:38	07/30/22 21:16	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/26/22 11:38	07/30/22 21:16	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		07/26/22 11:38	07/30/22 21:16	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130			07/26/22 11:38	07/30/22 21:16	1
1,4-Difluorobenzene (Surr)	115		70 - 130			07/26/22 11:38	07/30/22 21:16	1
Method: Total BTEX - Total BTE	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			07/31/22 10:51	1
Analyte	Result	Qualifier	RL	Unit				
			IXL.	Ullit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8		49.8	mg/Kg	— -	Prepared	Analyzed 07/27/22 08:23	
- -	<49.8	U				Prepared		
Total TPH Method: 8015B NM - Diesel Rang Analyte	<49.8 ge Organics (D	U			D	Prepared		1
Thethod: 8015B NM - Diesel Rang	<49.8 ge Organics (D	RO) (GC) Qualifier	49.8	mg/Kg			07/27/22 08:23	1
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics	<49.8 ge Organics (D Result	CO) (GC) Qualifier U	49.8 RL	mg/Kg		Prepared	07/27/22 08:23 Analyzed	Dil Fac
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	<49.8 ge Organics (D Result <49.8	RO) (GC) Qualifier U	49.8 RL 49.8	mg/Kg Unit mg/Kg		Prepared 07/26/22 10:45	07/27/22 08:23 Analyzed 07/27/22 04:43	Dil Fac
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	<49.8 ge Organics (D Result <49.8 <49.8	CO (GC) Qualifier U U	49.8 RL 49.8 49.8	mg/Kg Unit mg/Kg mg/Kg		Prepared 07/26/22 10:45 07/26/22 10:45	07/27/22 08:23 Analyzed 07/27/22 04:43 07/27/22 04:43	1 Dil Fac 1 1
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	<49.8 ge Organics (D Result <49.8 <49.8 <49.8	CO) (GC) Qualifier U U	49.8 RL 49.8 49.8 49.8	mg/Kg Unit mg/Kg mg/Kg		Prepared 07/26/22 10:45 07/26/22 10:45 07/26/22 10:45	07/27/22 08:23 Analyzed 07/27/22 04:43 07/27/22 04:43	Dil Fac 1 1 Dil Fac
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	<49.8 ge Organics (D) Result <49.8 <49.8 <49.8 %Recovery	CO) (GC) Qualifier U U	49.8 RL 49.8 49.8 49.8 <i>Limits</i>	mg/Kg Unit mg/Kg mg/Kg		Prepared 07/26/22 10:45 07/26/22 10:45 07/26/22 10:45 Prepared	07/27/22 08:23 Analyzed 07/27/22 04:43 07/27/22 04:43 Analyzed	Dil Fac
Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	<49.8 ge Organics (D) Result <49.8 <49.8 <49.8 %Recovery 99 111	CO (GC) Qualifier U U Qualifier	49.8 49.8 49.8 49.8 49.8 Limits 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 07/26/22 10:45 07/26/22 10:45 07/26/22 10:45 Prepared 07/26/22 10:45	07/27/22 08:23 Analyzed 07/27/22 04:43 07/27/22 04:43 Analyzed 07/27/22 04:43	Dil Fac
Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	49.8 ge Organics (D) Result <49.8 <49.8 <49.8 %Recovery 99 111 omatography -	CO (GC) Qualifier U U Qualifier	49.8 49.8 49.8 49.8 49.8 Limits 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 07/26/22 10:45 07/26/22 10:45 07/26/22 10:45 Prepared 07/26/22 10:45	07/27/22 08:23 Analyzed 07/27/22 04:43 07/27/22 04:43 Analyzed 07/27/22 04:43	1

Surrogate Summary

 Client: Ensolum
 Job ID: 890-2625-1

 Project/Site: PLU 18 TWIN WELLS 155H
 SDG: 03E1558066

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

		BFB1	DFBZ1	Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-17204-A-99-C MS	Matrix Spike	110	94	
380-17204-A-99-D MSD	Matrix Spike Duplicate	107	93	
890-2623-A-1-G MS	Matrix Spike	108	98	
390-2623-A-1-H MSD	Matrix Spike Duplicate	99	100	
390-2625-1	SS04	104	115	
CS 880-30687/1-A	Lab Control Sample	109	101	
CS 880-30703/1-A	Lab Control Sample	101	90	
CSD 880-30687/2-A	Lab Control Sample Dup	57 S1-	94	
CSD 880-30703/2-A	Lab Control Sample Dup	97	94	
MB 880-30687/5-A	Method Blank	95	101	
MB 880-30703/5-A	Method Blank	93	96	
Surrogate Legend				

DFBZ = 1,4-Difluorobenzene (Surr)

OTPH = o-Terphenyl

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2623-A-1-E MS	Matrix Spike	83	88	
890-2623-A-1-F MSD	Matrix Spike Duplicate	85	91	
890-2625-1	SS04	99	111	
LCS 880-30667/2-A	Lab Control Sample	115	116	
LCSD 880-30667/3-A	Lab Control Sample Dup	91	102	
MB 880-30667/1-A	Method Blank	87	102	
Surrogate Legend				

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Client: Ensolum Job ID: 890-2625-1 Project/Site: PLU 18 TWIN WELLS 155H SDG: 03E1558066

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-30687/5-A

Matrix: Solid Analysis Batch: 31048 Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 30687

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg	_	07/26/22 11:38	07/30/22 13:28	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/26/22 11:38	07/30/22 13:28	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/26/22 11:38	07/30/22 13:28	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/26/22 11:38	07/30/22 13:28	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/26/22 11:38	07/30/22 13:28	1
Xylenes, Total	< 0.00400	U	0.00400	mg/Kg		07/26/22 11:38	07/30/22 13:28	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130	07/26/22 11:38	07/30/22 13:28	1
1,4-Difluorobenzene (Surr)	101		70 - 130	07/26/22 11:38	07/30/22 13:28	1

Lab Sample ID: LCS 880-30687/1-A **Client Sample ID: Lab Control Sample**

Matrix: Solid

Analysis Batch: 31048

Prep Type: Total/NA Prep Batch: 30687

Spike LCS LCS Analyte Added Result Qualifier Unit %Rec Limits Benzene 0.100 0.09746 mg/Kg 97 70 - 130 Toluene 0.100 0.1112 mg/Kg 111 70 - 130 0.100 0.09449 Ethylbenzene mg/Kg 94 70 - 130 0.200 0.1906 95 70 - 130 m-Xylene & p-Xylene mg/Kg 0.100 0.1111 70 - 130 o-Xylene mg/Kg 111

LCS LCS

Surrogate	%Recovery Qualifi	er Limits
4-Bromofluorobenzene (Surr)	109	70 - 130
1,4-Difluorobenzene (Surr)	101	70 - 130

Lab Sample ID: LCSD 880-30687/2-A

Matrix: Solid

Analysis Batch: 31048

Prep Type: Total/NA Prep Batch: 30687

RPD %Rec

Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08535		mg/Kg		85	70 - 130	13	35
Toluene	0.100	0.1067		mg/Kg		107	70 - 130	4	35
Ethylbenzene	0.100	0.09872		mg/Kg		99	70 - 130	4	35
m-Xylene & p-Xylene	0.200	0.2048		mg/Kg		102	70 - 130	7	35
o-Xylene	0.100	0.1208		mg/Kg		121	70 - 130	8	35

Spike

LCSD LCSD

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits		
4-Bromofluorobenzene (Surr)	57	S1-	70 - 130		
1,4-Difluorobenzene (Surr)	94		70 - 130		

Lab Sample ID: 890-2623-A-1-G MS

Matrix: Solid

Analysis Batch: 31048

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

Prep Batch: 30687

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00199	U F1	0.100	0.07238		mg/Kg		72	70 - 130	
Toluene	< 0.00199	U F1	0.100	0.06879	F1	mg/Kg		68	70 - 130	

QC Sample Results

Client: Ensolum Job ID: 890-2625-1 SDG: 03E1558066 Project/Site: PLU 18 TWIN WELLS 155H

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

Lab Sample ID: 890-2623-A-1-G MS

Matrix: Solid

Analysis Batch: 31048

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 30687

Sample Sample Spike MS MS %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Ethylbenzene <0.00199 U F1 0.100 0.04505 F1 43 70 - 130 mg/Kg m-Xylene & p-Xylene <0.00398 UF1 0.201 0.09057 F1 mg/Kg 43 70 - 130 <0.00199 UF1 0.100 0.05193 F1 o-Xylene mg/Kg 50 70 - 130

MS MS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 30687

Matrix: Solid

Analysis Batch: 31048

Lab Sample ID: 890-2623-A-1-H MSD

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00199	U F1	0.0992	0.06858	F1	mg/Kg		69	70 - 130	5	35
Toluene	<0.00199	U F1	0.0992	0.06605	F1	mg/Kg		66	70 - 130	4	35
Ethylbenzene	<0.00199	U F1	0.0992	0.04301	F1	mg/Kg		42	70 - 130	5	35
m-Xylene & p-Xylene	<0.00398	U F1	0.198	0.08435	F1	mg/Kg		41	70 - 130	7	35
o-Xylene	<0.00199	U F1	0.0992	0.04861	F1	mg/Kg		47	70 - 130	7	35

MSD MSD

Surrogate	%Recovery Qu	alifier Limits
4-Bromofluorobenzene (Surr)	99	70 - 130
1,4-Difluorobenzene (Surr)	100	70 - 130

Lab Sample ID: MB 880-30703/5-A

Matrix: Solid

Analysis Batch: 31048

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 30703

MB MB

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/26/22 13:48	07/31/22 01:06	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/26/22 13:48	07/31/22 01:06	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/26/22 13:48	07/31/22 01:06	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/26/22 13:48	07/31/22 01:06	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/26/22 13:48	07/31/22 01:06	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/26/22 13:48	07/31/22 01:06	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		70 - 130	07/26/22 13:48	07/31/22 01:06	1
1,4-Difluorobenzene (Surr)	96		70 - 130	07/26/22 13:48	07/31/22 01:06	1

Lab Sample ID: LCS 880-30703/1-A

Matrix: Solid

Analysis Batch: 31048

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 30703

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.07529		mg/Kg		75	70 - 130	
Toluene	0.100	0.09547		mg/Kg		95	70 - 130	
Ethylbenzene	0.100	0.08300		mg/Kg		83	70 - 130	
m-Xylene & p-Xylene	0.200	0.1680		mg/Kg		84	70 - 130	

QC Sample Results

Client: Ensolum Job ID: 890-2625-1 Project/Site: PLU 18 TWIN WELLS 155H SDG: 03E1558066

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

Lab Sample ID: LCS 880-30703/1-A **Client Sample ID: Lab Control Sample Matrix: Solid** Prep Type: Total/NA **Analysis Batch: 31048** Prep Batch: 30703

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
o-Xylene	0.100	0.09893		mg/Kg		99	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	90		70 - 130

Lab Sample ID: LCSD 880-30703/2-A **Client Sample ID: Lab Control Sample Dup** Prep Type: Total/NA

Matrix: Solid Analysis Batch: 31048 Prep Batch: 30703

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.07473		mg/Kg		75	70 - 130	1	35
Toluene	0.100	0.09089		mg/Kg		91	70 - 130	5	35
Ethylbenzene	0.100	0.07880		mg/Kg		79	70 - 130	5	35
m-Xylene & p-Xylene	0.200	0.1596		mg/Kg		80	70 - 130	5	35
o-Xylene	0.100	0.09473		mg/Kg		95	70 - 130	4	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

Lab Sample ID: 880-17204-A-99-C MS Client Sample ID: Matrix Spike **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 31048 Prep Batch: 30703 Sample Sample Snika Me Me % Pac

	Sample	Sample	Spike	IVIO	IVIO				/orec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U F1	0.100	0.05327	F1	mg/Kg		53	70 - 130	
Toluene	<0.00201	U F1	0.100	0.06370	F1	mg/Kg		64	70 - 130	
Ethylbenzene	<0.00201	U F1	0.100	0.05143	F1	mg/Kg		51	70 - 130	
m-Xylene & p-Xylene	<0.00402	U F1	0.200	0.1050	F1	mg/Kg		52	70 - 130	
o-Xylene	<0.00201	U F1	0.100	0.06058	F1	mg/Kg		60	70 - 130	

0-Aylerie	<0.00201	UFI	0.100	0.00036 F	i ilig/Ng	00
	MS	MS				
Surrogate	%Recovery	Qualifier	Limits			
4-Bromofluorobenzene (Surr)	110		70 - 130			
1,4-Difluorobenzene (Surr)	94		70 - 130			

Lab Sample ID: 880-17204-A-99-D MSD **Client Sample ID: Matrix Spike Duplicate**

Matrix: Solid Prep Type: Total/NA **Analysis Batch: 31048** Prep Batch: 30703

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00201	U F1	0.0996	0.05952	F1	mg/Kg		60	70 - 130	11	35
Toluene	<0.00201	U F1	0.0996	0.06786	F1	mg/Kg		68	70 - 130	6	35
Ethylbenzene	<0.00201	U F1	0.0996	0.05352	F1	mg/Kg		53	70 - 130	4	35
m-Xylene & p-Xylene	<0.00402	U F1	0.199	0.1059	F1	mg/Kg		52	70 - 130	1	35
o-Xylene	<0.00201	U F1	0.0996	0.05896	F1	mg/Kg		59	70 - 130	3	35

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7/31/2022

Job ID: 890-2625-1 Client: Ensolum Project/Site: PLU 18 TWIN WELLS 155H SDG: 03E1558066

Limits

70 - 130

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

MSD MSD

%Recovery Qualifier

107

Lab Sample ID: 880-17204-A-99-D MSD

Matrix: Solid

Surrogate

Analysis Batch: 31048

4-Bromofluorobenzene (Surr)

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 30703

1,4-Difluorobenzene (Surr) 93 70 - 130 Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-30667/1-A

Matrix: Solid

Analysis Batch: 30645

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 30667

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		07/26/22 10:45	07/26/22 20:25	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		07/26/22 10:45	07/26/22 20:25	1
C10-C28)								
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/26/22 10:45	07/26/22 20:25	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	87		70 - 130	07/26/22 10:45	07/26/22 20:25	1
o-Terphenyl	102		70 - 130	07/26/22 10:45	07/26/22 20:25	1

LCS LCS

Result Qualifier

Unit

D

Lab Sample ID: LCS 880-30667/2-A

Lab Sample ID: LCSD 880-30667/3-A

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Matrix: Solid

Analysis Batch: 30645

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

Prep Batch: 30667

%Rec

%Rec Limits 70 - 130

Gasoline Range Organics 1000 1069 mg/Kg 107 (GRO)-C6-C10 Diesel Range Organics (Over 1000 921.7 mg/Kg 92 70 - 130 C10-C28)

Spike

Added

Matrix: Solid

Analysis Batch: 30645

Analyte

LCS LCS Surrogate %Recovery Qualifier Limits 70 - 130 1-Chlorooctane 115 o-Terphenyl 116 70 - 130

Client Sample ID: Lab Control Sample Dup

Prep Batch: 30667

LCSD LCSD Spike %Rec RPD Analyte Added Result Qualifier Unit %Rec Limits **RPD** Limit Gasoline Range Organics 1000 1061 mg/Kg 106 70 - 130 20 (GRO)-C6-C10 Diesel Range Organics (Over 1000 847.4 85 70 - 130 20 mg/Kg C10-C28)

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
1-Chlorooctane	91	70 - 130
o-Terphenyl	102	70 - 130



Job ID: 890-2625-1 Client: Ensolum Project/Site: PLU 18 TWIN WELLS 155H SDG: 03E1558066

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

1420 F1

Lab Sample ID: 890-2623-A-1-E MS

Matrix: Solid

Prep Type: Total/NA Analysis Batch: 30645 Prep Batch: 30667 Sample Sample Spike MS MS Result Qualifier Analyte Added Result Qualifier %Rec Limits Unit Gasoline Range Organics 8.08 1000 1129 mg/Kg 105 70 - 130

1866 F1

mg/Kg

1000

Diesel Range Organics (Over C10-C28)

(GRO)-C6-C10

MS MS %Recovery Qualifier Limits Surrogate 1-Chlorooctane 70 - 130 83 o-Terphenyl 88 70 - 130

Lab Sample ID: 890-2623-A-1-F MSD

Matrix: Solid

Analysis Batch: 30645

Client Sample ID: Matrix Spike Duplicate

Client Sample ID: Lab Control Sample Dup

70 - 130

45

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 30667

MSD MSD %Rec RPD Sample Sample Spike Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits **RPD** Limit Gasoline Range Organics 80.8 999 1107 mg/Kg 103 70 - 130 2 20 (GRO)-C6-C10 Diesel Range Organics (Over 1420 F1 999 1976 F1 mg/Kg 56 70 - 130 6 20 C10-C28)

MSD MSD Surrogate %Recovery Qualifier Limits 85

1-Chlorooctane 70 - 130 91 70 - 130 o-Terphenyl

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-30601/1-A

Matrix: Solid

Analysis Batch: 30721

Client Sample ID: Method Blank **Prep Type: Soluble**

Result Qualifier Analyte

MB MB

RL Unit Prepared Analyzed Dil Fac Chloride <5.00 U 5.00 07/27/22 09:44 mg/Kg

Lab Sample ID: LCS 880-30601/2-A

Client Sample ID: Lab Control Sample **Matrix: Solid Prep Type: Soluble Analysis Batch: 30721**

LCS LCS Spike %Rec Analyte Added Result Qualifier Unit D %Rec Limits Chloride 250 262.2 105 90 - 110 mg/Kg

Lab Sample ID: LCSD 880-30601/3-A

Matrix: Solid

Analysis Batch: 30721

Allarysis Datcii. 30721									
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	250	262.4		mg/Kg		105	90 - 110	0	20

Eurofins Carlsbad

Prep Type: Soluble

QC Sample Results

Client: Ensolum Job ID: 890-2625-1 Project/Site: PLU 18 TWIN WELLS 155H

SDG: 03E1558066

0

Method: 300.0 - Anions, Ion Chromatography (Continued)

<99.0 U

Lab Sample ID: 880-17254-A-1-B MS Client Sample ID: Matrix Spike **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 30721

	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	<99.0	U	4950	4828		mg/Kg	_	96	90 - 110		_

Lab Sample ID: 880-17254-A-1-C MSD Client Sample ID: Matrix Spike Duplicate **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 30721

Chloride

Sample Sample Spike MSD MSD %Rec RPD Result Qualifier Added Result Qualifier Limits RPD Limit Analyte Unit D %Rec

4950

Lab Sample ID: 880-17301-A-3-F MS Client Sample ID: Matrix Spike

Matrix: Solid Prep Type: Soluble

4817

mg/Kg

96

90 - 110

Analysis Batch: 30721

MS MS %Rec Sample Sample Spike

Analyte Result Qualifier Added Result Qualifier Unit Limits Chloride 9.76 F1 250 555.7 F1 218 90 - 110 mg/Kg

Lab Sample ID: 880-17301-A-3-G MSD Client Sample ID: Matrix Spike Duplicate **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 30721

Spike MSD MSD RPD Sample Sample %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 250 555.5 F1 9.76 F1 218 90 - 110 20 mg/Kg

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS 155H

Job ID: 890-2625-1 SDG: 03E1558066

GC VOA

Prep Batch: 30687

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2625-1	SS04	Total/NA	Solid	5035	
MB 880-30687/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30687/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30687/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2623-A-1-G MS	Matrix Spike	Total/NA	Solid	5035	
890-2623-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 30703

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-30703/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30703/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30703/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17204-A-99-C MS	Matrix Spike	Total/NA	Solid	5035	
880-17204-A-99-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 31048

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2625-1	SS04	Total/NA	Solid	8021B	30687
MB 880-30687/5-A	Method Blank	Total/NA	Solid	8021B	30687
MB 880-30703/5-A	Method Blank	Total/NA	Solid	8021B	30703
LCS 880-30687/1-A	Lab Control Sample	Total/NA	Solid	8021B	30687
LCS 880-30703/1-A	Lab Control Sample	Total/NA	Solid	8021B	30703
LCSD 880-30687/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30687
LCSD 880-30703/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30703
880-17204-A-99-C MS	Matrix Spike	Total/NA	Solid	8021B	30703
880-17204-A-99-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30703
890-2623-A-1-G MS	Matrix Spike	Total/NA	Solid	8021B	30687
890-2623-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30687

Analysis Batch: 31127

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2625-1	SS04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 30645

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2625-1	SS04	Total/NA	Solid	8015B NM	30667
MB 880-30667/1-A	Method Blank	Total/NA	Solid	8015B NM	30667
LCS 880-30667/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30667
LCSD 880-30667/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30667
890-2623-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	30667
890-2623-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30667

Prep Batch: 30667

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2625-1	SS04	Total/NA	Solid	8015NM Prep	
MB 880-30667/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30667/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30667/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2623-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	

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5

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7

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12

QC Association Summary

Client: Ensolum Job ID: 890-2625-1 Project/Site: PLU 18 TWIN WELLS 155H SDG: 03E1558066

GC Semi VOA (Continued)

Prep Batch: 30667 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2623-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 30761

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2625-1	SS04	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 30601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
890-2625-1	SS04	Soluble	Solid	DI Leach	
MB 880-30601/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-30601/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-30601/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-17254-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-17254-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
880-17301-A-3-F MS	Matrix Spike	Soluble	Solid	DI Leach	
880-17301-A-3-G MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 30721

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Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2625-1	SS04	Soluble	Solid	300.0	30601
MB 880-30601/1-A	Method Blank	Soluble	Solid	300.0	30601
LCS 880-30601/2-A	Lab Control Sample	Soluble	Solid	300.0	30601
LCSD 880-30601/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30601
880-17254-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30601
880-17254-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30601
880-17301-A-3-F MS	Matrix Spike	Soluble	Solid	300.0	30601
880-17301-A-3-G MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30601

Lab Chronicle

Client: Ensolum Job ID: 890-2625-1 Project/Site: PLU 18 TWIN WELLS 155H SDG: 03E1558066

Client Sample ID: SS04 Lab Sample ID: 890-2625-1 Date Collected: 07/21/22 15:20

Matrix: Solid

Date Received: 07/22/22 09:08

	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	30687	07/26/22 11:38	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31048	07/30/22 21:16	AJ	XEN MID
Total/NA	Analysis	Total BTEX		1			31127	07/31/22 10:51	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			30761	07/27/22 08:23	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	30667	07/26/22 10:45	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30645	07/27/22 04:43	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	30601	07/25/22 15:31	KS	XEN MID
Soluble	Analysis	300.0		1			30721	07/27/22 15:10	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum Job ID: 890-2625-1 Project/Site: PLU 18 TWIN WELLS 155H

SDG: 03E1558066

Laboratory: Eurofins Midland

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

Authority	Pr	ogram	Identification Number	Expiration Date	
Texas	NE	ELAP	T104704400-22-24	06-30-23	
The following analytes the agency does not of		it the laboratory is not certifi	ed by the governing authority. This list ma	ay include analytes fo	
Analysis Method	Door Made and	Matrix			
Analysis Method	Prep Method	Maurx	Analyte		
8015 NM	Ргер метпоа	Solid	Analyte Total TPH		

Method Summary

Client: Ensolum

Project/Site: PLU 18 TWIN WELLS 155H

Job ID: 890-2625-1

SDG: 03E1558066

aboratory	
EN MID	
EN MID	
EN MID	F

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

Protocol References:

ASTM = ASTM International

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Eurofins Carlsbad

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Sample Summary

Client: Ensolum

Project/Site: PLU 18 TWIN WELLS 155H

Job ID: 890-2625-1

SDG: 03E1558066

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2625-1	SS04	Solid	07/21/22 15:20	07/22/22 09:08	0.5

Superfund

RRC

ed Date 08/25/2020 Rev. 2020.3

Date/Time

Received by: (Signature)

PST/UST TRRP Brownfields Page Cool: Cool Work Order Comments HCL: HC ADaPT www.xenco.com Work Order No: Reporting: Level II | Level III UST/PST | PRP EDD State of Project: Deliverables: **ANALYSIS REQUEST** garrett. green@exxonmobile.com Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199 Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Green Chain of Custody Grarrett Pres. Code Bill to: (if different) Company Name: City, State ZIP: Rush Parks Highway Address: **Turn Around** Email: WRoutine Due Date: **Environment Testing** BRIDGO Tacoma Morrissey PLU 18 Two Wells 1554 (32.2096, -103.8149) 337-257-8307 3122 National Z Xenco 03E1558066 Kase Parker Ensolum Carlsbad eurofins 🔩 Project Manager: Company Name: Address:

tmerrissey@enschumcon Level IV n APP 221473569 6, DI Water: H₂O CC; 1665991001 NaOH: Na MeOH: Me HNO 3: HN NaOH+Ascorbic Acid: SAPC Sample Comments Preservative Codes Zn Acetate+NaOH: Zn Incident # Na 2 S 2 O 3: Na SO 3 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn Other: PM cmail VaHSO 4: NABIS Hg: 1631 / 245.1 / 7470 / 7471 H3PO 4: HP None: NO H2S04: H2 890-2625 Chain of Custody TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Chlorides HUL X BTEX X Cont # of X Parameters Comp Grab/ MADOL X TAT starts the day received by the lab, if received by 4:30pm 5.0 5.0 4 Depth 0.5 Corrected Temperature: Wet Ice: Sampled 520 Temperature Reading: Time Thermometer ID: Correction Factor: 7/21/22 Cyce No. Sampled Date Matrix (?) Temp Blank: Yes No N/A Yes No NA 200.8 / 6020: Yes No Sample Identification Samples Received Intact: Fotal 200.7 / 6010 Sample Custody Seals: Cooler Custody Seals: SAMPLE RECEIPT roject Number: Project Location: Sampler's Name: Total Containers: SSS City, State ZIP: Project Name: .# Od

Furofins Xenco. A minimum charge of \$85,50 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 titee: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control Circle Method(s) and Metal(s) to be analyzed

Relinquished by: (Signature) -32.22 908 Date/Time Received by (Signature) Relipquished by: (Signature)

3

7/31/2022

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-2625-1 SDG Number: 03E1558066

Login Number: 2625 List Source: Eurofins Carlsbad

List Number: 1 Creator: Clifton, Cloe

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2625-1 SDG Number: 03E1558066

Login Number: 2625
List Source: Eurofins Midland
List Number: 2
List Creation: 07/25/22 09:19 AM

Creator: Rodriguez, Leticia

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

4

4

0

11

42

14

<6mm (1/4").

Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-2626-1

Laboratory Sample Delivery Group: 03E1558066 Client Project/Site: PLU 18 TWIN WELLS 155H

For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Tacoma Morrissey

RAMER

Authorized for release by: 7/31/2022 10:18:36 AM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

.....LINKS

Review your project results through

EOL

Have a Question?

Received by OCD: 9/21/2023 12:45:11 PM

Visit us at:

www.eurofinsus.com/Env Released to Imaging: 2/23/2024 2:44:26 PM This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten

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

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS 155H

Laboratory Job ID: 890-2626-1 SDG: 03E1558066

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Definitions/Glossary

Job ID: 890-2626-1 Client: Ensolum Project/Site: PLU 18 TWIN WELLS 155H

SDG: 03E1558066

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier **Qualifier Description**

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

HPLC/IC

Qualifier **Qualifier Description**

Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation These commonly used abbreviations may or may not be present in this report. Listed under the "D" column to designate that the result is reported on a dry weight basis

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

DFR Duplicate Error Ratio (normalized absolute difference)

Dil Fac **Dilution Factor**

DL Detection Limit (DoD/DOE)

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

Decision Level Concentration (Radiochemistry) DLC **EDL** Estimated Detection Limit (Dioxin)

LOD Limit of Detection (DoD/DOE) LOQ Limit of Quantitation (DoD/DOE) EPA recommended "Maximum Contaminant Level" MCL

MDA Minimum Detectable Activity (Radiochemistry) MDC Minimum Detectable Concentration (Radiochemistry)

Method Detection Limit MDL 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

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

TNTC Too Numerous To Count

Eurofins Carlsbad

Case Narrative

Client: Ensolum

Project/Site: PLU 18 TWIN WELLS 155H

Job ID: 890-2626-1 SDG: 03E1558066

Job ID: 890-2626-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-2626-1

Receipt

The sample was received on 7/22/2022 9:08 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.0°C

GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-30687 and analytical batch 880-31048 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.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-30703 and analytical batch 880-31048 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-30667 and analytical batch 880-30645 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

HPLC/IC

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

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Client Sample Results

Client: Ensolum Job ID: 890-2626-1 Project/Site: PLU 18 TWIN WELLS 155H SDG: 03E1558066

Client Sample ID: SS05

Lab Sample ID: 890-2626-1

Matrix: Solid

Sample Depth: 0.5

Date Collected: 07/21/22 15:25

Date Received: 07/22/22 09:08

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00199	U	0.00199	mg/Kg		07/26/22 11:38	07/30/22 21:36	
Toluene	<0.00199	U	0.00199	mg/Kg		07/26/22 11:38	07/30/22 21:36	
Ethylbenzene	< 0.00199	U	0.00199	mg/Kg		07/26/22 11:38	07/30/22 21:36	
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		07/26/22 11:38	07/30/22 21:36	
o-Xylene	<0.00199	U	0.00199	mg/Kg		07/26/22 11:38	07/30/22 21:36	
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		07/26/22 11:38	07/30/22 21:36	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	103		70 - 130			07/26/22 11:38	07/30/22 21:36	
1,4-Difluorobenzene (Surr)	104		70 - 130			07/26/22 11:38	07/30/22 21:36	
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			07/31/22 10:51	
Method: 8015 NM - Diesel Range Analyte	Result	Qualifier	RL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			07/27/22 08:23	•
Method: 8015B NM - Diesel Rang	je Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		07/26/22 10:45	07/27/22 05:04	•
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		07/26/22 10:45	07/27/22 05:04	•
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/26/22 10:45	07/27/22 05:04	•
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	100		70 - 130			07/26/22 10:45	07/27/22 05:04	
o-Terphenyl	115		70 - 130			07/26/22 10:45	07/27/22 05:04	
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble						
Welliou. 300.0 - Allions, Ion Cili	matograpity -							
Analyte	•	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa

Surrogate Summary

Client: Ensolum Job ID: 890-2626-1 Project/Site: PLU 18 TWIN WELLS 155H SDG: 03E1558066

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-17204-A-99-C MS	Matrix Spike	110	94	
880-17204-A-99-D MSD	Matrix Spike Duplicate	107	93	
890-2623-A-1-G MS	Matrix Spike	108	98	
890-2623-A-1-H MSD	Matrix Spike Duplicate	99	100	
890-2626-1	SS05	103	104	
LCS 880-30687/1-A	Lab Control Sample	109	101	
LCS 880-30703/1-A	Lab Control Sample	101	90	
LCSD 880-30687/2-A	Lab Control Sample Dup	57 S1-	94	
LCSD 880-30703/2-A	Lab Control Sample Dup	97	94	
MB 880-30687/5-A	Method Blank	95	101	
MB 880-30703/5-A	Method Blank	93	96	
Surrogate Legend				
BFB = 4-Bromofluoroben:	zene (Surr)			

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1001	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2623-A-1-E MS	Matrix Spike	83	88	
890-2623-A-1-F MSD	Matrix Spike Duplicate	85	91	
890-2626-1	SS05	100	115	
LCS 880-30667/2-A	Lab Control Sample	115	116	
LCSD 880-30667/3-A	Lab Control Sample Dup	91	102	
MB 880-30667/1-A	Method Blank	87	102	
Surrogate Legend				
1CO = 1-Chlorooctane				

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OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum Job ID: 890-2626-1 SDG: 03E1558066 Project/Site: PLU 18 TWIN WELLS 155H

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-30687/5-A

Matrix: Solid

Analysis Batch: 31048

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 30687

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/26/22 11:38	07/30/22 13:28	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/26/22 11:38	07/30/22 13:28	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/26/22 11:38	07/30/22 13:28	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/26/22 11:38	07/30/22 13:28	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/26/22 11:38	07/30/22 13:28	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/26/22 11:38	07/30/22 13:28	1

мв мв

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130	07/26/22 11:38	07/30/22 13:28	1
1,4-Difluorobenzene (Surr)	101		70 - 130	07/26/22 11:38	07/30/22 13:28	1

Lab Sample ID: LCS 880-30687/1-A

Matrix: Solid

Analysis Batch: 31048

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 30687

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09746		mg/Kg		97	70 - 130	
Toluene	0.100	0.1112		mg/Kg		111	70 - 130	
Ethylbenzene	0.100	0.09449		mg/Kg		94	70 - 130	
m-Xylene & p-Xylene	0.200	0.1906		mg/Kg		95	70 - 130	
o-Xylene	0.100	0.1111		mg/Kg		111	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	109	70 - 130
1,4-Difluorobenzene (Surr)	101	70 - 130

Lab Sample ID: LCSD 880-30687/2-A

Matrix: Solid

Analysis Batch: 31048

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 30687

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.08535		mg/Kg		85	70 - 130	13	35	
Toluene	0.100	0.1067		mg/Kg		107	70 - 130	4	35	
Ethylbenzene	0.100	0.09872		mg/Kg		99	70 - 130	4	35	
m-Xylene & p-Xylene	0.200	0.2048		mg/Kg		102	70 - 130	7	35	
o-Xylene	0.100	0.1208		mg/Kg		121	70 - 130	8	35	

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	57	S1-	70 - 130
1.4-Difluorobenzene (Surr)	94		70 - 130

Lab Sample ID: 890-2623-A-1-G MS

Matrix: Solid

Analysis Batch: 31048

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

Prep Batch: 30687

		Sample	Sample	Spike	MS	MS				%Rec	
	Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
	Benzene	<0.00199	U F1	0.100	0.07238		mg/Kg	_	72	70 - 130	
١	Toluene	< 0.00199	U F1	0.100	0.06879	F1	mg/Kg		68	70 - 130	

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Client: Ensolum

Job ID: 890-2626-1

SDG: 03E1558066

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

Lab Sample ID: 890-2623-A-1-G MS

Lab Sample ID: 890-2623-A-1-H MSD

Project/Site: PLU 18 TWIN WELLS 155H

Matrix: Solid

Matrix: Solid

Analysis Batch: 31048

Analysis Batch: 31048

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 30687

Sample Sample Spike MS MS %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Ethylbenzene <0.00199 U F1 0.100 0.04505 F1 43 70 - 130 mg/Kg m-Xylene & p-Xylene <0.00398 UF1 0.201 0.09057 F1 mg/Kg 43 70 - 130 0.100 o-Xylene <0.00199 UF1 0.05193 F1 mg/Kg 50 70 - 130

MS MS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 30687

RPD

Sample Sample Spike MSD MSD Result Qualifier Added Result Qualifier Limits RPD Limit Analyte Unit %Rec 0.0992 0.06858 F1 Benzene <0.00199 UF1 mg/Kg 69 70 - 130 5 35 Toluene 0.0992 35 <0.00199 UF1 0.06605 F1 mg/Kg 66 70 - 130 4 Ethylbenzene <0.00199 UF1 0.0992 0.04301 F1 mg/Kg 42 70 - 130 5 35 0.198 0.08435 F1 70 - 130 35 m-Xylene & p-Xylene <0.00398 UF1 mg/Kg 0.0992 <0.00199 U F1 0.04861 F1 47 70 - 130 o-Xylene mg/Kg

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Lab Sample ID: MB 880-30703/5-A

Matrix: Solid

Analysis Batch: 31048

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 30703

MB MB

D-	14	A

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/26/22 13:48	07/31/22 01:06	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/26/22 13:48	07/31/22 01:06	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/26/22 13:48	07/31/22 01:06	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/26/22 13:48	07/31/22 01:06	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/26/22 13:48	07/31/22 01:06	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/26/22 13:48	07/31/22 01:06	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepar	red	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		70 - 130	07/26/22	13:48	07/31/22 01:06	1
1,4-Difluorobenzene (Surr)	96		70 - 130	07/26/22	13:48	07/31/22 01:06	1

Lab Sample ID: LCS 880-30703/1-A

Matrix: Solid

Analysis Batch: 31048

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 30703

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.07529		mg/Kg		75	70 - 130	
Toluene	0.100	0.09547		mg/Kg		95	70 - 130	
Ethylbenzene	0.100	0.08300		mg/Kg		83	70 - 130	
m-Xylene & p-Xylene	0.200	0.1680		mg/Kg		84	70 - 130	

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Client: Ensolum Job ID: 890-2626-1 Project/Site: PLU 18 TWIN WELLS 155H

SDG: 03E1558066

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

Lab Sample ID: LCS 880-30703/1-A **Client Sample ID: Lab Control Sample Matrix: Solid** Prep Type: Total/NA Prep Batch: 30703 **Analysis Batch: 31048**

	Бріке	LUS	LUS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
o-Xylene	 0.100	0.09893		mg/Kg		99	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	90		70 - 130

Lab Sample ID: LCSD 880-30703/2-A Client Sample ID: Lab Control Sample Dup

Matrix: Solid Prep Type: Total/NA Analysis Batch: 31048 Prep Batch: 30703

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.07473		mg/Kg		75	70 - 130	1	35
Toluene	0.100	0.09089		mg/Kg		91	70 - 130	5	35
Ethylbenzene	0.100	0.07880		mg/Kg		79	70 - 130	5	35
m-Xylene & p-Xylene	0.200	0.1596		mg/Kg		80	70 - 130	5	35
o-Xylene	0.100	0.09473		mg/Kg		95	70 - 130	4	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

Lab Sample ID: 880-17204-A-99-C MS Client Sample ID: Matrix Spike

Matrix: Solid Prep Type: Total/NA **Analysis Batch: 31048** Prep Batch: 30703

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U F1	0.100	0.05327	F1	mg/Kg		53	70 - 130	
Toluene	<0.00201	U F1	0.100	0.06370	F1	mg/Kg		64	70 - 130	
Ethylbenzene	<0.00201	U F1	0.100	0.05143	F1	mg/Kg		51	70 - 130	
m-Xylene & p-Xylene	<0.00402	U F1	0.200	0.1050	F1	mg/Kg		52	70 - 130	
o-Xylene	<0.00201	U F1	0.100	0.06058	F1	mg/Kg		60	70 - 130	
	440	440								

Surrogate	%Recovery Quali	ifier Limits
4-Bromofluorobenzene (Surr)	110	70 - 130
1,4-Difluorobenzene (Surr)	94	70 - 130

Lab Sample ID: 880-17204-A-99-D MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid Analysis Batch: 31048

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Analysis Batch: 31046									Prep	Batch:	30703
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00201	U F1	0.0996	0.05952	F1	mg/Kg		60	70 - 130	11	35
Toluene	<0.00201	U F1	0.0996	0.06786	F1	mg/Kg		68	70 - 130	6	35
Ethylbenzene	<0.00201	U F1	0.0996	0.05352	F1	mg/Kg		53	70 - 130	4	35
m-Xylene & p-Xylene	<0.00402	U F1	0.199	0.1059	F1	mg/Kg		52	70 - 130	1	35
o-Xylene	< 0.00201	U F1	0.0996	0.05896	F1	mg/Kg		59	70 - 130	3	35

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Prep Type: Total/NA Pron Batch: 30703

Project/Site: PLU 18 TWIN WELLS 155H

Client: Ensolum

Job ID: 890-2626-1

SDG: 03E1558066

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

Lab Sample ID: 880-17204-A-99-D MSD

Matrix: Solid

Analysis Batch: 31048

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 30703

MSD MSD

Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 107 70 - 130 1,4-Difluorobenzene (Surr) 93 70 - 130

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

Lab Sample ID: MB 880-30667/1-A

Matrix: Solid

Analysis Batch: 30645

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 30667

MB MB

Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fac Gasoline Range Organics <50.0 U 50.0 07/26/22 10:45 07/26/22 20:25 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over <50.0 U 50.0 mg/Kg 07/26/22 10:45 07/26/22 20:25 C10-C28) 07/26/22 20:25 Oll Range Organics (Over C28-C36) <50.0 U 50.0 mg/Kg 07/26/22 10:45

MB MB

Surrogate	%Recovery Qua	alifier Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	87	70 - 130	07/26/22 10:45	07/26/22 20:25	1
o-Terphenyl	102	70 - 130	07/26/22 10:45	07/26/22 20:25	1

Lab Sample ID: LCS 880-30667/2-A Client Sample ID: Lab Control Sample

Matrix: Solid

Analysis Batch: 30645

Prep Type: Total/NA

Prep Batch: 30667

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	1069		mg/Kg		107	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	921.7		mg/Kg		92	70 - 130	
C10-C28)								

LCS LCS

Surrogate	%Recovery Qualifier	Limits
1-Chlorooctane	115	70 - 130
o-Terphenyl	116	70 - 130

Lab Sample ID: LCSD 880-30667/3-A

Matrix: Solid

Analysis Batch: 30645

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 30667

LCSD LCSD Spike %Rec RPD Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Gasoline Range Organics 1000 1061 106 70 - 130 20 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 847.4 85 70 - 130 20 mg/Kg

C10-C28)

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
1-Chlorooctane	91	70 - 130
o-Terphenyl	102	70 - 130

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Job ID: 890-2626-1 Client: Ensolum Project/Site: PLU 18 TWIN WELLS 155H SDG: 03E1558066

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

Lab Sample ID: 890-2623-A-1-E MS

Lab Sample ID: 890-2623-A-1-F MSD

Matrix: Solid Analysis Batch: 30645 Client Sample ID: Matrix Spike

Prep Type: Total/NA Prep Batch: 30667

Sample Sample Spike MS MS Result Qualifier Analyte Added Result Qualifier %Rec Limits Unit Gasoline Range Organics 8.08 1000 1129 mg/Kg 105 70 - 130 (GRO)-C6-C10 1420 F1 1000 1866 F1 70 - 130Diesel Range Organics (Over mg/Kg 45

Limits

70 - 130

70 - 130

C10-C28)

Matrix: Solid

Analysis Batch: 30645

MS MS %Recovery Qualifier Surrogate 1-Chlorooctane 83 o-Terphenyl 88

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

Prep Batch: 30667

MSD MSD %Rec RPD Sample Sample Spike Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits **RPD** Limit Gasoline Range Organics 80.8 999 1107 mg/Kg 103 70 - 130 2 20 (GRO)-C6-C10 Diesel Range Organics (Over 1420 F1 999 1976 F1 mg/Kg 56 70 - 130 6 20 C10-C28)

MSD MSD Surrogate %Recovery Qualifier Limits 1-Chlorooctane 85 70 - 130 91 70 - 130 o-Terphenyl

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-30625/1-A Client Sample ID: Method Blank

Matrix: Solid Prep Type: Soluble

Analysis Batch: 30693

MB MB Result Qualifier Analyte RL Unit Prepared Analyzed Dil Fac Chloride <5.00 U 5.00 07/27/22 04:59 mg/Kg

Lab Sample ID: LCS 880-30625/2-A Client Sample ID: Lab Control Sample

Matrix: Solid

Analysis Batch: 30693

LCS LCS Spike %Rec Analyte Added Result Qualifier Unit D %Rec Limits Chloride 250 261.5 105 90 - 110 mg/Kg

Lab Sample ID: LCSD 880-30625/3-A Client Sample ID: Lab Control Sample Dup Matrix: Solid **Prep Type: Soluble**

Analysis Batch: 30693

Spike LCSD LCSD %Rec RPD Analyte Added Result Qualifier %Rec Limits RPD Limit Unit D Chloride 250 105 262.3 mg/Kg 90 _ 110 20

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QC Sample Results

Client: Ensolum Job ID: 890-2626-1 Project/Site: PLU 18 TWIN WELLS 155H

SDG: 03E1558066

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-2623-A-11-E MS Client Sample ID: Matrix Spike **Matrix: Solid**

Prep Type: Soluble

Analysis Batch: 30693

Analysis Batch: 30693

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	1640		2520	4348		mg/Kg		107	90 - 110	

Lab Sample ID: 890-2623-A-11-F MSD Client Sample ID: Matrix Spike Duplicate **Matrix: Solid**

Prep Type: Soluble

Sample Sample Spike MSD MSD %Rec RPD RPD Result Qualifier Added Result Qualifier Limits Limit Analyte Unit D %Rec 2520 Chloride 1640 4346 mg/Kg 107 90 - 110 0

QC Association Summary

Client: Ensolum

Job ID: 890-2626-1 Project/Site: PLU 18 TWIN WELLS 155H SDG: 03E1558066

GC VOA

Prep Batch: 30687

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2626-1	SS05	Total/NA	Solid	5035	
MB 880-30687/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30687/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30687/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2623-A-1-G MS	Matrix Spike	Total/NA	Solid	5035	
890-2623-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 30703

Lab Sample ID MB 880-30703/5-A	Client Sample ID Method Blank	Prep Type Total/NA	Solid	Method 5035	Prep Batch
LCS 880-30703/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30703/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17204-A-99-C MS	Matrix Spike	Total/NA	Solid	5035	
880-17204-A-99-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 31048

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2626-1	SS05	Total/NA	Solid	8021B	30687
MB 880-30687/5-A	Method Blank	Total/NA	Solid	8021B	30687
MB 880-30703/5-A	Method Blank	Total/NA	Solid	8021B	30703
LCS 880-30687/1-A	Lab Control Sample	Total/NA	Solid	8021B	30687
LCS 880-30703/1-A	Lab Control Sample	Total/NA	Solid	8021B	30703
LCSD 880-30687/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30687
LCSD 880-30703/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30703
880-17204-A-99-C MS	Matrix Spike	Total/NA	Solid	8021B	30703
880-17204-A-99-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30703
890-2623-A-1-G MS	Matrix Spike	Total/NA	Solid	8021B	30687
890-2623-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30687

Analysis Batch: 31128

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2626-1	SS05	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 30645

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2626-1	SS05	Total/NA	Solid	8015B NM	30667
MB 880-30667/1-A	Method Blank	Total/NA	Solid	8015B NM	30667
LCS 880-30667/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30667
LCSD 880-30667/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30667
890-2623-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	30667
890-2623-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30667

Prep Batch: 30667

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2626-1	SS05	Total/NA	Solid	8015NM Prep	
MB 880-30667/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30667/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30667/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2623-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	

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QC Association Summary

 Client: Ensolum
 Job ID: 890-2626-1

 Project/Site: PLU 18 TWIN WELLS 155H
 SDG: 03E1558066

GC Semi VOA (Continued)

Prep Batch: 30667 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2623-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 30762

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2626-1	SS05	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 30625

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2626-1	SS05	Soluble	Solid	DI Leach	
MB 880-30625/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-30625/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-30625/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2623-A-11-E MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2623-A-11-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 30693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2626-1	SS05	Soluble	Solid	300.0	30625
MB 880-30625/1-A	Method Blank	Soluble	Solid	300.0	30625
LCS 880-30625/2-A	Lab Control Sample	Soluble	Solid	300.0	30625
LCSD 880-30625/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30625
890-2623-A-11-E MS	Matrix Spike	Soluble	Solid	300.0	30625
890-2623-A-11-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30625

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Lab Chronicle

 Client: Ensolum
 Job ID: 890-2626-1

 Project/Site: PLU 18 TWIN WELLS 155H
 SDG: 03E1558066

Client Sample ID: SS05 Lab Sample ID: 890-2626-1

Date Collected: 07/21/22 15:25

Date Received: 07/22/22 09:08

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	30687	07/26/22 11:38	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31048	07/30/22 21:36	AJ	XEN MID
Total/NA	Analysis	Total BTEX		1			31128	07/31/22 10:51	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			30762	07/27/22 08:23	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	30667	07/26/22 10:45	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30645	07/27/22 05:04	AJ	XEN MID
Soluble	Leach	DI Leach			4.97 g	50 mL	30625	07/25/22 16:31	KS	XEN MID
Soluble	Analysis	300.0		1			30693	07/27/22 08:38	CH	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
 Job ID: 890-2626-1

 Project/Site: PLU 18 TWIN WELLS 155H
 SDG: 03E1558066

Project/Site: PLU 18 TWIN WELLS 155H SDG: 0

Laboratory: Eurofins Midland

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

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

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Method Summary

Client: Ensolum

Project/Site: PLU 18 TWIN WELLS 155H

Job ID: 890-2626-1 SDG: 03E1558066

Method **Method Description** Protocol Laboratory 8021B Volatile Organic Compounds (GC) SW846 XEN MID **Total BTEX Calculation** Total BTEX 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 SW846 XEN MID Closed System Purge and Trap 8015NM Prep Microextraction SW846 XEN MID DI Leach Deionized Water Leaching Procedure ASTM XEN MID

Protocol References:

ASTM = ASTM International

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

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Sample Summary

Client: Ensolum

Project/Site: PLU 18 TWIN WELLS 155H

Job ID: 890-2626-1

SDG: 03E1558066

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2626-1	SS05	Solid	07/21/22 15:25	07/22/22 09:08	0.5

Chain of Custody

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

Environment Testing Xenco

💸 eurofins

Work Order No:

Programs Park Highwal Address Addres	Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green	Work Order Comments	nments
3122 National Parks Houses 23122 National Parks Houses Cartenand Mark 86120 Cartena		٤	Company Name:	XTO	T/PST ☐ PRP□	nfields□ RRC□ Superfund□
13-1-251-8501 Charle but, NM 88210 Chy State 2P Chy Charles but, Color Chy Charles but, Color Charles but, NG Charles but, NG Charles but, Color Charles but, Charl		National	Address:			[
3571-251-8301 Email garrett. access Email garret		Z	City, State ZIP:			ST
Humber: 03E 15 B De & Control 10 B De De De Control 10 B De Co				@	EDD	Other:
The properties			m Around	ANALY	IS REQUEST	Preservative Codes
The State of		Rout	Rush			None: NO DI Water: H ₂ O
Short Control of Sanger Contro		2094 103.8.149)				Cool: Cool MeOH: Me
The RECEIPT Targing Blank: Targing		Parker	he day received by			HCL: HC HNO 3: HN
Se Ag SiO ₂ Na Sr Hg: 1631/245.1/						H ₂ SO ₄ : H ₂ NaOH: Na
Se Ag SiO ₂ Na Sr Hg: 1631 / 245.1 /	SAMPLE RECEIPT	oN ON	(Yes No			H₃PO 4: HP
Se Ag SiO ₂ Na Sr Hg: 1631/245.1/	Samples Received Intact:	No	-00-			NaHSO 4: NABIS
Se Ag SiO ₂ Na Sr Hg: 1631 / 245.1 /	Cooler Custody Seals:	1	Ö			Na ₂ S ₂ O ₃ : NaSO ₃
Se Ag SiO ₂ Na Sr Hg: 1631 / 245.1 /	Sample Custody Seals:	N/A)	•	, Di	26 Chain of Custody	Zn Acetate+NaOH: Zn
Se Ag SiO ₂ Na Sr Hg: 1631/245.1/	Total Containers:	Corrected Temperature:	က်	+	-	NaOH+Ascorbic Acid: SAPC
Se Ag SiO ₂ Na Sr Hg: 1631 / 245.1 /	Sample Identificati	Matrix Sampled	Depth Grab/	18		Sample Comments
Se Ag SiO ₂ Na Sr Hg: 1631 / 245.1 /	\$505	7/1/1/22	0.5′	×		CC; 1665991001
Se Ag SiO ₂ Na Sr Hg: 1631 / 245.1 /						Incident #;
Se Ag SiO ₂ Na Sr Hg: 1631 / 245.1 /						nAPP 2214735696
Se Ag SiO ₂ Na Sr Hg: 1631/245.1/						Imornisces@ensolum.
Se Ag SiO ₂ Na Sr TI Hg: 1631 / 245.1 / 7v						
Se Ag SiO ₂ Na Sr TI Hg: 1631/245.1/7/			1			
Se Ag SiO ₂ Na Sr TI Hg: 1631/245.1/7						
Se Ag SiO ₂ Na Sr TI Hg: 1631/245.1/7						
Se Ag SiO ₂ Na Sr TI Hg: 1631 / 245.1 / 7v						
Se Ag SiO ₂ Na Sr TI Hg: 1631 / 245.1 / 7 ¹ received by: (Signature)					1	
Gei	Total 200.7 / 6010		Texas 11 Al S	Cd Ca Cr Co	Ni K Se	II Sn U V Zn
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 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, Aminimum charge of \$55.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated. Received by; (Signature) Received by; (Signature) Received by; (Signature) 1-22-22 4 4 6 Company to the control of Eurofins Xenco. Aminimum charge of \$55.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated. Received by; (Signature) 1-22-22 4 4 6 6 6 7-22-62 8 9 9 9 9 9 9 9 9 9 9 9 9	Circle Method(s) and		6010 : 8RCRA	Sb As Ba Be Cd Cr Co Cu Pb Mn		7470 / 7471
Relipquished by: (Signature) Received by: (Sig	Notice: Signature of this document of service. Eurofins Xenco will be lis of Eurofins Xenco. A minimum char	and relinquishment of samples constitutes a valid purchase of able only for the cost of samples and shall not assume any reserge of \$85.00 will be applied to each project and a charge of	order from client company to Eur sponsibility for any kosses or expe \$5 for each sample submitted to	ofns Xenco, its affiliates and subcontractors. It assigns si ness incurred by the client if such losses are due to circur Eurofins Xenco, but not analyzed. These terms will be en	indard terms and conditions istances beyond the control cored unless previously negotiated.	
(Jul Wy 7.33.33	Relipquished by: (Sigl	natule) Received by (Signatu	ure)	Date/Time Relinquished by	(Signature) Received by: (Signature)	Date/Time
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Login Sample Receipt Checklist

Client: Ensolum Job I

Job Number: 890-2626-1 SDG Number: 03E1558066

Login Number: 2626 List Source: Eurofins Carlsbad

List Number: 1 Creator: Clifton, Cloe

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

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Login Sample Receipt Checklist

Client: Ensolum Job Nur

Job Number: 890-2626-1 SDG Number: 03E1558066

Login Number: 2626
List Source: Eurofins Midland
List Number: 2
List Creation: 07/25/22 09:19 AM

Creator: Rodriguez, Leticia

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

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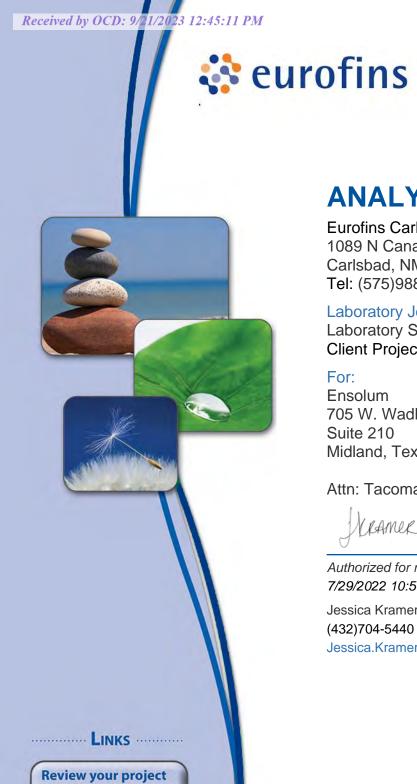
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<6mm (1/4").



results through

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www.eurofinsus.com/Env

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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: 890-2627-1

Laboratory Sample Delivery Group: 03E1558066 Client Project/Site: PLU TWIN WELLS 155H

For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Tacoma Morrissey

RAMER

Authorized for release by: 7/29/2022 10:57:59 AM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

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

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

Client: Ensolum
Project/Site: PLU TWIN WELLS 155H
Laboratory Job ID: 890-2627-1
SDG: 03E1558066

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Definitions/Glossary

Job ID: 890-2627-1 Client: Ensolum Project/Site: PLU TWIN WELLS 155H SDG: 03E1558066

Qualifiers

GC	VOA
Ous	lifior

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

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description

Indicates the analyte was analyzed for but not detected.

Glossary

DLC

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

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

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

Decision Level 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 **Quality Control** QC

RER Relative Error Ratio (Radiochemistry)

Reporting Limit or Requested Limit (Radiochemistry) RL

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

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

TNTC Too Numerous To Count

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Case Narrative

Client: Ensolum

Job ID: 890-2627-1 Project/Site: PLU TWIN WELLS 155H SDG: 03E1558066

Job ID: 890-2627-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-2627-1

Receipt

The sample was received on 7/22/2022 9:08 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.0°C

GC VOA

Method 8021B: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 880-30589 and analytical batch 880-30859 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: The surrogate recovery for the blank associated with preparation batch 880-30669 and analytical batch 880-30859 was outside the upper control limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (890-2641-A-1-D). 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: SS06 (890-2627-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following samples were outside control limits: (LCSD 880-30589/2-A) and (880-17202-A-1-D MS). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-30589 and analytical batch 880-30859 was outside the upper control limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (880-17202-A-1-F). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-30669 and analytical batch 880-30859 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

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

GC Semi VOA

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-30667 and analytical batch 880-30645 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

HPLC/IC

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

Matrix: Solid

Lab Sample ID: 890-2627-1

Client Sample Results

Client: Ensolum Job ID: 890-2627-1 Project/Site: PLU TWIN WELLS 155H SDG: 03E1558066

Client Sample ID: SS06

Date Collected: 07/21/22 15:30 Date Received: 07/22/22 09:08

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		07/26/22 10:50	07/28/22 20:22	1
Toluene	<0.00202	U	0.00202	mg/Kg		07/26/22 10:50	07/28/22 20:22	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		07/26/22 10:50	07/28/22 20:22	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		07/26/22 10:50	07/28/22 20:22	1
o-Xylene	<0.00202	U *+	0.00202	mg/Kg		07/26/22 10:50	07/28/22 20:22	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		07/26/22 10:50	07/28/22 20:22	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	135	S1+	70 - 130			07/26/22 10:50	07/28/22 20:22	1
1,4-Difluorobenzene (Surr)	96		70 - 130			07/26/22 10:50	07/28/22 20:22	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			07/29/22 09:30	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			07/27/22 08:23	1
Method: 8015B NM - Diesel Rang	je Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		07/26/22 10:45	07/27/22 05:26	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		07/26/22 10:45	07/27/22 05:26	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/26/22 10:45	07/27/22 05:26	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130			07/26/22 10:45	07/27/22 05:26	1
o-Terphenyl	104		70 - 130			07/26/22 10:45	07/27/22 05:26	1
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

5.02

mg/Kg

55.5

Eurofins Carlsbad

07/27/22 08:46

Chloride

Surrogate Summary

Client: Ensolum Job ID: 890-2627-1
Project/Site: PLU TWIN WELLS 155H SDG: 03E1558066

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-17202-A-1-D MS	Matrix Spike	352 S1+	298 S1+	
880-17202-A-1-E MSD	Matrix Spike Duplicate	129	107	
890-2627-1	SS06	135 S1+	96	
890-2641-A-1-B MS	Matrix Spike	123	98	
390-2641-A-1-C MSD	Matrix Spike Duplicate	130	106	
LCS 880-30589/1-A	Lab Control Sample	123	101	
LCS 880-30669/1-A	Lab Control Sample	118	98	
LCSD 880-30589/2-A	Lab Control Sample Dup	131 S1+	113	
LCSD 880-30669/2-A	Lab Control Sample Dup	116	106	
MB 880-30589/5-A	Method Blank	107	62 S1-	
MB 880-30669/5-A	Method Blank	91	63 S1-	
Surrogate Legend				

DFBZ = 1,4-Difluorobenzene (Surr)

OTPH = o-Terphenyl

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2623-A-1-E MS	Matrix Spike	83	88	
890-2623-A-1-F MSD	Matrix Spike Duplicate	85	91	
890-2627-1	SS06	93	104	
LCS 880-30667/2-A	Lab Control Sample	115	116	
LCSD 880-30667/3-A	Lab Control Sample Dup	91	102	
MB 880-30667/1-A	Method Blank	87	102	
Surrogate Legend				
1CO = 1-Chlorooctane				

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Client: Ensolum

Job ID: 890-2627-1

SDG: 03E1558066

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-30589/5-A

Lab Sample ID: LCS 880-30589/1-A

Matrix: Solid

Project/Site: PLU TWIN WELLS 155H

Matrix: Solid Analysis Batch: 30859 Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 30589

	IVID	IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000400	U	0.000400	mg/Kg		07/25/22 12:06	07/29/22 02:31	1
Toluene	<0.000400	U	0.000400	mg/Kg		07/25/22 12:06	07/29/22 02:31	1
Ethylbenzene	<0.000400	U	0.000400	mg/Kg		07/25/22 12:06	07/29/22 02:31	1
m-Xylene & p-Xylene	<0.000800	U	0.000800	mg/Kg		07/25/22 12:06	07/29/22 02:31	1
o-Xylene	<0.000400	U	0.000400	mg/Kg		07/25/22 12:06	07/29/22 02:31	1
Xylenes, Total	<0.000800	U	0.000800	mg/Kg		07/25/22 12:06	07/29/22 02:31	1

MB MB

MD MD

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130	_	07/25/22 12:06	07/29/22 02:31	1
1,4-Difluorobenzene (Surr)	62	S1-	70 - 130		07/25/22 12:06	07/29/22 02:31	1

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 30589

Prep Type: Total/NA

Prep Batch: 30589

35

35

Analysis Batch: 30859 LCS LCS Spike Analyte Added Result Qualifier Unit %Rec Limits mg/Kg Benzene 0.100 0.1106 111 70 - 130 Toluene 0.100 0.1060 mg/Kg 106 70 - 130 0.100 Ethylbenzene 0.1050 mg/Kg 105 70 - 130 0.200 105 70 - 130 m-Xylene & p-Xylene 0.2101 mg/Kg 0.100 o-Xylene 0.1245 mg/Kg 125 70 - 130

LCS LCS

Surrogate	%Recovery Qualifie	r Limits
4-Bromofluorobenzene (Surr)	123	70 - 130
1,4-Difluorobenzene (Surr)	101	70 - 130

Client Sample ID: Lab Control Sample Dup

70 - 130

70 - 130

106

126

Matrix: Solid Analysis Batch: 30859

Lab Sample ID: LCSD 880-30589/2-A

RPD LCSD LCSD Spike %Rec Analyte Added Result Qualifier Unit %Rec Limits Limit Benzene 0.100 0.1160 mg/Kg 116 70 - 130 5 35 Toluene 0.100 0.1083 mg/Kg 108 70 - 130 2 35 Ethylbenzene 0.100 0.1026 mg/Kg 103 70 - 130 35 0.200

0.100

0.2112

0.1264

mg/Kg

mg/Kg

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	131	S1+	70 - 130
1,4-Difluorobenzene (Surr)	113		70 - 130

Lab Sample ID: 880-17202-A-1-D MS

Matrix: Solid

m-Xylene & p-Xylene

o-Xylene

Analysis Batch: 30859

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

Prep Batch: 30589

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U	0.101	0.09818		mg/Kg		98	70 - 130	
Toluene	<0.00201	U	0.101	0.09360		mg/Kg		93	70 - 130	

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Page 7 of 21

Client: Ensolum

Job ID: 890-2627-1 Project/Site: PLU TWIN WELLS 155H SDG: 03E1558066

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

Lab Sample ID: 880-17202-A-1-D MS

Lab Sample ID: 880-17202-A-1-E MSD

Matrix: Solid

Analysis Batch: 30859

Client Sample ID: Matrix Spike	

Prep Type: Total/NA

Prep Batch: 30589

Sample Sample Spike MS MS %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Ethylbenzene <0.00201 U F1 0.101 0.07292 72 70 - 130 mg/Kg m-Xylene & p-Xylene <0.00402 UF1 0.201 0.1277 F1 mg/Kg 63 70 - 130 0.101 o-Xylene <0.00201 UF1 0.1418 F1 mg/Kg 141 70 - 130

MS MS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	352	S1+	70 - 130
1,4-Difluorobenzene (Surr)	298	S1+	70 - 130

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 30589

RPD

Analysis Batch: 30859 Sample Sample Spike MSD MSD Result Qualifier Added Result Qualifier Limits RPD Limit Analyte Unit %Rec <0.00201 U 0.100 Benzene 0.09685 mg/Kg 97 70 - 130 1 35 Toluene <0.00201 U 0.100 0.07927 79 70 - 130 mg/Kg 17 35 Ethylbenzene <0.00201 UF1 0.100 0.06937 F1 mg/Kg 69 70 - 130 5 35 0.200 56 70 - 130 35 m-Xylene & p-Xylene <0.00402 U F1 0.1122 F1 mg/Kg 13 0.100 <0.00201 UF1 0.1004 70 - 130 34 o-Xylene mg/Kg 100

MSD MSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	129	70 - 130
1,4-Difluorobenzene (Surr)	107	70 - 130

Lab Sample ID: MB 880-30669/5-A

Matrix: Solid

Matrix: Solid

Analysis Batch: 30859

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 30669

MR MR

	INID	IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/26/22 10:50	07/28/22 12:54	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/26/22 10:50	07/28/22 12:54	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/26/22 10:50	07/28/22 12:54	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/26/22 10:50	07/28/22 12:54	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/26/22 10:50	07/28/22 12:54	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/26/22 10:50	07/28/22 12:54	1

MB MB

Surrogate	%Recovery Qualifie	r Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91	70 - 130	07/26/22 10:50	07/28/22 12:54	1
1,4-Difluorobenzene (Surr)	63 S1-	70 - 130	07/26/22 10:50	07/28/22 12:54	1

Lab Sample ID: LCS 880-30669/1-A

Matrix: Solid

Analysis Batch: 30859

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 30669

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1289		mg/Kg		129	70 - 130	
Toluene	0.100	0.1149		mg/Kg		115	70 - 130	
Ethylbenzene	0.100	0.1145		mg/Kg		115	70 - 130	
m-Xylene & p-Xylene	0.200	0.2274		mg/Kg		114	70 - 130	

Eurofins Carlsbad

Project/Site: PLU TWIN WELLS 155H

Client: Ensolum

Job ID: 890-2627-1

SDG: 03E1558066

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

Lab Sample ID: LCS 880-30669/1-A Client Sample ID: Lab Control Sample **Matrix: Solid** Prep Type: Total/NA Analysis Batch: 30859 Prep Batch: 30669 Spike LCS LCS %Rec

Analyte Added Result Qualifier Unit %Rec Limits D 0.100 0 1307 131 70 - 130 o-Xylene mg/Kg

LCS LCS Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 118 70 - 130 70 - 130 1,4-Difluorobenzene (Surr) 98

Lab Sample ID: LCSD 880-30669/2-A Client Sample ID: Lab Control Sample Dup

Matrix: Solid Prep Type: Total/NA **Analysis Batch: 30859** Prep Batch: 30669

Spike LCSD LCSD RPD RPD Analyte Added Result Qualifier Unit %Rec Limits Limit D Benzene 0.100 0.1141 mg/Kg 114 70 - 130 12 35 Toluene 0.100 0.1064 mg/Kg 106 70 - 130 8 35 Ethylbenzene 0.100 0.1061 mg/Kg 106 70 - 130 8 35 m-Xylene & p-Xylene 0.200 0.2107 mg/Kg 105 70 - 130 8 35 0.100 0.1219 122 70 - 130 35 o-Xylene mg/Kg

LCSD LCSD Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 116 70 - 130 1,4-Difluorobenzene (Surr) 106 70 - 130

Lab Sample ID: 890-2641-A-1-B MS Client Sample ID: Matrix Spike

Matrix: Solid Prep Type: Total/NA Analysis Batch: 30859 Prep Batch: 30669 MS MS Sample Sample Spike %Rec

	•	-	•						
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzene	<0.00202	U	0.0998	0.07226		mg/Kg		72	70 - 130
Toluene	<0.00202	U	0.0998	0.07101		mg/Kg		71	70 - 130
Ethylbenzene	<0.00202	U	0.0998	0.07062		mg/Kg		71	70 - 130
m-Xylene & p-Xylene	<0.00403	U	0.200	0.1424		mg/Kg		71	70 - 130
o-Xylene	<0.00202	U *+	0.0998	0.08584		mg/Kg		86	70 - 130

Surrogate %Recovery Qualifier Limits 70 - 130 4-Bromofluorobenzene (Surr) 123 70 - 130 1,4-Difluorobenzene (Surr) 98

MS MS

Lab Sample ID: 890-2641-A-1-C MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid Analysis Batch: 30859

Sample Sample Spike MSD MSD %Rec RPD Result Qualifier Result Qualifier Added Limit Analyte Unit %Rec Limits RPD <0.00202 U 0.101 0.07981 mg/Kg 79 70 - 130 10 35 <0.00202 U 0.101 0.08154 81 70 - 13035 mg/Kg 14 <0.00202 U 0.101 0.08365 mg/Kg 83 70 - 130 17 35

Benzene Toluene Ethylbenzene m-Xylene & p-Xylene <0.00403 U 0.202 0.1671 mg/Kg 83 70 - 13016 35 o-Xylene <0.00202 U*+ 0 101 0.09998 mg/Kg 99 70 - 130 15 35

Eurofins Carlsbad

Prep Type: Total/NA Prep Batch: 30669 Limits

70 - 130

70 - 130

Unit

mg/Kg

mg/Kg

mg/Kg

D

Prepared

07/26/22 10:45

07/26/22 10:45

07/26/22 10:45

Job ID: 890-2627-1 Client: Ensolum Project/Site: PLU TWIN WELLS 155H SDG: 03E1558066

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

MSD MSD

%Recovery Qualifier

130

106

Lab Sample ID: 890-2641-A-1-C MSD

Matrix: Solid

Surrogate

Analysis Batch: 30859

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 30669

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

Lab Sample ID: MB 880-30667/1-A

Matrix: Solid

Analysis Batch: 30645

Client Sample ID: Method Blank

Analyzed

07/26/22 20:25

07/26/22 20:25

07/26/22 20:25

Prep Type: Total/NA

Prep Batch: 30667

Dil Fac

Analyte Result Qualifier RL Gasoline Range Organics <50.0 U 50.0

(GRO)-C6-C10 Diesel Range Organics (Over <50.0 U C10-C28)

Oll Range Organics (Over C28-C36)

<50.0 U MB MB

MB MB

Surrogate %Recovery Qualifier Limits 70 - 130 1-Chlorooctane 87 o-Terphenyl 102 70 - 130

Dil Fac Prepared Analyzed 07/26/22 10:45 07/26/22 20:25 07/26/22 10:45 07/26/22 20:25

Lab Sample ID: LCS 880-30667/2-A

Matrix: Solid

Analysis Batch: 30645

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

Prep Batch: 30667

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit D %Rec Limits Gasoline Range Organics 1000 1069 mg/Kg 107 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over 1000 921.7 mg/Kg 92 70 - 130 C10-C28)

50.0

50.0

LCS LCS %Recovery Surrogate Qualifier Limits 1-Chlorooctane 115 70 - 130 o-Terphenyl 116 70 - 130

Lab Sample ID: LCSD 880-30667/3-A

Matrix: Solid

Analysis Batch: 30645

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 30667

Spike LCSD LCSD %Rec RPD Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Gasoline Range Organics 1000 1061 106 70 - 130 20 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 847.4 85 70 - 130 20 mg/Kg 8 C10-C28)

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
1-Chlorooctane	91	70 - 130
o-Terphenyl	102	70 - 130

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Client: Ensolum Job ID: 890-2627-1 Project/Site: PLU TWIN WELLS 155H SDG: 03E1558066

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

Lab Sample ID: 890-2623-A-1-E MS

Matrix: Solid

Analysis Batch: 30645

Client	Sample	ID:	Mat	rix	Spike	
	Duan			T-4	-I/NIA	

Prep Type: Total/NA Prep Batch: 30667

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	80.8		1000	1129		mg/Kg		105	70 - 130	
(GRO)-C6-C10										
Diesel Range Organics (Over	1420	F1	1000	1866	F1	mg/Kg		45	70 - 130	
C10 C20)										

C10-C28)

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	83		70 - 130
o-Terphenyl	88		70 - 130

Lab Sample ID: 890-2623-A-1-F MSD

Matrix: Solid

Analysis Batch: 30645

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 30667

	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	80.8		999	1107		mg/Kg		103	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	1420	F1	999	1976	F1	mg/Kg		56	70 - 130	6	20

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	85		70 - 130
o-Terphenyl	91		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-30625/1-A

Matrix: Solid

Analysis Batch: 30693

Client	Sampl	le ID:	Method	l Blank
		Dron	Tuno.	Palubla

Analyte Result Qualifier Unit Dil Fac Prepared Chloride <5.00 U 5.00 mg/Kg 07/27/22 04:59

Lab Sample ID: LCS 880-30625/2-A	Client Sample ID: Lab Control Sample
Matrix: Solid	Prep Type: Soluble
Analysis Batch: 30693	

LCS LCS Spike %Rec Analyte Added Result Qualifier Limits Unit %Rec Chloride 250 261.5 105 90 - 110 mg/Kg

MB MB

Lab Sample ID: LCSD 880-30625/3-A Client Sample ID: Lab Control Sample Dup

Matrix: Solid Analysis Batch: 30693

Spike LCSD LCSD %Rec **RPD** Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 250 262.3 105 90 - 110 20 mg/Kg

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Prep Type: Soluble

QC Sample Results

Client: Ensolum Job ID: 890-2627-1 Project/Site: PLU TWIN WELLS 155H

SDG: 03E1558066

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-2623-A-11-E MS Client Sample ID: Matrix Spike **Matrix: Solid**

Prep Type: Soluble

Analysis Batch: 30693

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	1640		2520	4348		mg/Kg		107	90 - 110	

Client Sample ID: Matrix Spike Duplicate

Prep Type: Soluble

Matrix: Solid

Analysis Batch: 30693

Lab Sample ID: 890-2623-A-11-F MSD

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	1640		2520	4346	-	mg/Kg		107	90 - 110	0	20

QC Association Summary

Client: Ensolum

Project/Site: PLU TWIN WELLS 155H

Job ID: 890-2627-1 SDG: 03E1558066

1558066

GC VOA

Prep Batch: 30589

Lab Sample ID MB 880-30589/5-A	Client Sample ID Method Blank	Prep Type Total/NA	Matrix Solid	Method 5035	Prep Batch
LCS 880-30589/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30589/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17202-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
880-17202-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 30669

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
890-2627-1	SS06	Total/NA	Solid	5035	
MB 880-30669/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30669/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30669/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2641-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
890-2641-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 30859

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2627-1	SS06	Total/NA	Solid	8021B	30669
MB 880-30589/5-A	Method Blank	Total/NA	Solid	8021B	30589
MB 880-30669/5-A	Method Blank	Total/NA	Solid	8021B	30669
LCS 880-30589/1-A	Lab Control Sample	Total/NA	Solid	8021B	30589
LCS 880-30669/1-A	Lab Control Sample	Total/NA	Solid	8021B	30669
LCSD 880-30589/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30589
LCSD 880-30669/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30669
880-17202-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	30589
880-17202-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30589
890-2641-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	30669
890-2641-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30669

Analysis Batch: 30969

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2627-1	SS06	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 30645

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2627-1	SS06	Total/NA	Solid	8015B NM	30667
MB 880-30667/1-A	Method Blank	Total/NA	Solid	8015B NM	30667
LCS 880-30667/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30667
LCSD 880-30667/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30667
890-2623-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	30667
890-2623-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30667

Prep Batch: 30667

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2627-1	SS06	Total/NA	Solid	8015NM Prep	
MB 880-30667/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30667/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30667/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2623-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	

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QC Association Summary

 Client: Ensolum
 Job ID: 890-2627-1

 Project/Site: PLU TWIN WELLS 155H
 SDG: 03E1558066

GC Semi VOA (Continued)

Prep Batch: 30667 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2623-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 30763

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2627-1	SS06	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 30625

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2627-1	SS06	Soluble	Solid	DI Leach	
MB 880-30625/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-30625/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-30625/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2623-A-11-E MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2623-A-11-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 30693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2627-1	SS06	Soluble	Solid	300.0	30625
MB 880-30625/1-A	Method Blank	Soluble	Solid	300.0	30625
LCS 880-30625/2-A	Lab Control Sample	Soluble	Solid	300.0	30625
LCSD 880-30625/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30625
890-2623-A-11-E MS	Matrix Spike	Soluble	Solid	300.0	30625
890-2623-Δ-11-F MSD	Matrix Snike Dunlicate	Soluble	Solid	300.0	30625

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Lab Chronicle

Client: Ensolum Job ID: 890-2627-1
Project/Site: PLU TWIN WELLS 155H SDG: 03E1558066

Client Sample ID: SS06 Lab Sample ID: 890-2627-1

Matrix: Solid

Date Collected: 07/21/22 15:30 Date Received: 07/22/22 09:08

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	30669	07/26/22 10:50	MR	XEN MID
Total/NA	Analysis	8021B		1			30859	07/28/22 20:22	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30969	07/29/22 09:30	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30763	07/27/22 08:23	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	30667	07/26/22 10:45	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30645	07/27/22 05:26	AJ	XEN MID
Soluble	Leach	DI Leach			4.98 g	50 mL	30625	07/25/22 16:31	KS	XEN MID
Soluble	Analysis	300.0		1			30693	07/27/22 08:46	CH	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 TWIN WELLS 155H
SDG: 03E1558066

Laboratory: Eurofins Midland

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

Authority	Pre	ogram	Identification Number	Expiration Date
Texas	NE	LAP	T104704400-22-24	06-30-23
The following analytes	are included in this report, but	t the laboratory is not certifi	ed by the governing authority. This list ma	av include analytee for w
the agency does not of	' '	t the laboratory is not certifi	ed by the governing additionty. This list the	ay include analytes for v
,	' '	Matrix	Analyte	ay include analytes for v
the agency does not of	fer certification.	,	, , ,	ay include analytes for v

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Method Summary

Job ID: 890-2627-1 Client: Ensolum Project/Site: PLU TWIN WELLS 155H

SDG: 03E1558066

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 TWIN WELLS 155H

Job ID: 890-2627-1

SDG: 03E1558066

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2627-1	SS06	Solid	07/21/22 15:30	07/22/22 09:08	0.5

Revised Date: 08/25/2020 Rev. 2020.2

Date/Time

Received by: (Signature)

pee.

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Chain of Custody

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

Environment Testing Xenco

💸 eurofins

Work Order No:

							WWWW.AETICO.CC	
Project Manager:	Tacoma Morrissey	7	Bill to: (if different)	J	arrett	Garrett Green	Work Order	Work Order Comments
	Ensolum		Company Name:		XTO		Program: UST/PST PRP	Brownfields ☐ RRC ☐ Superfund ☐
Address:	3122 National Parks Highway Address:	VEW Highway	Address:	_			State of Project:	
e ZIP:	Carlswad, NM 88220	2.0	City, State ZIP:				Reporting: Level II Level III	Reporting: Level II
	1	Email:		Scarle	CAXON	garrett, green @ exxonmobile. com	Deliverables: EDD A	ADaPT ☐ Other:
Project Name:	PLU 18 TWIN WELLS 155H		Turn Around			ANALYSIS REQUEST	QUEST	Preservative Codes
Project Number:	03E1558066	Routine	Rush	Pres. Code				None: NO DI Water: H ₂ O
Project Location:	(32.2096, -103.8149)	Due Date:						To To
Sampler's Name:	Kase Parker	TAT starts the day r	e day received by	_		_		
PO #:		the lab, if re	ceived by 4:30pm	S				H ₂ SO ₄ : H ₂ NaOH: Na
SAMPLE RECEIPT	Temp Blank: Yes) No	No Wet Ice:	(Yes) No	eter				H₃PO ₄; HP
Samples Received Intact:	on Ca	Thermometer ID:	NMINOS	rame	_			NaHSO 4: NABIS
Cooler Custody Seals:	Yes No NY Corre	Correction Factor:	10:0	Бq				Na2S2O3: NaSO 3
Sample Custody Seals:	Yes No W/A Temp	Temperature Reading:	5.9	λ			890-2627 Chain of Custody	Zn Acetate+NaOH: Zn
Total Containers:	Corre	Corrected Temperature:	200	′∃.	Н	-	-	NaOH+Ascorbic Acid: SAPC
Sample Identification	Matrix	Date Time	Depth Grab/	Gont BT	dL	CPI		Sample Comments
SSOG	SIR	72 KM 1530	2,50	X	×	Y		CC, 1665991001
								Incident #;
								nAPP2214735696
								thornssed ensolumeter
				DAR				
				_	1			
						/		
							/	
							1	
Total 200.7 / 6010	200.8 / 6020:	8RCR.	PM Texas 11 Al	Al Sb As Ba Be B	a Be B (Cd Ca Cr Co Cu Fe Pb N	Ai K Se	Ag SiO ₂ Na Sr Tl Sn U V Zn
Circle Method(s) an	Circle Method(s) and Metal(s) to be analyzed		SPLP 6010 : 8KCK	A SD AS	ga be Co	ICLP/SPLP6010: 8RCKA SD AS Ba Be Cd Cr Co Cu PD Min Mo MI SE Ag II O		13.17.4707.47.1

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. obtice: 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 freeze, 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 Relinguished by: (Signature) Date/Time Received by: (Signature) Refinanished by:

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2627-1

SDG Number: 03E1558066

Login Number: 2627 List Source: Eurofins Carlsbad

List Number: 1 Creator: Clifton, Cloe

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

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Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-2627-1 SDG Number: 03E1558066

List Source: Eurofins Midland

List Number: 2 Creator: Rodriguez, Leticia

Login Number: 2627

List Creation: 07/25/22 09:19 AM

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



Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-2628-1

Laboratory Sample Delivery Group: 03E1558066 Client Project/Site: PLU 18 TWIN WELLS 155H

For:

eurofins 🔆

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Tacoma Morrissey

RAMER

Authorized for release by: 7/29/2022 10:57:58 AM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

.....LINKS

Review your project results through EOL

Received by OCD: 9/21/2023 12:45:11 PM

Have a Question?



Visit us at:

www.eurofinsus.com/Env Released to Imaging: 2/23/2024 2:44:26 PM

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

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

Client: Ensolum Laboratory Job ID: 890-2628-1 Project/Site: PLU 18 TWIN WELLS 155H

SDG: 03E1558066

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Definitions/Glossary

Client: Ensolum Job ID: 890-2628-1 Project/Site: PLU 18 TWIN WELLS 155H

SDG: 03E1558066

Qualifiers

GC	VOA
Qua	lifier

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

Indicates the analyte was analyzed for but not detected.

Qualifier Description

GC Semi VOA

Qualifier	1 LCS/LCSD RPD exceeds control limits.
*1	LCS/LCSD RPD exceeds control limits.
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

LOQ

MCL

MDA

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)

MDC Minimum Detectable Concentration (Radiochemistry) Method Detection Limit MDL MLMinimum 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)

Limit of Quantitation (DoD/DOE)

EPA recommended "Maximum Contaminant Level"

Minimum Detectable Activity (Radiochemistry)

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

PRES Presumptive QC **Quality Control**

RER Relative Error Ratio (Radiochemistry)

RLReporting Limit or Requested Limit (Radiochemistry)

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

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

TNTC Too Numerous To Count

Case Narrative

Client: Ensolum

Project/Site: PLU 18 TWIN WELLS 155H

Job ID: 890-2628-1

SDG: 03E1558066

Job ID: 890-2628-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-2628-1

Receipt

The sample was received on 7/22/2022 9:08 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.0°C

GC VOA

Method 8021B: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 880-30589 and analytical batch 880-30859 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: The surrogate recovery for the blank associated with preparation batch 880-30669 and analytical batch 880-30859 was outside the upper control limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (890-2641-A-1-D). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following samples were outside control limits: (LCSD 880-30589/2-A) and (880-17202-A-1-D MS). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-30589 and analytical batch 880-30859 was outside the upper control limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (880-17202-A-1-F). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-30669 and analytical batch 880-30859 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

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

GC Semi VOA

Method 8015MOD NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-30765 and analytical batch 880-30743 recovered outside control limits for the following analytes: Diesel Range Organics (Over C10-C28).

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

HPLC/IC

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

Matrix: Solid

Lab Sample ID: 890-2628-1

Client Sample Results

Client: Ensolum Job ID: 890-2628-1 Project/Site: PLU 18 TWIN WELLS 155H SDG: 03E1558066

Client Sample ID: SS07

Date Collected: 07/21/22 15:35 Date Received: 07/22/22 09:08

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00200	U	0.00200	mg/Kg		07/26/22 10:50	07/28/22 20:48	
Toluene	<0.00200	U	0.00200	mg/Kg		07/26/22 10:50	07/28/22 20:48	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/26/22 10:50	07/28/22 20:48	
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		07/26/22 10:50	07/28/22 20:48	
o-Xylene	<0.00200	U *+	0.00200	mg/Kg		07/26/22 10:50	07/28/22 20:48	
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		07/26/22 10:50	07/28/22 20:48	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)			70 - 130			07/26/22 10:50	07/28/22 20:48	
1,4-Difluorobenzene (Surr)	108		70 - 130			07/26/22 10:50	07/28/22 20:48	
Method: Total BTEX - Total B1	EX Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00399	U	0.00399	mg/Kg			07/29/22 09:30	
Method: 8015 NM - Diesel Rar	nge Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	84.0		49.9	mg/Kg			07/28/22 09:08	
Method: 8015B NM - Diesel Ra	ange Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		07/27/22 08:40	07/27/22 18:37	
Diesel Range Organics (Over C10-C28)	<49.9	U *1	49.9	mg/Kg		07/27/22 08:40	07/27/22 18:37	
Oll Range Organics (Over C28-C36)	84.0		49.9	mg/Kg		07/27/22 08:40	07/27/22 18:37	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	90		70 - 130			07/27/22 08:40	07/27/22 18:37	
o-Terphenyl	95		70 - 130			07/27/22 08:40	07/27/22 18:37	
Method: 300.0 - Anions, Ion C	hromatography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	167		4.99	mg/Kg			07/27/22 08:54	

Surrogate Summary

 Client: Ensolum
 Job ID: 890-2628-1

 Project/Site: PLU 18 TWIN WELLS 155H
 SDG: 03E1558066

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
380-17202-A-1-D MS	Matrix Spike	352 S1+	298 S1+	
880-17202-A-1-E MSD	Matrix Spike Duplicate	129	107	
890-2628-1	SS07	112	108	
890-2641-A-1-B MS	Matrix Spike	123	98	
390-2641-A-1-C MSD	Matrix Spike Duplicate	130	106	
LCS 880-30589/1-A	Lab Control Sample	123	101	
LCS 880-30669/1-A	Lab Control Sample	118	98	
LCSD 880-30589/2-A	Lab Control Sample Dup	131 S1+	113	
LCSD 880-30669/2-A	Lab Control Sample Dup	116	106	
MB 880-30589/5-A	Method Blank	107	62 S1-	
MB 880-30669/5-A	Method Blank	91	63 S1-	
Surrogate Legend				

DFBZ = 1,4-Difluorobenzene (Surr)

OTPH = o-Terphenyl

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-17301-A-1-E MS	Matrix Spike	99	88	
880-17301-A-1-F MSD	Matrix Spike Duplicate	99	89	
890-2628-1	SS07	90	95	
LCS 880-30765/2-A	Lab Control Sample	89	82	
LCSD 880-30765/3-A	Lab Control Sample Dup	107	108	
MB 880-30765/1-A	Method Blank	82	83	
Surrogate Legend				

Eurofins Carlsbad

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QC Sample Results

Client: Ensolum Job ID: 890-2628-1 SDG: 03E1558066 Project/Site: PLU 18 TWIN WELLS 155H

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-30589/5-A

Lab Sample ID: LCS 880-30589/1-A

Matrix: Solid

Analysis Batch: 30859

Matrix: Solid

Analysis Batch: 30859

Client	Sample	ID:	Method	Blan	k

Prep Type: Total/NA

Prep Batch: 30589

	IVID	IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000400	U	0.000400	mg/Kg		07/25/22 12:06	07/29/22 02:31	1
Toluene	<0.000400	U	0.000400	mg/Kg		07/25/22 12:06	07/29/22 02:31	1
Ethylbenzene	<0.000400	U	0.000400	mg/Kg		07/25/22 12:06	07/29/22 02:31	1
m-Xylene & p-Xylene	<0.000800	U	0.000800	mg/Kg		07/25/22 12:06	07/29/22 02:31	1
o-Xylene	<0.000400	U	0.000400	mg/Kg		07/25/22 12:06	07/29/22 02:31	1
Xylenes, Total	<0.000800	U	0.000800	mg/Kg		07/25/22 12:06	07/29/22 02:31	1

MB MB

MD MD

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130	_	07/25/22 12:06	07/29/22 02:31	1
1,4-Difluorobenzene (Surr)	62	S1-	70 - 130		07/25/22 12:06	07/29/22 02:31	1

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 30589

LCS LCS Spike Analyte Added Result Qualifier Unit %Rec Limits Benzene 0.100 0.1106 mg/Kg 111 70 - 130 Toluene 0.100 0.1060 mg/Kg 106 70 - 130 0.100 0.1050 105 Ethylbenzene mg/Kg 70 - 130 0.200 105 70 - 130 m-Xylene & p-Xylene 0.2101 mg/Kg 0.100 125 70 - 130 o-Xylene 0.1245 mg/Kg

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	123	70 - 130
1,4-Difluorobenzene (Surr)	101	70 - 130

Client Sample ID: Lab Control Sample Dup

Matrix: Solid

Lab Sample ID: LCSD 880-30589/2-A

Analysis Batch: 30859

Prep Type: Total/NA Prep Batch: 30589

	Бріке	LC2D	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.1160		mg/Kg		116	70 - 130	5	35	
Toluene	0.100	0.1083		mg/Kg		108	70 - 130	2	35	
Ethylbenzene	0.100	0.1026		mg/Kg		103	70 - 130	2	35	
m-Xylene & p-Xylene	0.200	0.2112		mg/Kg		106	70 - 130	1	35	
o-Xylene	0.100	0.1264		mg/Kg		126	70 - 130	1	35	

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	131	S1+	70 - 130
1,4-Difluorobenzene (Surr)	113		70 - 130

Lab Sample ID: 880-17202-A-1-D MS

Matrix: Solid

Analysis Batch: 30859

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

Prep Batch: 30589

-	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U	0.101	0.09818		mg/Kg		98	70 - 130	
Toluene	<0.00201	U	0.101	0.09360		mg/Kg		93	70 - 130	

Project/Site: PLU 18 TWIN WELLS 155H

Client: Ensolum

Job ID: 890-2628-1

SDG: 03E1558066

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

Matrix: Solid

Analysis Batch: 30859

Lab Sample ID: 880-17202-A-1-D MS Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 30589

	Sample	Sample	эріке	INIO	IVIO				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylbenzene	<0.00201	U F1	0.101	0.07292		mg/Kg		72	70 - 130	
m-Xylene & p-Xylene	<0.00402	U F1	0.201	0.1277	F1	mg/Kg		63	70 - 130	
o-Xylene	<0.00201	U F1	0.101	0.1418	F1	mg/Kg		141	70 - 130	

MS MS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	352	S1+	70 - 130
1,4-Difluorobenzene (Surr)	298	S1+	70 - 130

Client Sample ID: Matrix Spike Duplicate

70 - 130

100

Prep Type: Total/NA

Prep Batch: 30589

Lab Sample ID: 880-17202-A-1-E MSD **Matrix: Solid**

Analysis Batch: 30859

Sample Sample Spike MSD MSD RPD Result Qualifier Added Result Qualifier Limits RPD Limit Analyte Unit %Rec <0.00201 U 0.100 Benzene 0.09685 mg/Kg 97 70 - 130 1 35 Toluene <0.00201 U 0.100 0.07927 79 70 - 130 mg/Kg 17 35 Ethylbenzene <0.00201 UF1 0.100 0.06937 F1 mg/Kg 69 70 - 130 5 35 m-Xylene & p-Xylene <0.00402 UF1 0.200 0.1122 F1 56 70 - 130 35 mg/Kg 13

0.1004

mg/Kg

0.100

MSD MSD

<0.00201 UF1

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	129	70 - 130
1,4-Difluorobenzene (Surr)	107	70 - 130

Lab Sample ID: MB 880-30669/5-A

Matrix: Solid

o-Xylene

Analysis Batch: 30859

Client Sample ID: Method Blank

Prep Type: Total/NA

34

Prep Batch: 30669

MD MD

ı		IVID	IVID						
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Benzene	<0.00200	U	0.00200	mg/Kg		07/26/22 10:50	07/28/22 12:54	1
	Toluene	<0.00200	U	0.00200	mg/Kg		07/26/22 10:50	07/28/22 12:54	1
	Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/26/22 10:50	07/28/22 12:54	1
I	m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/26/22 10:50	07/28/22 12:54	1
	o-Xylene	<0.00200	U	0.00200	mg/Kg		07/26/22 10:50	07/28/22 12:54	1
	Xylenes, Total	< 0.00400	U	0.00400	mg/Kg		07/26/22 10:50	07/28/22 12:54	1

MB MB

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91	70 - 130	07/26/22 10:50	07/28/22 12:54	1
1 4-Difluorobenzene (Surr)	63 S1-	70 - 130	07/26/22 10:50	07/28/22 12:54	1

Lab Sample ID: LCS 880-30669/1-A

Matrix: Solid

Analysis Batch: 30859

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 30669

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1289		mg/Kg		129	70 - 130	
Toluene	0.100	0.1149		mg/Kg		115	70 - 130	
Ethylbenzene	0.100	0.1145		mg/Kg		115	70 - 130	
m-Xylene & p-Xylene	0.200	0.2274		mg/Kg		114	70 - 130	

Job ID: 890-2628-1 Client: Ensolum Project/Site: PLU 18 TWIN WELLS 155H SDG: 03E1558066

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

Lab Sample ID: LCS 880-30669/1-A Client Sample ID: Lab Control Sample **Matrix: Solid** Prep Type: Total/NA Prep Batch: 30669 Analysis Batch: 30859 Spike LCS LCS %Rec

Analyte Added Result Qualifier Unit %Rec Limits D 0.100 0 1307 131 70 - 130 o-Xylene mg/Kg

LCS LCS %Recovery Qualifier Limits Surrogate 4-Bromofluorobenzene (Surr) 118 70 - 130 70 - 130 1,4-Difluorobenzene (Surr) 98

Lab Sample ID: LCSD 880-30669/2-A Client Sample ID: Lab Control Sample Dup

Matrix: Solid Prep Type: Total/NA **Analysis Batch: 30859** Prep Batch: 30669

LCSD LCSD RPD Spike Limit Analyte Added Result Qualifier Unit %Rec Limits **RPD** D Benzene 0.100 0.1141 mg/Kg 114 70 - 130 12 35 Toluene 0.100 0.1064 mg/Kg 106 70 - 130 8 35 Ethylbenzene 0.100 0.1061 mg/Kg 106 70 - 130 8 35 m-Xylene & p-Xylene 0.200 0.2107 mg/Kg 105 70 - 130 8 35 0.100 0.1219 122 70 - 130 35 o-Xylene mg/Kg

LCSD LCSD Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 116 70 - 130 1,4-Difluorobenzene (Surr) 106 70 - 130

Lab Sample ID: 890-2641-A-1-B MS Client Sample ID: Matrix Spike **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 30859

o-Xylene

Prep Batch: 30669 MS MS Sample Sample Spike %Rec Result Qualifier Added Result Qualifier Analyte Unit D %Rec Limits Benzene <0.00202 U 0.0998 0.07226 72 70 - 130 mg/Kg Toluene <0.00202 U 0.0998 0.07101 mg/Kg 71 70 - 130 Ethylbenzene <0.00202 U 0.0998 0.07062 mg/Kg 71 70 - 130 m-Xylene & p-Xylene <0.00403 U 0.200 0.1424 mg/Kg 71 70 - 130

0.08584

mg/Kg

86

70 - 130

MS MS %Recovery Surrogate Qualifier Limits 4-Bromofluorobenzene (Surr) 123 70 - 130 70 - 130 1,4-Difluorobenzene (Surr) 98

<0.00202 U *+

Lab Sample ID: 890-2641-A-1-C MSD Client Sample ID: Matrix Spike Duplicate

0.0998

Analysis Batch: 30859

Matrix: Solid

Prep Batch: 30669 Sample Sample Spike MSD MSD %Rec RPD Result Qualifier Result Qualifier Added Limit Analyte Unit %Rec Limits RPD Benzene <0.00202 U 0.101 0.07981 mg/Kg 79 70 - 130 10 35 0.101 Toluene <0.00202 U 0.08154 81 70 - 13035 mg/Kg 14 Ethylbenzene <0.00202 U 0.101 0.08365 mg/Kg 83 70 - 130 17 35 <0.00403 U 0.202 m-Xylene & p-Xylene 0.1671 mg/Kg 83 70 - 13016 35 o-Xylene <0.00202 U*+ 0 101 0.09998 mg/Kg 99 70 - 130 15 35

Eurofins Carlsbad

Prep Type: Total/NA

Project/Site: PLU 18 TWIN WELLS 155H

Client: Ensolum

Job ID: 890-2628-1

SDG: 03E1558066

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

Lab Sample ID: 890-2641-A-1-C MSD

Matrix: Solid

Analysis Batch: 30859

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 30669

MSD MSD

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

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

Lab Sample ID: MB 880-30765/1-A

Matrix: Solid

Analysis Batch: 30743

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 30765

MB MB

Analyte Result Qualifier RL Unit Prepared Analyzed Dil Fac Gasoline Range Organics <50.0 U 50.0 07/27/22 08:40 07/27/22 09:41 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over <50.0 U 50.0 mg/Kg 07/27/22 08:40 07/27/22 09:41 C10-C28) 07/27/22 09:41 Oll Range Organics (Over C28-C36) <50.0 U 50.0 mg/Kg 07/27/22 08:40

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	82		70 - 130	07/27/22 08:4	0 07/27/22 09:41	1
o-Terphenyl	83		70 - 130	07/27/22 08:4	0 07/27/22 09:41	1

Lab Sample ID: LCS 880-30765/2-A Client Sample ID: Lab Control Sample

Matrix: Solid

Analysis Batch: 30743

Prep Type: Total/NA

Prep Batch: 30765

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	1071		mg/Kg		107	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	848.8		mg/Kg		85	70 - 130	
C10-C28)								

LCS LCS

Surrogate	%Recovery Qualifier	Limits
1-Chlorooctane	89	70 - 130
o-Terphenyl	82	70 - 130

Lab Sample ID: LCSD 880-30765/3-A

Matrix: Solid

Analysis Batch: 30743

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 30765

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	1037		mg/Kg		104	70 - 130	3	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	1108	*1	mg/Kg		111	70 - 130	26	20
C10-C28)									

LCSD LCSD

Surrogate	%Recovery Qua	lifier Limits
1-Chlorooctane	107	70 - 130
o-Terphenyl	108	70 - 130

Client: Ensolum Job ID: 890-2628-1 Project/Site: PLU 18 TWIN WELLS 155H SDG: 03E1558066

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

Lab Sample ID: 880-17301-A-1-E MS

Matrix: Solid Analysis Batch: 30743 Client Sample ID: Matrix Spike

Prep Type: Total/NA Prep Batch: 30765

Prep Batch: 30765

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	1100		mg/Kg		106	70 - 130	
Diesel Range Organics (Over	<50.0	U *1	1000	760.4		mg/Kg		76	70 - 130	

C10-C28)

MS MS %Recovery Qualifier Limits Surrogate 70 - 130 1-Chlorooctane 99 o-Terphenyl 88 70 - 130

Lab Sample ID: 880-17301-A-1-F MSD Client Sample ID: Matrix Spike Duplicate Prep Type: Total/NA

Matrix: Solid Analysis Batch: 30743

,	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	999	1099		mg/Kg		106	70 - 130	0	20
(GRO)-C6-C10											
Diesel Range Organics (Over	<50.0	U *1	999	782.1		mg/Kg		78	70 - 130	3	20
C10-C28)											

MSD MSD %Recovery Qualifier Surrogate Limits 1-Chlorooctane 99 70 - 130 o-Terphenyl 89 70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-30625/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 30693

MB MB

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			07/27/22 04:59	1

Lab Sample ID: LCS 880-30625/2-A **Client Sample ID: Lab Control Sample Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 30693

	Spike	LUS	LUS				70Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	261.5		mg/Kg		105	90 - 110	

Lab Sample ID: LCSD 880-30625/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 30693

Released to Imaging: 2/23/2024 2:44:26 PM

	Spike	LCSD	LCSD			%Rec		RPD
Analyte	Added	Result	Qualifier Unit	D	%Rec	Limits	RPD	Limit
Chloride	250	262.3	mg/K	 g	105	90 - 110	0	20

QC Sample Results

Client: Ensolum Job ID: 890-2628-1 Project/Site: PLU 18 TWIN WELLS 155H

SDG: 03E1558066

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-2623-A-11-E MS Client Sample ID: Matrix Spike **Matrix: Solid**

Prep Type: Soluble

Analysis Batch: 30693

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	1640		2520	4348		mg/Kg		107	90 - 110	

Client Sample ID: Matrix Spike Duplicate

Prep Type: Soluble

Analysis Batch: 30693

Matrix: Solid

Lab Sample ID: 890-2623-A-11-F MSD

Sample Sample Spike MSD MSD %Rec RPD RPD Result Qualifier Added Result Qualifier Limits Limit Analyte Unit D %Rec 2520 Chloride 1640 4346 mg/Kg 107 90 - 110 0

QC Association Summary

Client: Ensolum

Project/Site: PLU 18 TWIN WELLS 155H

Job ID: 890-2628-1 SDG: 03E1558066

GC VOA

Prep Batch: 30589

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-30589/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30589/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30589/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17202-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
880-17202-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 30669

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2628-1	SS07	Total/NA	Solid	5035	
MB 880-30669/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30669/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30669/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2641-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
890-2641-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 30859

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2628-1	SS07	Total/NA	Solid	8021B	30669
MB 880-30589/5-A	Method Blank	Total/NA	Solid	8021B	30589
MB 880-30669/5-A	Method Blank	Total/NA	Solid	8021B	30669
LCS 880-30589/1-A	Lab Control Sample	Total/NA	Solid	8021B	30589
LCS 880-30669/1-A	Lab Control Sample	Total/NA	Solid	8021B	30669
LCSD 880-30589/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30589
LCSD 880-30669/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30669
880-17202-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	30589
880-17202-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30589
890-2641-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	30669
890-2641-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30669

Analysis Batch: 30970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2628-1	SS07	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 30743

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2628-1	SS07	Total/NA	Solid	8015B NM	30765
MB 880-30765/1-A	Method Blank	Total/NA	Solid	8015B NM	30765
LCS 880-30765/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30765
LCSD 880-30765/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30765
880-17301-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	30765
880-17301-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30765

Prep Batch: 30765

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2628-1	SS07	Total/NA	Solid	8015NM Prep	
MB 880-30765/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30765/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30765/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-17301-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	

QC Association Summary

 Client: Ensolum
 Job ID: 890-2628-1

 Project/Site: PLU 18 TWIN WELLS 155H
 SDG: 03E1558066

GC Semi VOA (Continued)

Prep Batch: 30765 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17301-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 30870

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2628-1	SS07	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 30625

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2628-1	SS07	Soluble	Solid	DI Leach	
MB 880-30625/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-30625/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-30625/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2623-A-11-E MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2623-A-11-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 30693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2628-1	SS07	Soluble	Solid	300.0	30625
MB 880-30625/1-A	Method Blank	Soluble	Solid	300.0	30625
LCS 880-30625/2-A	Lab Control Sample	Soluble	Solid	300.0	30625
LCSD 880-30625/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30625
890-2623-A-11-E MS	Matrix Spike	Soluble	Solid	300.0	30625
800-2623-A-11-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30625

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Lab Chronicle

Client: Ensolum Job ID: 890-2628-1 Project/Site: PLU 18 TWIN WELLS 155H SDG: 03E1558066

Client Sample ID: SS07 Lab Sample ID: 890-2628-1 Date Collected: 07/21/22 15:35

Matrix: Solid

Date Received: 07/22/22 09:08

	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	30669	07/26/22 10:50	MR	XEN MID
Total/NA	Analysis	8021B		1			30859	07/28/22 20:48	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30970	07/29/22 09:30	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30870	07/28/22 09:08	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	30765	07/27/22 08:40	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30743	07/27/22 18:37	SM	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	30625	07/25/22 16:31	KS	XEN MID
Soluble	Analysis	300.0		1			30693	07/27/22 08:54	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum Job ID: 890-2628-1

Project/Site: PLU 18 TWIN WELLS 155H SDG: 03E1558066

Laboratory: Eurofins Midland

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

Authority	Pr	ogram	Identification Number	Expiration Date
Texas	NE	ELAP	T104704400-22-24	06-30-23
The following analytes	are included in this report, bu	it the laboratory is not certifi	ied by the governing authority. This list ma	av include analytes for
the agency does not of		,	ieu sy ale gerelling aanenly.	ay morado dilarytoo lor
the agency does not of Analysis Method		Matrix	Analyte	ay molado analytoo tor
0 ,	fer certification.	•	, , ,	

Method Summary

Client: Ensolum

Method

8021B

Total BTEX 8015 NM

8015B NM

8015NM Prep

DI Leach

300.0

5035

Project/Site: PLU 18 TWIN WELLS 155H

Method Description

Total BTEX Calculation

Microextraction

Volatile Organic Compounds (GC)

Diesel Range Organics (DRO) (GC)

Diesel Range Organics (DRO) (GC)

Deionized Water Leaching Procedure

Anions, Ion Chromatography

Closed System Purge and Trap

Job ID: 890-2628-1

SDG: 03E1558066

Protocol	Laboratory
SW846	XEN MID
TAL SOP	XEN MID
SW846	XEN MID
SW846	XEN MID
MCAWW	XEN MID
SW846	XEN MID

XEN MID

XEN MID

SW846

ASTM

Protocol References:

ASTM = ASTM International

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum

Project/Site: PLU 18 TWIN WELLS 155H

Job ID: 890-2628-1

SDG: 03E1558066

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2628-1	SS07	Solid	07/21/22 15:35	07/22/22 09:08	0.5

Date/Time

Chain of Custody

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

Environment Testing

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Work Order No:

Project Manager:	Tacoma Mornissey	nssey		Bill to: (if different)	10	Garret		Green	Work O	Work Order Comments	
Company Name:	Ensolum			Company Name:	83	XTO	O		Program: UST/PST ☐ PRP☐] Brownfields ☐ RRC ☐	☐ Superfund ☐
	3122 National Parks Highway	Parks Hi		Address:					State of Project:		1
City, State ZIP:	Cacispad, NM	88220	-	City, State ZIP:					Reporting: Level II Level III	PST/UST	TRRP Level IV
Phone: 3	337-257-8307	1.0	Email:	3	-gree	2 0 0	MONTH	arrett.green@exxonmobile.com	Deliverables: EDD	ADaPT Other:	
Project Name:	PLU 18 TENN WELLS 155H	HSSI SIIS	Turn	Turn Around				ANALYSIS REQUEST	UEST	Preservat	Preservative Codes
er:	03E15580%		Routine	Rush	Pres. Code					None: NO	DI Water: H ₂ O
Project Location: (32	(32,2096,-103.8149		Due Date:			_				Cool: Cool	MeOH: Me
Sampler's Name: K7	KASE Parker		TAT starts the	TAT starts the day received by						HCL: HC	HNO 3: HN
PO #:			the lab, if rec	the lab, if received by 4:30pm	S.					H2504: H2	NaOH: Na
SAMPLE RECEIPT	Temp Blank:	ON S	Wet Ice:	No No	1919					H ₃ PO ₄ : HP	
Samples Received Intact:	(Yes) No	Thermometer ID:	r ID:	(NIM-OC	П					NaHSO 4: NABIS	
Cooler Custody Seals:	Yes No N	Correction Factor:	actor:	0	eq					Na ₂ S ₂ O ₃ : NaSO	25
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	Reading:	5			ادى	890-2628 Ch	890-2628 Chain of Custody	Zn Acetate+NaOH: Zn	JH: Zn
Total Containers:)	Corrected Temperature:	mperature:	5.0				-	-	NaOH+Ascorbic Acid: SAPC	Acid: SAPC
Sample Identification	on Matrix	Date	Time	Depth Grab/	# of Cont	18	כלו			Sample C	Sample Comments
5507	S	7/12/122	1535	0.5'		X	×			CC; 166599100	19001
										Incident #	Ħ
										NAPPZ	nAPP 2214735676
										bearist	marrissed ensoina
						1					
					1	+		 			
Total 200.7 / 6010	200.8 / 6020:	88	8RCRA 13PPM	M Texas 11	Al Sb	Is Ba B	Al Sb As Ba Be B Cd Ca	Cr Co Cu Fe Pb Mg Mn Mo Ni K	Mo Ni K Se	S	
704/1000 04 04 (0/10+0V) 7 00 (0/70 04+0) V 0/70/1	Matal(c) to be an	pozzie	TO D / S	TCIP/SPIP6010 · RRCRA Sh As Ba Be Cd	CRA Sh	As Ba	Re Cd Cr	Cr Co Cii Ph Mn Mo Ni Se Ad	=	HG: 163 / 245. /4/0 / /4/	

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. An ininimum charge of \$55.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-2628-1 SDG Number: 03E1558066

Login Number: 2628 List Source: Eurofins Carlsbad

List Number: 1 Creator: Clifton, Cloe

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

of 184

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4.0

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Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-2628-1 SDG Number: 03E1558066

Login Number: 2628 **List Source: Eurofins Midland** List Number: 2 List Creation: 07/25/22 09:19 AM

Creator: Rodriguez, Leticia

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

<6mm (1/4").



APPENDIX D

NMOCD Notifications

From: Green, Garrett J

To: ocd.enviro@state.nm.us; Bratcher, Mike, EMNRD; <a href="mailto:Hamlet, <a href="mailto:Robert, EMNRD; <a href="mailto:Hamlet, Robert, EMNRD; <a href="mailto:Hamlet, Total Control

Cc: <u>Tacoma Morrissey</u>; <u>DelawareSpills /SM</u>

Subject: XTO - Sampling Notification (week of 7/18/22 - 7/22/22)

Date: Friday, July 15, 2022 2:22:18 PM

[**EXTERNAL EMAIL**]

All,

XTO plans to complete final sampling activities at the following sites the week of July 18, 2022.

Tuesday

- BEU 5E Han Solo 114H/ nAPP2209041753
- BEU 5E Han Solo 105H/ nAPP2209731445

Wednesday

- BEU 5E Han Solo 114H/ nAPP2209041753
- BEU 5E Han Solo 105H/ nAPP2209731445

Thursday

- PLU 18 TWR 155H/ nAPP2214735696
- JRU DI 1 Liner Delineation/ nAPP2216152113

Friday

- PLU 18 TWR 155H/ nAPP2214735696

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



APPENDIX E

Safety Data Sheet for Friction Reducer



SAFETY DATA SHEET

Issuing Date 01-Aug-2019 Revision Date 01-Aug-2019 Revision Number 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name POLYglide Xcel-200

Other means of identification

Product Code(s) 10497

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use No information available

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Address Manufacturer Address

PfP Industries PfP Industries 29738 Goynes Rd. 29738 Goynes Rd. Katy, TX 77493 Katy, TX 77493

Emergency telephone number

Company Phone Number 281-371-2000

Emergency Telephone Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids Category 4

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Warning

Combustible liquid

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Revision Date 01-Aug-2019

Appearance Opaque Physical state Liquid Odor Mineral Oil

Precautionary Statements - Prevention

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

In case of fire: Use CO2, dry chemical, or foam for extinction

Precautionary Statements - Storage Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other Information

May be harmful in contact with skin Harmful to aquatic life

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Chemical name	CAS No	Weight-%	Trade secret
Petroleum distillates, hydrotreated light	64742-47-8	40 - 70	

^{*}The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

Inhalation Remove to fresh air.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep

eve wide open while rinsing. Do not rub affected area. Remove contact lenses, if present

and easy to do. Continue rinsing.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated

clothes and shoes.

Ingestion Clean mouth with water and drink afterwards plenty of water.

Self-protection of the first aider Remove all sources of ignition. Ensure that medical personnel are aware of the material(s)

involved, take precautions to protect themselves and prevent spread of contamination.

Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

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Revision Date 01-Aug-2019

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Dry chemical. Carbon dioxide (CO2). Water spray. Alcohol resistant foam.

Unsuitable extinguishing media CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the

chemical

Keep product and empty container away from heat and sources of ignition. In the event of

fire, cool tanks with water spray.

Explosion data

Sensitivity to Mechanical Impact None. Sensitivity to Static Discharge

Special protective equipment for

fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Use personal protective equipment as required. See

section 8 for more information. Take precautionary measures against static discharges. Do

not touch or walk through spilled material.

Environmental precautions

Environmental precautions Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage

if safe to do so.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Do not touch or walk through spilled material. Dike far

ahead of liquid spill for later disposal.

Methods for cleaning up Take precautionary measures against static discharges. Dam up. Soak up with inert

absorbent material. Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use personal protection equipment. Do not breathe vapor or mist. Keep away from heat,

> hot surfaces, sparks, open flames and other ignition sources. No smoking, Take precautionary measures against static discharges. Use with local exhaust ventilation.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from

heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Store in accordance with the particular

national regulations. Store in accordance with local regulations.

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Revision Date 01-Aug-2019

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or

level that contributes to the hazard classification of the mixture) which have an exposure

limit applicable in the region for which this safety data sheet is intended or other

recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Appropriate engineering controls

Engineering controls Showers

Evewash stations

Ventilation systems.

Individual protection measures, such as personal protective equipment

Eve/face protection Tight sealing safety goggles.

Skin and body protection No special protective equipment required.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are

exceeded or irritation is experienced, ventilation and evacuation may be required.

Do not eat, drink or smoke when using this product. Contaminated work clothing should not General hygiene considerations

> be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Liquid **Appearance** Opaque

Color Milky white to yellow

Odor Mineral Oil

Odor threshold No information available

Remarks • Method Property Values

Hq No data available None known Melting point / freezing point No data available None known Boiling point / boiling range No data available None known

Flash point >= 67 °C / 153

Evaporation rate No data available None known Flammability (solid, gas) No data available None known

Flammability Limit in Air None known

Upper flammability limit: No data available Lower flammability limit: No data available

Vapor pressure No data available None known Vapor density No data available None known

Relative density 0.97 - 1.03Water solubility Miscible in water

Solubility in other solvents No data available None known Partition coefficient No data available None known Autoignition temperature No data available None known Decomposition temperature No data available None known

Kinematic viscosity ≥150 mm²/s

Dynamic viscosity No data available None known **Explosive properties** No information available Oxidizing properties

No information available

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Revision Date 01-Aug-2019

Other Information

Softening point

Molecular weight

VOC Content (%)

Liquid Density

No information available
No information available
No information available
No information available
No information available

10. STABILITY AND REACTIVITY

Reactivity No information available.

Chemical stability Stable under normal conditions.

Possibility of hazardous reactions None under normal processing.

Conditions to avoid Heat, flames and sparks.

Incompatible materials None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available.

Eye contact Specific test data for the substance or mixture is not available.

Skin contact Specific test data for the substance or mixture is not available.

Ingestion Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Numerical measures of toxicity

Acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document.

ATEmix (oral) 5,005.00 mg/kg
ATEmix (dermal) 2,002.00 mg/kg
ATEmix (inhalation-dust/mist) 5.20 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Petroleum distillates, hydrotreated light 64742-47-8	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.2 mg/L (Rat)4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

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Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Petroleum distillates, hydrotreated light 64742-47-8		2.4: 96 h Oncorhynchus mykiss mg/L LC50 static 45: 96 h Pimephales promelas mg/L LC50 flow-through 2.2: 96 h Lepomis macrochirus mg/L LC50 static		4720: 96 h Den-dronereides heteropoda mg/L LC50

Persistence and degradability No information available.

Bioaccumulation There is no data for this product.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused

products

Dispose of in accordance with local regulations. Dispose of waste in accordance with

environmental legislation.

Contaminated packaging Do not reuse empty containers.

14. TRANSPORT INFORMATION

DOT Not regulated. Product does not sustain combustion (49 CFR 173.120(b)(3))

15. REGULATORY INFORMATION

International Inventories

TSCA Complies
DSL/NDSL Complies
EINECS/ELINCS Complies
ENCS Does not comply
IECSC Complies
KECL Complies

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PICCS Complies
AICS Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	Yes
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

US State Regulations

This product does not contain any substances regulated by state right-to-know regulations

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

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16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA Health hazards 2 Flammability 2 Instability 0 Physical and chemical

properties -

HMIS Health hazards 2 Flammability 2 Physical hazards 0 Personal protection X

Issuing Date 01-Aug-2019

Revision Date 01-Aug-2019

Revision Note No information available.

Disclaimer

The data supplied herein is for use only in connection with occupational safety and health. The information provided in this Safety Data Sheet is believed to be correct as of the date issued. Updates to this information may be obtained by contacting (either reference contact location or website). PfP Industries MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. This information is not meant to be an all-inclusive document on worldwide hazard communication regulations. Each user of the material described herein must evaluate the conditions of use and design, many of which will be solely within the user's knowledge and control, and the appropriate protective actions, including proper notification and training of employees, necessary to prevent employee exposures, property damage or release to the environment.

End of Safety Data Sheet

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APPENDIX B

Lithologic / Soil Sampling Log

			Sample Name: BH01	Date: 8/07/2023	
ENS		M	Site Name: PLU 18 TWR SAT E	BATTERY	
	OLO		Incident Number: nAPP2230551957		
			Job Number: 03C1558144		
LITHOLOGIC / SOIL	SAMPLING LOG		Logged By: M. O'Dell	Method: Air Rotary Rig	
Coordinates: 32.207892, -103.817942			Hole Diameter: 5"	Total Depth: 110'	
Comments: No field screening or sampli	ng was conducted at the	site.			
Moisture Content Chloride (ppm) Vapor (ppm) Staining	Sample Depth (ft bgs) Depth (ft bgs)	USCS/Rock Symbol	Lithologic	Descriptions	
	∭ 0 + -				
	10	SP	0-10'. Sand w/ trace cali fine to fine grained, sub poorly graded, dry.	che. Reddish brown, verv rounded to subangular,	
	<u>†</u> 20	CCHE	10-40'.Caliche w/ sand. very fine to fine grained subangular, poorly grad	, subrounded to	
	± 30 +				
	± 40 ±	SP	40-100'. Sand w/ trace of very fine to fine grained subangular grains, poor	, subrounded to	
	50		50': Injecting/adding wa	ter & soap at 50'	
	<u>+</u> 60				
	<u>+</u> 70				
	± 80				
	90				
	100	SP/SC	100-110'. Clayey sand, r very fine to fine grained	eddish orange , poorly graded, dry.	
	110		110': stopped drilling an	d set casing at 110'.	
	TD (@ 110' b	ogs.		

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

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

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

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

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

CONDITIONS

Action 267800

CONDITIONS

Operator:	OGRID:	
XTO ENERGY, INC	5380	
6401 Holiday Hill Road	Action Number:	
Midland, TX 79707	267800	
	Action Type:	
	[C-141] Release Corrective Action (C-141)	

CONDITIONS

Created By	Condition	Condition Date
scott.rodgers	Remediation Closure approved. All areas not reasonably needed for production or subsequent drilling operations will need to be reclaimed and revegetated as soon as practical. Areas reasonably needed for production or subsequent drilling operations will need to be reclaimed and revegetated as soon as they are no longer reasonably needed.	2/23/2024